

Multiple preverbation in Homeric Greek: A typological insight

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Abstract

This paper analyses the system of multiple affixation of spatial preverbs in Homeric Greek in a typological perspective, based on Talmy's (2000) typology of Motion event, on the work done within the Trajectoire Project (CNRS, TUL), and work on (multiple) affixation systems in some Amerindian languages (Craig & Hale 1988; Craig 1993; Grinevald 2003). It details the existence in Homeric Greek of a set of relational preverbs functionally distinct from the more widely-known "satellite" preverbs, and the existence of interesting semantic affix-order constraints on their multiple affixation on the verb stem. Throughout, the analysis focuses on the motivated and function-driven interconnection between the morphosyntactic patterning and the semantic constraints affecting this system.

Résumé en français

Cet article analyse le système d'affixation multiple de préverbes spatiaux en grec homérique dans une perspective typologique, à partir du cadre théorique proposé par Talmy (2000) sur l'évènement spatial, des travaux du Projet Trajectoire (CNRS, TUL) et de travaux sur des systèmes d'affixation (multiple) dans des langues amérindiennes (Craig & Hale, 1988). Cet article détaille l'existence en grec homérique d'un inventaire de préverbes relationnels fonctionnellement distincts des préverbes « satellites », mieux connus, ainsi que l'existence d'intéressantes contraintes sur l'ordre sémantique des affixes sur le radical verbal. L'analyse se concentre sur les motivations fonctionnelles de l'interconnexion entre l'organisation morphosyntaxique et les contraintes sémantiques qui gouvernent ce système.

Introduction

This paper analyzes the coding strategies of Path in Homeric Greek within the frame of functional-typological grammar, (for instance Givón 2001; Croft 2003) and in a grammaticalization approach (in the vein of Heine & al. 1991; Heine 2003; Hopper & Traugott 2003; Marchello-Nizia 2006; DeLancey to appear)¹. More specifically, it will address the relationships of competition and compensation between morphosyntactic systems of Path coding, casting the analysis into a “panchronic” perspective. The term “panchronic” (taken from Svorou 1994: 91) denotes the fact that several evolutionary stages of a specific construction may coexist within a single language state.

The goal of this paper is two-fold. First, it is a demonstration of the applicability of a typological approach of language description to the description of ancient languages, and conversely of how it is crucial to further develop the inclusion of such languages in current typologies. Such typological approaches to ancient languages were recently proposed in the literature, within the frame of Path-coding typologies. The discussion of Ancient Greek has benefited for instance from work by Skopeteas (2008) and Viti (2008). Skopeteas proposes a diachronic analysis, about how Ancient Greek witnessed the emergence and loss of restrictions in the selection of spatial complements by motion verbs; he notably includes German, Yucatec Maya and Bahasa Indonesia in his typological account. Viti (2008) proposes an exploration of the Path element *en* ‘in’ and how its prepositional or preverbal uses are correlated to the referential and semantic nature of the complement (such as animacy). Her study includes occurrences of relational preverbs (although she does not identify them in

¹ I would like to thank the coordinators and members of the Trajectoire Project (CNRS / TUL, France) and of the Topoi Project (Frei Universität and Humboldt Universität, Germany) for their feedback, criticisms and comments; special thanks go to Maarten Lemmens (Trajectoire Project; University of Lille 3) and Tatiana Nikitina (Topoi Project) who kindly sent me their constructive and expert comments on different revisions of the present paper. Thanks also to the two anonymous reviewers for their helpful comments.

these terms) and is an inquiry into how preverbs acquire a growing degree of transitivity, through an applicative-like intermediary stage.

The present paper is a spin-off from my own PhD research (Imbert, 2008a) and intends to complement those works by exploring a system of multiple preverbation in Homeric Greek. This system is described here as involving “relational” preverbs and “satellite” preverbs, and as exhibiting grammaticalization from relational preverb to satellite preverb. This system has received some attention in the literature, often in sections devoted to “prepositions” (Schwyzer *et al.* 1950 ; Kühner *et al.* 1904) or “double prepositions” (Monro, 1891; Chantraine, 1963). A semantic analysis for this phenomenon generally remains fairly undeveloped, mostly considering the hypothesis of the intensification of the first preverb (the one closest to the verb stem) as does Chantraine (1963:144-145) or Monro (1891, *emph. CI*) who says: “It is characteristic of Homer to form species of compound by combining two Prepositions [...]. In *all* these instances the meaning and construction are mainly determined by the first of the two Prepositions. The second does little more than add some emphasis.” On the morphosyntactic level, the literature is mostly concerned with identification and categorization matters (as will be addressed later here, in section 2.3).

The hypothesis proposed in this paper, inspired by earlier work on Amerindian languages (Craig & Hale 1988; Craig 1993, Grinevald 2003) and general typology (Bybee 1985), sees multiple preverbation as an emergent system of Path coding that involves (a) a morphosyntactic system of “relational preverbs” and (b) strict semantic constraints on the order of affixation of the preverbs on the verb stem. The analysis also reveals interesting interactions between semantics and morphosyntax: overall, the preverb that is closer to the verb stem is relevant to the determination of the Figure and its Path, while the preverb that is farther away from the verb stem is relevant to the determination of the Ground. Morphosyntactically, the latter preverb is also *systematically* the one that introduces the oblique verb argument, *which is the overt expression of the Ground*.

The paper is structured as follows. Section 1 briefly addresses the theoretical framework underlying the description. Sections 2 to 4 present some key results of the multiple preverbatum constructions in Homeric Greek.

1. Theoretical background

1.1 A functional-typological frame for a typological description

Our research on Homeric Greek has been conducted within the frame of functional-typological grammar (as defined in Givón 2001). This framework allows us to account for grammaticalization processes and the motivation for language structures and language change, as DeLancey points out: “Patterns of structure, and of structure-function correlation, that repeat themselves throughout the world must be motivated. [...] Typological investigation shows a principled relation between structure and function, most easily seen in the process of grammaticalization.” (DeLancey 2001:19-20)

1.2 Talmy’s approach to Path coding

In his by now well-known typology, Talmy (1985, 1991, 2000) defines a Motion event as a spatial situation which may imply Localization (1a) or Movement (1b). The basic semantic elements making up a Motion event are the Figure (the moving or localized entity), the Ground (the entity with respect to which the Figure is moving or localized), the Movement (MOV) or the Localization (LOC) expression, and the Path, which he considers the core element of a Motion event:

- (1) a. The man is out of the house
FIGURE LOC PATH GROUND
b. The man goes out of the house
FIGURE MOV PATH GROUND

To these four basic semantic elements, Talmy also adds the CO-EVENT, which refers to the Manner and the Cause of the motion or location. For instance, in (2a) the verb codes Movement (*MVT*) as well as Manner of Movement (*MNR*); in (2b), it codes Movement and Cause of Movement; in (2c), it codes Movement and both Manner and Cause of Movement:

- (2) a. Movement + Manner of Movement

- | | | | | |
|---------|---------|--------|-----------|--|
| The man | ran | out of | the house | |
| FIGURE | MVT+MNR | PATH | GROUND | |
- b. Movement + Cause of Movement
- | | | | | |
|---------|-----------|------------|--------|-----------|
| The man | pushed | the robber | out of | the house |
| (AGENT) | MVT+CAUSE | FIGURE | PATH | GROUND |
- c. Movement + Manner of Movement + Cause of Movement
- | | | | | |
|---------|---------------|------------|--------|-----------|
| The man | kicked | the robber | out of | the house |
| (AGENT) | MVT+MNR+CAUSE | FIGURE | PATH | GROUND |

Talmy distinguishes two types of languages in the world: languages that express Path in the verb stem (*verb-framed languages*) and those that express Path outside of the verb stem, in a surface element which he calls a "satellite" (*satellite-framed languages*). As examples of such satellites, he mentions the English verb particles and some German preverbs, and essentially opposes satellites to adpositions: "[Satellite] is the grammatical category of any constituent other than a noun-phrase or prepositional-phrase complement that is in a sister relation to the verb root" (Talmy, 2000: II,102; my emphasis). Examples (3a-b) illustrate Talmy's distinction between satellite-framed languages (such as English in (3a)) and verb-framed languages (such as French in (3b)):

- (3) a. The boy ran out
 verb[-PATH] **satellite[+PATH]**
- b. Le garçon **sortit** (en courant)
 verb[+PATH]
- 'The boy ran out' (*lit.* 'the boy exited (running)')

Homeric Greek is a satellite-framed language: Path is coded in preverbs (different kinds of them, as shown in section 3), but not in verb stems.

Finally, the semantic element of Path may be distributed over several surface elements (cf. Sinha & Kuteva, 1995), such as a verb particle and an adposition in the English example (4):

- (4) The boy ran out into the garden
 verb[-PATH] **particle[+PATH]** **adposition[+PATH]**

This point will be further explored in this paper when Homeric preverbs and adpositions are confronted.

Overall, Talmy's typology has been further discussed on many of its aspects in the literature. For example, Slobin (2004) proposed that the expression of Manner of Motion constitutes a

more important element than what Talmy initially suggested. He showed that satellite-framed languages tend to use more Manner of Motion verbs than verb-framed languages (Slobin 2004:224). More specifically, a verb-framed language will typically omit Manner of Motion in its Motion event descriptions or express it in an element discursively less important than the verb, while satellite-framed languages will typically express Manner of Motion and will do so in a discursively important element, such as the verb. Slobin (2004:250) thus adds some nuances to Talmy's view, focusing on a cline of Manner salience rather than on a dichotomy between Path in the verb vs. Path outside of the verb. This allows a gradient typology from high Manner salient languages to low Manner salient languages.

Similarly, Slobin (2004) as well as Zlatev & Yangklang (2004) have also put forward the problem of serial verb languages that do not fit well in Talmy's dichotomy between satellite-framed vs. verb-framed languages, leading Slobin (2004:228) to coin a third category, namely equipollently-framed languages (for instance with a Manner verb + a Path verb). In another perspective, Slobin's (1996) *Thinking for Speaking* hypothesis considered the fact that speakers express Motion event descriptions in a way that is partly determined by their language: each language does not make the different elements of a Motion event, such as Manner, Path or setting, equally salient. This hypothesis has led to different test studies, such as Gennari & al. (2002), Papafragou & al. (2008), Soroli & Hickmann (to appear). Finally, many more studies have prolonged Talmy's framework and sought to refine his typology, such as Filipovic (2009) and Ibarretxe (2009).

1.3 Systems dynamics in language change

Against the background of this Path-coding typology, this paper focuses on the systems dynamics and their functional motivations in the synchronic study of a language. More specifically, it considers the coexistence and interactions of emergent, stable and declining systems as an actual trigger for typological change. The interactions in question are competition, compensation and recycling dynamics. Competition induces functional tension between systems, then leading to compensation and recycling dynamics. The stabilization or decline of one of the systems in competition depends on its functional motivations and its

capacity to fulfill the communicational needs at stake. These *function-driven systems dynamics* may sometimes lead to typological shifts; for instance, a shift from satellite-framed to verb-framed, such as studied by Kopecka (2006) for French, Iacobini (2009) and Iacobini & Masini (2006; 2007) for Italian, or a shift from one type of satellite-framed system to another, such as studied by Imbert (2008b) for Old English.

Understanding these dynamics of competition between systems is key to understanding the functional motivations and evolution dynamics of some types of typological changes. In that perspective, the present study focuses on function-driven dynamics affecting Path-coding systems in Homeric Greek. After the brief sketch of Path coding in Homeric Greek (section 2) and the morphosyntactic patterning of the multiple preverbatum construction (section 3), we will be in a position to address the semantic constraints underlying this construction and motivating its evolution.

2. Path coding in Homeric Greek

It is necessary here to anticipate questions on the choice of Homeric Greek. It is an earlier language stage than Classical Greek and has often been considered a highly artificial language and even one which was perhaps never spoken. It is a language constrained by the poetic and epic registers which ended up characterizing it and may be described as a sort of “graphic *koine*” used by the *aoidos* to transmit their oral poetry. It is based on a dialectal mixture (Ionian and Æolian), which further obscures the question of its origins and linguistic profile. However, I will here uphold a more moderate position, notably put forward by philologists such as Pharr (1985:xxiv) and Meillet (1935:178). Meillet emphasizes that the lack of dialectal purity in a language does not modify its morphological structure nor its *system*; he argues that this literary language was at the least used and above all understood by the Greek speakers of the time. Tradition would later have “frozen” it in its heterogeneity: it would then have become the epic, literary and set language that we know. These “artificiality” issues are extensively developed in Imbert (2008a:74-124).

For the expression of spatial relations, Homeric Greek exhibits a case system, several inventories of Path morphemes, and productive systems of syntactic combinations between cases and Path morphemes.

2.1 Cases, adverbs, adpositions and preverbs

Three of the five morphological cases of Homeric Greek still have an autonomous Path-coding function, but also argument-marking functions, as summarized in Table 1:

Case	Main Path-coding function	Main argument-marking function
Accusative	direction 'to' or median 'through'	object marking
Genitive	direction 'from'	noun complement marking
Dative	localization 'in'	attribution marking

Table 1 – Three cases and their main functions in Homeric Greek

The use of cases alone (i.e. without another element to command it, such as an adposition or preverb) to code Path in Motion events is already declining in Homeric Greek. Such uses are semantically restricted: cases cannot express detailed Paths by themselves and designate general movements (such as 'from' or 'to'), or localization ('at'). In addition, they are also contextually constrained; for instance, the accusative case, when designating the final portion of a Path (Path *to* a Ground), is essentially found with verbs like 'arrive' when used alone, as shown in (5):

- (5) he: d' ára Kúpron híkane (Od. 8.362)²
- DEM:NOM LNK LNK Cyprus:ACC arrive:IMPF.3SG
- 'But she reached Cyprus' (lit. 'But she went/arrived **to/at** Cyprus')

² The Homeric data in this paper was collected from the complete texts of the *Iliad* and the *Odyssey*, through the *Perseus Digital Library* online database (Crane, 1997). *Il.* refers to *Iliad* and *Od.* to *Odyssey*; the first number refers to the number of the book and the second number refers to the number of the verse. For technical reasons, the Greek *êta* and *omega* are respectively transcribed *e:* and *o:* (API vowel-lengthening convention), aspiration is transcribed *h*, and the ~ sign on Greek vowels is transcribed with the ^ sign.

Concerning the inventory of Path morphemes, Homeric Greek has a system of extremely frequent morphemes that may code Path. Table 1 gives a selection of 14 such morphemes that are involved in the multiple preverbation constructions presented in this paper³. These morphemes may appear either as (a) adverbs, (b) adpositions (prepositions and more rarely postpositions), or (c) preverbs. When used as adpositions, they may be syntactically linked to an argument of the verb and as such control case marking. Table 2 therefore also mentions which case(s) each morpheme commands when used as an adposition:

Path morphemes	Spatial meaning	Case(s) commanded
<i>amphí</i>	around	Acc/Gen/Dat
<i>aná</i>	up	Acc/Gen/Dat
<i>apó</i>	off	Gen
<i>diá</i>	through	Acc/Gen
<i>eis</i>	to	Acc
<i>ek</i>	out	Gen
<i>en</i>	in	Dat
<i>epí</i>	at	Acc/Gen/Dat
<i>hupér</i>	above	Acc/Gen
<i>hupó</i>	under	Acc/Gen/Dat
<i>katá</i>	down	Acc/Gen
<i>pará</i>	beside	Acc/Gen/Dat
<i>perí</i>	around	Acc/Gen/Dat
<i>pró</i>	forth	Gen

Table 2 – Selection of 14 Path morphemes and their cases in Homeric Greek

The three morphosyntactic possibilities of these Path morphemes (adverbs, adpositions, or preverbs) are not equally attested in Homeric Greek: adverbs are in fact only residual or extinct depending on which morpheme is involved (Luraghi 2003), while adpositions and

³ This inventory excludes a set of “compound Path morphemes” that could not be treated here given the length of this paper. However, they are included and analyzed in Imbert (2008a); they are 4 morphemes (*apék* ‘off and out’, *diék* ‘through and out’, *parék* ‘beside and out’, *hupék* ‘under and out’; respectively formed with *apó-ek*, *diá-ek*, *pará-ek* and *hupó-ek*), 2 of which are involved in multiple preverbation constructions (*parék*, *hupék*).

preverbs are in general stable and extremely productive. Example (6) illustrates an adverbial occurrence with the Path morpheme *en* ‘in’:

- (6) **en** dé hoi askòn éthe:ke theà
in LNK 3SG.DAT skin:ACC put:AOR.3SG goddess:NOM
 [+PATH]
 mélanos oínoio (Od 5.265)
 black:GEN wine:GEN
 ‘In (there), the goddess put a skin of dark wine for him’

We will not go into further details here concerning the declining system of Path adverbs, but focus on the two stable and productive systems of adpositions and preverbs. Examples (7) and (8) each illustrate a prototypical occurrence of an adposition and of a preverb respectively. As an adposition in (7), the Path morpheme (here *parà* ‘beside’) is linked to an argument of the verb (‘shore’, in italics) and controls accusative case-marking, here designating median Path. Conversely, as a preverb in (8), the same Path morpheme functions as a satellite of the verb, similarly to how a verb particle would in English:

- (7) tò:[...] báte:n **parà** *thîn’* halòs atrugétoio (Il 1.327)
 DEM:NOM.DL go:AOR.DL **beside** *shore:ACC* sea:GEN unresting:GEN
 [+PATH] [+PATH]
 ‘The two of them [...] went **along** the shore of the unresting sea’

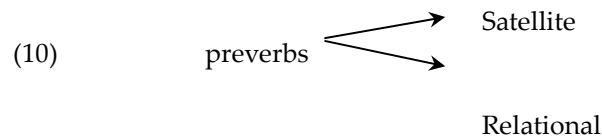
- (8) hò d’ ár’ ô:ka **par-** édramen aphantíe:isin (Il. 10.350)
 DEM:NOM LNK LNK quickly **beside-** run.AOR:3SG folly:DAT.PL
 [+PATH]
 ‘But he quickly ran **past** in his folly’

However —and this is crucial in the present paper— Homeric preverbs may also be linked to an argument of the verb and control case-marking, just like adpositions, as illustrated in example (9): the morpheme *en-* ‘in’ appears morphologically as a preverb but functions as an adposition by syntactically introducing the argument *ne:usin* ‘ship’ and controlling the dative case:

- (9) pûr **ém-** pese *ne:usin* Akhaiôn (Il. 16.112-113)
 fire:NOM **in-** fall:AOR.3SG *ship:DAT.PL* Achaean:GEN.PL
 [+PATH] [+PATH]
 ‘Fire fell **into** the ships of the Achaeans’

My analysis defends the view of the existence of two functional types of preverbs in Homeric Greek, such as shown in (10) – which supposes systematicity and coherence and thus goes

further than (but does not contradict) the observation of the fuzziness of the categories of Path morphemes in Ancient Greek:



“Satellite” preverbs as in (8) are well-known, well-identified and extensively described in the literature, especially for instance in Indo-European languages (such as Germanic and Slavic languages). Conversely, “relational” preverbs as in (9) are less well-known and may be defined as being morphologically prefixal but functionally adpositional – for instance by being linked to an oblique argument of the verb and by governing its case. Relational preverbs were originally discussed in Craig & Hale (1988) on the basis of some Amerindian languages, such as Rama (Chibchan family). In Rama, they developed from a system of postpositions. This notion of “relational preverb” is crucial in Homeric Greek for the understanding of multiple preverbatation in this paper.

2.2 Constructions in competition

Homeric Greek exhibits different kinds of competing syntactic constructions involving cases and Path morphemes. Some constructions allow for the expression of several portions of Path in one Motion event. This section addresses and confronts two such constructions: (a) the combination of a preverb and one or several adposition(s) and (b) the combination of several preverbs, or multiple preverbatation.

The syntactic combination [preverb + adposition(s)] is the most productive way to code multiple portions of Paths in Homeric Greek. Examples (11a-b) illustrate different variations on this type of combinations; for instance, there may be one preverb and one adposition, or even one preverb and several adpositions. Note how the preverb works as a satellite and how each adposition introduces an oblique verb argument (both adposition and argument are marked with a common referential index, such as *i* or *j*); the # marks word boundaries (such as presented in the consulted edition of the text):

(11) a. [PV-V] # [ADP_{*i*} # ARG_{*i*}]

Akhaioì		aspasio:s	Pátroklon [...]
Achaean:NOM.PL		gladly	Patroclus:ACC
kát-	thesan	en	lekhéessi (Il. 18.231-233)
SatP/down-	lay:AOR.3PL	ADP<i>i</i>/in	ARG <i>i</i> /couch:DAT.PL
[+PATH]		[+PATH]	[+PATH]

'But the Achaeans with gladness [...] laid Patroclus **down on** a bier'

- b. [PV-V] # [ADP*i* # ARG*i*] # [ADP*j* # ARG*j*]
- | | | | |
|---------|-----|------------------------|---------------------------|
| autos | d' | ek | díphroio |
| DEM:NOM | LNK | ADP<i>i</i>/out | ARG <i>i</i> /chariot:GEN |
| | | [+PATH] | [+PATH] |
-
- | | | | |
|---------------------------|-------------------------|------------------|-----------------------|
| parà | trokhòn | ex- | ekulísthe: (Il. 6.42) |
| ADP<i>j</i>/beside | ARG <i>j</i> /wheel:ACC | SatP/out- | roll: PASS.AOR.3SG |
| [+PATH] | | [+PATH] | |
- 'But he rolled (**from**) **out of** the chariot (**to**) **beside** the wheel'

The syntactic combination [preverb + adposition(s)] is a well-documented and well-described Path-coding system in reference grammars on Homeric Greek and Ancient Greek in general⁴. Conversely, multiple preverbation has remained virtually unexplored as such. Example (12) provides a typical example of such constructions, which is another productive way of coding complex Paths in Homeric Greek, although much less frequent⁵. Both [preverb + adposition] combinations and multiple preverbation fulfill a similar coding function: expressing multiple portions of Path in one Motion event. However, syntactically, multiple preverbation works differently: (a) no adposition may be used to introduce the oblique verb

⁴ See, among others, Chantraine (1963), Humbert (1954), Allard & Feuillâtre (1972), Pharr (1985), Ragon (1976), Riemann & Cucuel (1986), Schwyzer *et al.* (1950), Kühner *et al.* (1904), Monro (1891), or even more recently Horrocks (1981) and Luraghi (2003), although her work concentrates on prepositions and cases.

⁵ The term "productive" needs to be opposed here to "frozen", while "frequent" needs to be opposed to "infrequent". Frequency refers here to the token and type frequency of a form or construction in a corpus; productivity refers here to the morphosyntactic versatility and semantic transparency of a form or construction. Although multiple preverbation is rather infrequent in the examined data when compared to simple preverbation, it also exhibits constructional productivity and semantic transparency that make it formally segmentable and analyzable.

argument; and (b) the syntactic scope of the preverbs is different: the preverb affixed closest to the verb stem (SatP; *kat-* in example 12 below) functions as a *bona fide* “satellite” of the verb and as such does not syntactically interact with any verb argument, while the preverb farthest from the verb stem (RelP; *en-* in example 12) is of a “relational” kind, as it introduces the verb argument and controls its case (here the dative) – as marked by the referential index *i*:

- (12) *xíphos* *arguróe:lon* *kouleô:i*
 sword:ACC silver-studded:ACC ARGi/sheath:DAT
- en-** **kat-** *épe:x'* (Od. 11.98)
RelP*i*/in- **SatP/down-** thrust:AOR.1SG
 [+PATH] [+PATH]
 ‘I thrust my silver-studded sword **down into** its sheath’

The specificities of multiple preverbation are detailed and discussed through a morphosyntactic sketch in section 3, which will throughout present further arguments for the distinction between RelP and SatP.

2.3 Defusing the conflict: adverbs, adpositions or preverbs?

Overall, the “formal” categorization of preverbs vs. adpositions vs. adverbs in Greek is subject to variation and hesitation in traditional grammars. Chantraine (1963: 82-86) mentions the difficulties for a linguist presented by such categorization, yet retains the incoherencies of terminology and processing method⁶. This variable treatment is reinforced by the well-used and yet problematic notion of *tmesis*⁷, which is, however, not a reliable

⁶ My point here is not to discuss the details of Chantraine’s terminology, but rather to show that the specialists were aware of the problem, faced as they were with the persistence of highly confusing analyses of this type of morpheme.

⁷ This traditional notion refers to the “*tmesis*” (split, separation) which is said to take place on occasion between the verb and the preverb in Ancient Greek, particularly in Homeric Greek. An analysis based on the notion of “*tmesis*” defends the idea that for various reasons, e.g. syntactic or metrical, the preverb was sometimes “detached” from the verb stem and was placed elsewhere in the

solution (see Imbert 2008a:163-166). The discussion here will be limited to the scope of the present paper, i.e. multiple preverbatation.

An exhaustive and thorough observation of multiple preverbatation occurrences in the Homeric data points to their unclear and ambiguous nature. This is particularly obvious when one looks at the variability of transcriptions in different manuscripts and editions of the texts, such as in (13a-b) and (14a-b) below, where the Path element *ek* 'out', in bold, is shown as either free or affixed; the oblique verb argument is shown in italics. One should keep in mind that such an ambiguity based on typography is all the more reinforced by the fact that in most ancient records of these texts there was no space insertion between words.

(13) Ambiguity of multiple preverbatation occurrences for the same sentence in two editions (Il. 5.763)

- | | | | |
|----|--|----|---|
| a. | Edition used in Magnien, 1930 | b. | Edition used in <i>Perseus</i> |
| | <i>mákhe:s</i> ex apo:- dío:mai | | <i>mákhe:s</i> ex- apo:- dío:mai |
| | <i>battle:GEN</i> out off- drive:SUBJ.PRES.1SG | | <i>battle:GEN</i> out- off- drive:SUBJ.PRES.1SG |
| | 'I drive him out of the battle' | | 'I drive him out of the battle' |

(14) Ambiguity of multiple preverbatation occurrences for two sentences in one edition (Magnien, 1930)

- | | | | |
|----|--|----|---|
| a. | (Il. 20.212) | b. | (Il. 16.252) |
| | <i>mákhe:s</i> èx apo:- néesthai | | <i>mákhe:s</i> ex- apo:- néesthai |
| | <i>battle:GEN</i> out off- return:MID.PRES.1SG | | <i>battle:GEN</i> out- off- return:MID.PRES.1SG |
| | 'I return from (out of) the battle' | | 'I return from (out of) the battle' |

Let us take for instance the sentence illustrated in example (13a-b). Technically, three readings are possible as to the status of the Path element *ek*- 'out':

- a) *ek* is an adverb, i.e. a syntactically independent element, and consequently the genitive case works independently as well;
- b) *ek* is an adposition that introduces the genitive case of the oblique verb argument;
- c) *ek* is a preverb: and there, two "sub-readings" are possible: either *ek* is a satellite preverb and the genitive case works independently, or *ek* is a relational preverb and introduces the genitive case.

sentence, in adverb position. The hypothesis of a *tnesis* rather than of a simple *adverbial use* of the Path morpheme is used in the traditional literature whenever the linguist "feels" a semantic affinity between the "detached preverb" and the verb, i.e. when the "detached preverb" seems to combine semantically with the meaning of the verb, which however excludes – in the mind of the aforementioned linguist – an adverbial analysis (Chantraine, 1963: 83).

This paper adopts a reading coherent with the systems-dynamics perspective introduced in section 1: namely that the adverbial system is already heavily declining in Homer and so is the “case-alone” Path-coding system. Consequently, the reading (a) adverb + case alone can be dismissed as much less probable. The “sub-reading” in (c) where the case would work alone anyway can also be dismissed for the same reason, and the demonstration in Section 3 about the morphosyntax of multiple preverbation provides further grounds for this dismissal.

This leaves us with two possible readings: in examples (13a-b), *ek* is either an adposition or a relational preverb (RelP) – while *apó* is a *bona fide* satellite preverb (SatP). These two readings are illustrated in templates (15a-b):

- (15) a. Adposition reading b. Relational-preverb reading
 ARG_i # ADP_i # [SatP- V] ARG_i # [RelP_i- SatP- V]

Note how the occurrences illustrated in both (13a-b) and (14a-b) place *ek* in a postpositional (and not prepositional) type of constituent configuration. This point may be actually interesting, in the light of previous work on relational preverbs in Amerindian languages (Craig & Hale 1988; Grinevald 2003), as developed in Section 3 below. In Chibchan Rama, a system of postpositions has grammaticalized to a system of relational preverbs. In Homeric Greek, however, there is no such a “postpositional system” anymore and postpositional configurations are residual – except, *crucially*, in the case of multiple preverbation.

3. Morphosyntactic sketch of multiple preverbation

This section focuses on the morphosyntactic aspects of multiple preverbation and the coexistence in this construction of two types of preverbs, satellite vs. relational.

3.1 Facts and numbers of multiple preverbation

Multiple preverbation is a situation when the verb takes two different Path preverbs. It is illustrated in template (16):

- (16) Template for multiple preverbation
 [PV2- PV1- V]
 RelP SatP

Examples (17a-c) contrast cases of simple preverbatation in (b-b'), with one of multiple preverbatation in (17c):

(17) Verb prefixation in Homeric Greek

- | | | | | |
|----|-------------------------|---------|--------|-----------------------|
| a. | Non-prefixed verb | | | |
| | baíno: | | | |
| | walk | | | |
| | 'To walk' | | | |
| | | | | |
| b. | Simple preverbatation | | b'. | Simple preverbatation |
| | ana- | baíno: | | eis- baíno: |
| | PV1/ up- | V/walk | | PV1/to- V/walk |
| | 'To walk up' | | | 'To walk to' |
| | | | | |
| c. | Multiple preverbatation | | | |
| | eis- | ana- | baíno: | |
| | PV2/to- | PV1/up- | V/walk | |
| | 'To walk up to' | | | |

Table 3 summarizes frequency facts, where multiple preverbatation is compared to simple preverbatation.⁸ They have been obtained through the *Perseus* database:

⁸ The token frequency refers to the number of occurrences; the type frequency refers to the number of different (multi)prefixed verbs. Weighted frequencies, offered in *Perseus*, weight each occurrence of a form, depending on its degree of ambiguity, i.e. depending on the number of different lexical entries it is linked to. Thus if a token is unambiguous, its weight is 1, which corresponds to its maximum frequency. If it is ambiguous and can be linked to two different entries, its weight is 0.5. If it is ambiguous and can be linked to 3 forms, its weight is 0.33, etc. The minimum frequency is 0, which means that *Perseus* assumes that the form does not correspond to the lexical entry it has been automatically linked to. The main purpose of the weighted frequency is that it makes it possible to determine, through set and reliable calculations, whether the *absolute* (or *real*) frequency of a word is closer to the maximum or minimum frequency calculated by *Perseus*. It is very useful when the number of occurrences of an element is very high. Concerning multiple preverbatation however, I have manually disambiguated each occurrence and the frequencies given here are *absolute* frequencies.

	Total type frequency	Total token frequency	Attested combinations of prefixes
Simple preverbatation (<i>the Iliad</i>) (weighted frequency)	889	3708,71	N/A
Multiple preverbatation (<i>the Iliad and the Odyssey</i>) (absolute frequency)	47	98	23

Table 3 – Facts and numbers about multiple preverbatation in Homeric Greek

Although multiple preverbatation is far less frequent in terms of token and type frequencies than simple preverbatation, it occurs frequently enough and in sufficiently different syntactic and semantic contexts to be considered. Versatility is enhanced here by morphosyntactic productivity, as is addressed below. Moreover, multiple preverbatation also exhibits 23 attested possibilities of combinations between preverbs on the verb stem, which are ruled by interesting semantic affix-order constraints (see Section 4).

3.2 Is the “relational preverb” really a preverb, and is it really relational?

Multiple preverbatation morphosyntax provides three arguments that demonstrate the mixed character (prefixal as well as adpositional) nature of the RelP: its prefixal nature is shown by constituent structure and by semantic shift phenomena; its affiliation with “relational” elements such as adpositions is revealed in its syntactic behaviour.

First, in addition to demonstrating the syntactic diversity of the contexts of multiple preverbatation, constituent structure shows that in many occurrences RelP cannot be analyzed as an adposition. Table 4 gives an overview of these different constituent structure types; it gives information on the presence or absence of the oblique argument (ARG), and on its position with respect to the multiprefixed verb. The marker *lnk* designates a discourse marker⁹ and the marker *arg* in low case designates a whole syntactic argument:

⁹ Or, traditionally, “particles” such as *dé* “but, and”, *ára* “therefore”, etc. (Allard et al. 1972:213).

	Type		Construction		Token frequency
+ARG	TYPE 1	ARGi # (<i>lnk</i>) #	[RelP <i>i</i> -SatP-V]		63 (61.74%)
+ARG	TYPE 2		[RelP <i>i</i> -SatP-V]	# (<i>arg</i>) # ARGi	8 (7.84%)
-ARG	TYPE 3	∅	[RelP <i>i</i> -SatP-V]		27 (26.46%)
TOTAL					98 (100%)

Table 4 – Attested constituent structures for multiple preverbatum occurrences

A short comment is in order on the template for Type 3. As the table focuses purely on constituent structure matters, Type 3 gathers occurrences of zero-anaphora of ARG and also occurrences where RelP exhibits lexicalization into the multiprefixed construction (as will be discussed in 3.3). So strictly speaking, Type 3 should be identified as a [SatP-SatP-V] construction type. The question is to what extent zero-anaphora of the ARG, which is pragmatically triggered at a discursive level, can be considered as matching a syntactic *absence* of the ARG. This deserves a more thorough discussion which will not be developed in this paper; therefore, Table 4 is restricted to constituent structure matters and the [SatP-SatP-V] construction is discussed below, regarding cases of lexicalization of the RelP.

Examples (18) to (20) illustrate each of these constituent structure types. The oblique verb argument is in *italics* and RelP is in **bold face**:

- (18) Type 1 construction
 toi *homòn* *lékhos* **eis-** ana- baínoi (Il. 8.291)
 2SG:DAT *same:ACC* *bed:ACC* **RelP/to-** SatP/up- walk:OPT.PRES.3SG
 ‘(A woman that) shall go up into thy bed’
- (19) Type 2 construction ¹⁰
ex- ap- ébe:san etaíroi *ne:ós* (Od. 12.306)
RelP/out- SatP/off- walk:AOR.3PL comrade:NOM.PL *ship:GEN*
 ‘And my comrades went out from the ship’
- (20) Type 3 construction

¹⁰ There is only one occurrence of Type 2 with another argument in between RelP and ARG. It is given here as an example, but the reason for the presence of an argument here is certainly multidimensional (syntactic, metrical, pragmatic, etc.), therefore caution is advised as to the interpretation of such an example among other Type 2 examples.

autàr	epeì	pánte:i	para-	káb-	balon	(Il. 23.127)
LNK	LNK	every_way	RelP/aside-	SatP/down-	throw:AOR.3PL	
áspeton	húle:n					
precious	wood:ACC					
'But when on all sides they had cast down the precious wood'						

Table 4 clearly shows how RelP is prefixal in nature: ARG does not necessarily precede the multiprefixed construction, as it may follow the latter (Type 2), or may be absent altogether (Type 3); moreover, there may be intervening elements between ARG and the multiprefixed verb, such as a discourse marker or a whole argument – the latter being more relevant to show that the ARG and RelP do not (or not any longer?) form a syntactic constituent.

However, Table 4 also echoes one of the two hypotheses formulated in section 2.3 above, about the ambiguity of multiple preverbatation. It shows that 63 out of 98 (61.74%) of the total multiple preverbatation occurrences exhibit in Homeric Greek an ambiguous constituent order where ARG directly precedes the multiprefixed construction (as attested in Type 1), i.e. where RelP could be mistaken as a postposition. It is therefore interesting to notice that although a prepositional configuration is normally expected in Homeric Greek and postpositional configurations are rare, the postpositional configurations seem to be consistently present in cases of multiple preverbatation. Yet, putting forward the hypothesis of a postpositional-configuration origin for multiple is rather speculative but not completely unfounded, and may deserve to be further explored¹¹.

Second, the prefixal nature of RelP is supported by patterns of semantic shift. The RelP element may undergo semantic shift along with the whole construction, such as illustrated in (21), which would not be the case if RelP was in fact an adposition. The multiprefixed construction *apó-aná-ainanto* literally means 'off-up-take' (= 'take off, remove'); however, it has semantically shifted (and has been formally altered) in Homeric Greek and just means

¹¹ I thank Tatiana Nikitina for our productive discussions on that topic in Fall 2010, which were very helpful in the production of the present paper.

‘deny’. Section 4 will demonstrate how such occurrences of semantic shift are correlated with Type 3 (no ARG) constituent structure types, through interesting semantic constraints:

- (21) hoi d’ ou gignó:skontes ape:né:nanto hékastos (Il. 7.185)
DEM:NOM LNK NEG know:PART.PRES.NOM deny:MID.AOR.3PL every_one:NOM
RelP/apó-SatP/aná-
ainanto
off-up-take
‘But they knew it not, and everyone denied (it)’

Third, while constituent structure and patterns of semantic bleaching suggest that the RelP is prefixal in nature, its syntactic behaviour exhibits similarities to that of adpositions. While simple prevervation allows for the use of an adposition to introduce the oblique verb argument, the oblique argument of a multiple prevervation construction is *never* introduced by an adposition, arguably because RelP already syntactically introduces that argument and commands its case. This systematicity is surprising, as combining prefixed verbs and adpositions is extremely frequent and productive in the Homeric data, but consistently unattested when the verb is multiprefixed. This is illustrated throughout the multiple prevervation examples given in this paper, and this is even illustrated in the case of a unique occurrence involving *three* preverbs, found in *the Iliad*: as template and example (22a-b) show, no adposition is used to introduce the oblique verb argument *metaphrénou* ‘back’. Similar to what is observed in two-preverb examples, the oblique verb argument is controlled by the preverb affixed farthest from the verb stem, i.e. PV3 *ex-* triggering the genitive case:

- (22) a. ARG_i # [PV3_i-RelP-SatP-V]
b. smôdix d’ aimatóessa metaphrénou
swollen Bruise:NOM LNK blood_red:NOM ARG_i/back:GEN
ex- hup- an- éste: (Il. 2.267)
RelP3_i/out- SatP/under- SatP/up- start:AOR.3SG
‘A bloody weal rose up on his back’ (*lit.* ‘rose up (from) under out of his back’)

This is all the more clear when there are two oblique verb arguments, such as in (23). As in any other occurrence, the oblique argument that depends on the [RelP-SatP-V] construction (here, *ouranòn*) is not introduced by an adposition, but by its corresponding RelP (here, *eis*).

Conversely, the second oblique argument (*akalarreítao bathurróou O:keanoío*) is introduced by an adposition (*ek*) – arguably because the RelP construction cannot do it, syntactically (it already introduces its own argument) and semantically: *eis* is not a Source-encoding (and genitive-commanding) Path morpheme:

- (23) E:élios **ex** *akalarreítao* *bathurróou* *O:keanoío*
 sun:NOM **ADPj/out** *soft-flowing:GEN* *deep-flowing:GEN* ARGj/*Oceanus:GEN*
ouranòn **eis-** an- ió:n (Il. 7.422-423)
 ARGi/*sky:ACC* **RelPi/ to-** SatP/up- go:PART.PRES.NOM
 ‘The sun going up to the sky from soft-gliding, deep-flowing Oceanus’

Thus, in multiple preverbation constructions, the preverb farthest from the verb stem exhibits morphological and semantic characteristics of prefixal type, while also exhibiting syntactic behaviour of a more relational nature typical for adpositions. Conversely, the SatP, closest to the verb stem, always functions as a satellite of the verb. Basically, a multiple preverbation construction may be formalized as in template (24), where RelP stands for *relational* preverb and SatP stands for *satellite* preverb:

- (24) ARGi # [RelPi- (SatP)- SatP- V]

However and as expected, things are not so clear-cut from a panchronic perspective. Multiple preverbation exhibits in synchrony different stages of grammaticalization; the preverbs eventually attest lexicalization into multiprefixed verb forms, thereby changing the function of any RelP they contain to that of a SatP.

3.3 From relational preverbs to satellite preverbs: grammaticalization at work

Revisiting the multiple preverbation constructions in a grammaticalization approach reveals the synchronic co-occurrence in Homeric Greek of both ends of a grammaticalization process of the RelP, from cliticized RelP to lexicalized RelP. A similar grammaticalization continuum in the Amerindian language Rama is described by Craig & Hale (1988) which gives further credence to our analysis of the Homeric data.

On the one hand, the RelP may simply be a cliticized adposition (25a-b). This process is productive and no semantic shift occurs: each part of the construction (RelP, SatP and V)

conveys its own meaning. Syntactically, the RelP commands the case it would have commanded as an adposition:

- (25) a. *toì* *méga* *teíkhos* **huper-** *kat-* *ebe:san*
 DEM:NOM.PL *great:ACC* *wall:ACC* **RelP/above-** SatP/down- walk:AOR.3PL
homílo:i (Il. 13.87)
 throng:DAT
 ‘(The Trojans) who had got down over the great wall in their multitude’
- b. *hê* *mèn* *ár’* **eis-** *ana-* *bâs’*
 REL:NOM LNK LNK **RelP/to-** SatP/up- walk:AOR.3SG
huperó:ïa *sigalóenta* (Od. 16.449)
upper_chamber:ACC *bright:ACC*
 ‘So she went up to her bright upper chamber’

On the other hand, if these occurrences of cliticized RelP may well be regarded as an early stage of the grammaticalization of the RelP from a free-form state (for instance a postposition) to a prefix state, then the problem is that the end point of such a grammaticalisation process, that of strong lexicalization of the whole [RelP-SatP-V] construction, is also attested in the Homeric data.

In those cases, both SatP and RelP function as satellites, more specifically as “lexicalized satellites”, just as English verb particles may lexicalize into a particle verb constructions (e.g., *run out* ‘exit by running’ vs. *run out* ‘exhaust’). Three observations can be used as evidence to demonstrate this claim: (a) since the preverbs are lexicalized, the process of prefixation is not productive anymore; (b) the RelP is semantically shifted and also bleached, in the sense that the semantics of the RelP cannot be distinguished anymore (or at least, less easily, lexicalization being a matter of degree) from the semantics of the whole construction; and (c) the syntax of the [RelP-SatP-V] construction changes. If the lexicalized construction is intransitive, there is, as expected, no verb argument. However, if the lexicalized construction is transitive, the verb argument to which the RelP is syntactically linked is now the direct object and takes the object-marking case, i.e. the accusative, even when the involved RelP cannot normally command the accusative case. Thus, in examples (26) and (27), the lexicalized construction *apó-aná-ainómai* ‘to deny’ may be intransitive (26) or transitive (27). In (27), the argument linked to the RelP is treated as the direct object, and as such takes the

accusative case. This occurs despite the fact that the Path morpheme *apó* ‘off’ is normally used exclusively with the genitive case:

- (26) *hoi d’ ou gignó:skontes ape:né:nanto hékastos* (Il. 7.185)
 DEM:NOM LNK NEG know:PART.PRES.NOM deny:MID.AOR.3PL every_one:NOM
RelP/apó-SatP/aná-ainanto
off-up-take
 ‘But they knew it not, and everyone denied (it)’

- (27) *éntha sù me:két’ épeit’ apané:nasthai* (Od. 10.297)
 LNK 2SG.NOM no_more LNK deny:MID.AOR.INF
RelP/apó-SatP/aná-ainasthai
off-up-take
theoû euné:n
 god:GEN couch:ACC
 ‘Then do not thou thereafter refuse the couch of the goddess’

Examples (26) and (27) illustrate a case of complete lexicalization in which the verb stem (**ainomai* ‘to take away, to rob of’) does not exist by itself anymore (or at least is not attested in the data). Also semantically, the [SatP-V] construction *aná-ainómai* has become fully lexicalized, as little or nothing remains of the original Path semantics of the preverb. The [RelP-SatP-V] construction *apó-aná-ainómai* shows similar evidence of complete lexicalization and loss of constructional transparency and productivity.

In other words, Homeric Greek shows examples of a grammaticalization process of the RelP to a SatP. However and crucially, this process is constrained by semantic affix-order matters, as shown in Section 4 below.

4. Semantic constraints ruling multiple preverbatation emergence

The syntactic changes of multiple preverbatation as described are also semantically-driven. Our semantic analysis is inspired by typological work by Greenberg (1963) and Bybee (1985), and by Grinevald’s work on the affix order of directionals in Jakalteq Popti’ (Craig 1993, Grinevald, 2003), an Amerindian language of the Mayan family (Guatemala).

4.1 Constraints on affix order

A thorough observation of Homeric Greek shows how the preverbs are affixed on the verb stem in a certain order in cases of multiple preverbatation. As Table 3 above has shown, multiple preverbatation occurs 98 times in *the Iliad* and *the Odyssey*, with 23 different two-preverb combinations and one three-preverb combination. While the limited number of texts motions to caution, these results suggest that there are affix-order constraints. Theoretically, the total number of possible different two-preverb combinations is 272¹². If restricted to a selective inventory of 14 Path morphemes such as the one proposed in Table (see footnote 3), there are only 19 two-preverb combinations, for a total of 86 occurrences, while theoretically 182 two-preverb combinations could have occurred. Table 5 details these 19 combinations, from the most frequent to the less frequent (token frequency).

	Combination	Gloss	Token Frequency
Totals	19		86
	<i>eis-aná-</i>	to-up-	17
	<i>eis-apó-</i>	to-off-	13
	<i>ek-apó-</i>	out-off-	11
	<i>epí-pró-</i>	at-forth-	7
	<i>ek-aná-</i>	out-up-	6
	<i>apó-pró-</i>	off-forth-	5
	<i>en-katá-</i>	in-down-	5
	<i>epí-apó-</i>	at-off-	4
	<i>amphí-perí-</i>	around-around-	2
	<i>apó-aná-</i>	off-up-	2
	<i>ek-katá-</i>	out-down-	2
	<i>ek-pró-</i>	out-forth-	2
	<i>epí-aná-</i>	at-up-	2
	<i>hupér-katá-</i>	above-down-	2
	<i>pará-katá-</i>	besides-down-	2

¹² The total number of possible two-preverb combinations (272) was obtained via a *permutation* calculation (without repetition, since you cannot have a sequence of the same preverbs, e.g. **eis-eis*), for two-preverb combinations ($r=2$) out of an exhaustive inventory of 17 Path morphemes in ($n=17$). Formula: $(n)_r = n! / (n - r)!$, with ! as a factorial operator.

<i>eis-katá-</i>	to-down-	1
<i>ek-diá-</i>	out-through-	1
<i>epí-en-</i>	at-in-	1
<i>perí-pró-</i>	around-forth-	1

Table 5 – Attested combinations of preverbs in multiple preverbatation

Both the constrained number and the *fixed* nature of the affix orders raise the question of possible underlying motivations that constrain them, discussed next.

4.2 Semantic constraints on affix order

Bybee (1985:33-35) demonstrates how the affix order of morphemes on stems may exhibit an *order and relevance* principle, which holds that the more an affix is semantically relevant to the stem, the closer it will be to it. She bases her conclusions on previous work on nominal affixes by Greenberg (1963) and on her own work on inflectional verbal affixes.

In light of her approach and based on an exhaustive examination of the collected data, Table 6 draws a parallel between each attested combination of preverbs and the semantics of the preverbs themselves. The latter are arranged in 3 slots, the leftward numbering starting from the verb stem. These slots are not interchangeable: for instance, one may find *apó-aná-V*, but not **aná-apó-V*. Table 6 actually reveals a correlation of relevance between the affix order of the preverbs and the different semantic components of a Motion event:

-3	-2	-1	V
Path/Ground	Figure / Ground	Path Orientation	VERB STEM

relation	Localization	Median Path	
<i>eis-</i> 'to'	<i>apó-</i> 'off'	<i>aná-</i> 'up, back'	
<i>ek-</i> 'out'	<i>en-</i> 'in, into'	<i>katá-</i> 'down'	
<i>epí-</i> 'at, onto'	<i>pará-</i> 'beside'	<i>pró-</i> 'forth'	
<i>amphí-</i> 'about, all ways' ¹³	<i>perí-</i> 'around'	<i>diá-</i> 'through'	
	<i>hupér-</i> 'above'		
	<i>hupó-</i> 'under'		

Table 6 – Semantic and conceptual constraints on affix order in multiple preverbation¹⁴

Overall, the closer the preverb to the verb stem, the highest its relevance to the determination of the Figure and Path orientation. Conversely, the farthest the preverb from the verb stem, the highest its relevance to the determination of the Ground and how the Path relates to it:

- Slot [-1] contains the 4 preverbs that may determine *how the Path followed by the Figure is oriented on a vertical and horizontal axis* (e.g. motion up, down, forward or back), and may express *median* types of Path;
- Slot [-2] contains the 6 preverbs that *localize the Figure with respect to the Ground* during a Motion event (position detached from, inside, beside, around, above or under);
- Slot [-3] contains the 4 preverbs that determine *the relation of the Path with respect to the Ground* (reaching or approaching the Ground, extraction from the Ground, brutal contact with the Ground, erratic motion “all ways about” the Ground – for the latter, cf. footnote 13).

¹³ In the examined date, *amphí* ‘about’ as a RelP occurs only once, with *perí* ‘around’ as a SatP. I still wonder whether this should be taken as real multiple preverbation, or as a form of redundant preverbation, such as in *pró-pró-kulíndomai* ‘to roll forth on and on’ (Od. 17.525 ; Il. 22.221); cf. Imbert (2008a:191) for a discussion of the latter.

¹⁴ As for the compound morphemes *parék* and *hupék* (see footnote 3), which are addressed along with the other Path morphemes in Imbert (2008a), they behave as one morpheme and belong to slot 2 – it seems that the first morpheme of the compound (*pará* and *hupó*) determines the slot, as opposed to the second morpheme of the compound, which in both cases is *ek*.

A larger typological perspective on affix-order constraints allows a striking comparison with other Path coding systems in languages. For instance, Grinevald (2003:5) addresses similar constraints on the multiple suffixation of “directional” morphemes on verb stems in Jakaltek Popti’ (Mayan family). They constitute an organized system; the verb stem may get up to three different directionals. Example (28), taken from Grinevald (2003), illustrates a common two-suffix pattern:

- (28) [V-DIR2-DIR3]
- | | | | | | |
|-------------|-------|--------|---------|--------|-------------|
| sirnih | -ay | -toj | sb’a | naj | sat |
| A3.E3.threw | -down | -away | E3.REFL | NCL/he | E3.in.front |
| pahaw | b’et | wichen | | | |
| cliff | into | gully | | | |
- ‘He threw himself away over the cliff into the gully’

Table 7 below shows how the multiple suffixation of these directionals in Jakaltek is organized, and compares it to multiple preverbatation in Homeric Greek, in terms of affix-order constraints:

- Slot [1–] contains the directionals that mark the verbal aspect (e.g. iterative). These “aspectual” semantics have evolved from a spatial meaning.
- Slot [2–] contains the directionals that may determine *how the Path followed by the Figure is oriented on a vertical axis* (i.e. motion up and down), or whether the Figure is going through or crossing something (*median Path*); as opposed to Homeric Greek, this second slot may also specify whether the Path followed by the Figure is boundary-crossing (‘enter’, ‘exit’);
- Slot [3–] contains the 4 preverbs that may determine *the (deictic) relation of the Path with respect to the Ground* (approaching or moving away).

Homeric Greek			
-3 Path/Ground relation (incl. boundary- crossing)	-2 Figure/Ground Localization	-1 Figure Orientation, Median Path	V
	V	+1 Aspect	+2 Figure Orientation, Median Path
			+3 Path/Ground relation (<i>toward / away</i>)

		(incl. boundary-crossing)	
Jakaltek Popti'			

Table 7– “Mirror-image” affix-order constraints for Homeric preverbs and Jakaltek directionals

In both languages, the affix closest to the verb stem tends to be less involved in the determination of how the Path relates to the Ground than the affix farthest from the verb stem. In other words, even though they are genetically unrelated languages, both the affixation order of Jakaltek directionals and Homeric preverbs lend support to the hypothesis of a [+Ground] semantic constraint on the affix farthest from the verb stem. These constraints could be seen as reflecting more general constraints on multiple affixation phenomena, that need to be further investigated.

Interestingly, these semantic affix-order constraints find a corollary in Homeric Greek in the morphosyntactic patterning of multiple preverbation.

4.3 Semantic constraints and morphosyntactic patterning

In Homeric Greek, the semantics basically say that the preverb farthest from the verb stem is the most Ground-biased of the string of preverbs. Morphosyntactically, that preverb is also the relational preverb RelP, i.e. the preverb that introduces the oblique verb argument, which is the overt expression of the Ground. Moreover, slot [-3] preverbs – those that are semantically the most “Ground-biased”– exhibit a strong tendency to occur as RelP in constituent structure types in which the oblique verb argument (the overt expression of the Ground) is present, i.e. [+ARG] constituent structure types. Table 8 thus aligns the distribution of the 19 combinations presented above into [+ARG] vs. [-ARG] constituent structure types. They are classified by RelP, from the most common to the least common in [+ARG] constituent structure types:

[Slot] RelP	Combinations RelP- SatP-	Gloss	[+ARG] Types	[- ARG] Type	Total
[-3] <i>eis-</i>		to	31	-	31
	<i>eis-aná-</i>	to-up	17	-	17

	<i>eis-apó-</i>	to-off	13	-	13
	<i>eis-katá-</i>	to-down	1	-	1
[-3]	<i>ek-</i>	out	17	7	24
	<i>ek-aná-</i>	out-up	4	2	6
	<i>ek-apó-</i>	out-off	7	4	11
	<i>ek-katá-</i>	out-down	2	-	2
	<i>ek-pró-</i>	out-forth	1	1	2
	<i>ek-diá-</i>	out-through	1	-	1
	<i>ek-hupó-aná-</i>	out-under-up	1	-	1
[-3]	<i>epí-</i>	at	8	6	14
	<i>epí-aná-</i>	at-up	-	2	2
	<i>epí-apó-</i>	at-off	2	2	4
	<i>epí-en-</i>	at-in	1	-	1
	<i>epí-pró-</i>	at-forth	5	2	7
[-2]	<i>en-</i>	in	5	-	5
	<i>en-katá-</i>	in-down	5	-	5
[-2]	<i>hupér-</i>	above	2	-	2
	<i>hupér-katá-</i>	above-down	2	-	2
[-2]	<i>apó-</i>	off	2	5	7
	<i>apó-aná-</i>	off-up	-	2	2
	<i>apó-pró-</i>	off-forth	2	3	5
[-3]	<i>amphí-</i>	around	2	-	2
		around-			
	<i>amphí-perí-</i>	around	2	-	2
[-2]	<i>pará-</i>	beside	1	1	2
	<i>pará-katá-</i>	beside-down	1	1	2
[-2]	<i>perí-</i>	around	-	1	1
	<i>perí-pró-</i>	around-forth	-	1	1
Total			67	20	87

Table 8 – Distribution of the 19 combinations into the 3 constituent structure types in terms of token frequencies

Figure 1 shows the same findings graphically and focuses on the Relp only:

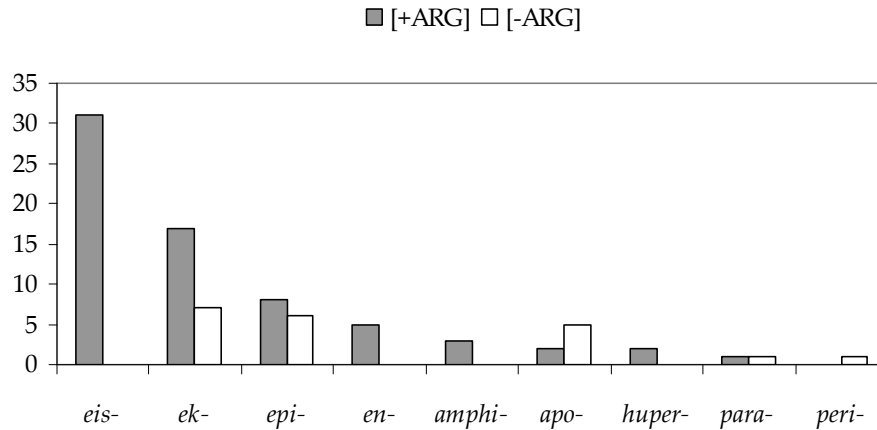


Figure 1– RelP frequencies in [+ARG] vs. [-ARG] constituent structures types

Several observations can be made concerning these findings. First, in line with the semantic affix-order constraints presented above, they show that within multiple preverbation constructions, slot [-1] preverbs are quite logically never found as RelP; semantically, the slot [-1] preverbs code either the orientation of the Path followed by the Figure or median types of Paths. Conversely, slot [-3] preverbs are the most common as RelP; semantically, they are the most Ground-biased. Second, slot [-3] preverbs not only are the most common RelP in multiple preverbation occurrences (81,6%; 71 on 87) of multiple preverbation occurrences) but they also occur almost systematically in [+ARG] constituent structure types, i.e. when the Ground is overtly expressed (81,7%; 58 on 71) of slot [-3] preverbs occurrences are exclusively found in [+ARG] constituent structure types). In short, there is a strong [+Ground] semantic bias on multiple preverbation, and the [+Ground] bias on slot [-3] preverbs is clearly correlated in morphosyntactic patternings such as constituent structure types. These observations are definitely tilting the balance for the whole system of multiple preverbation: in Homeric Greek, 77% of multiple preverbation occurrences are [+ARG] occurrences.

Just as the comparison between semantic affix-order constraints in Homeric Greek and Jakaltek Popti' could be seen as reflecting more general constraints on multiple affixation phenomena, a more general interpretation of the correlation between semantic constraints and morphosyntactic patterning in Homeric multiple preverbation points to interesting

hypotheses. This correlation basically suggests that the most Ground-biased semantic contents are coded farther away from the verb stem and thus closer to the external arguments that code the Ground.

For reasons of space, we cannot elaborate all the issues concerning the correlations between semantics and morphosyntax in Homeric multiple preverbatation, but some additional points can be made to support the latter assumption. They mainly relate to another but nonetheless similar bias affecting multiple preverbatation in general and the RelP in particular, that of a [-Goal] vs. [+Goal] bias.

4.4 What RelP do that SatP cannot: the [+Goal] constraint

The discussion above has shown a strong frequency asymmetry for [+Ground] Path morphemes vs. other Path morphemes in multiple preverbatation in general, regardless of whether or not they function as RelP or SatP, or whether they occur in [+ARG] constituent structure types when functioning as RelP.

Another type of frequency asymmetry can be observed in the data, this time for [+Goal] Path morphemes vs. [-Goal] Path morphemes, i.e. those that explicitly code Goal ('to, toward, into, onto, at...') vs. those that do not. Although different from the more specific Source vs. Goal asymmetries issues that have discussed in the recent literature (see notably Ikegami 1987, Bourdin 1997, Lakusta & Landau 2005, and Wälchli & Zuniga 2006, among others), the observed asymmetry can be indirectly related to this, as we will show below.

The [+Goal] vs. [-Goal] frequency asymmetry in Homeric Greek affects the grammaticalization processes from RelP to SatP evoked in section 3 above. That asymmetry consists of two tendencies. First, [+Goal] Path morphemes are far more frequent as RelP than other Path morphemes. Second, and even more interestingly, multiple preverbatation constructions involving a [+Goal] morpheme as RelP tend to grammaticalize (and eventually lexicalize) to a much lesser degree than other multiple preverbatation constructions. Constructions involving a [+Goal] morpheme tend to occur in [+ARG] constituent structure types *and*, somehow, prevent the loss of the overt expression of the Ground: they constrain

the grammaticalization into a lexicalized verb form that would co-occur with a [-ARG] constituent structure type (the lexicalized verb being either intransitive, or transitive with an *object* verb argument).

These two tendencies are clearly shown in Table 9, which classifies the RelP in terms of token frequency, whether they are [+Goal] or [-Goal], and whether they occur in [+ARG] or [-ARG] constituent structure types. For instance, although *eis-* ‘to’ is by far the most frequent of all RelP in the data (31 occurrences), it completely disappears from the record in [-ARG] constituent structure types. This means that multiple preverbatum constructions that involve *eis-* ‘to’ as a RelP never grammaticalize nor evolve into lexicalized multiprefixed verbs, whatever the syntactic and semantic context.

RelP	Gloss	Total of occurrences	[+ARG] occurrences	[-ARG] occurrences
[+Goal]		50	44	6
<i>eis-</i>	to	31	31	-
<i>epí-</i>	at, onto	14	8	6
<i>en-</i>	in, into	5	5	-
[-Goal]		37	23	14
<i>amphí-</i>	about	2	2	-
<i>apó-</i>	off	7	2	5
<i>ek-</i>	out	23	16	7
<i>hupér-</i>	above	2	2	-
<i>pará-</i>	beside	2	1	1
<i>perí-</i>	around	1	0	1
Total		87	67	20

Table 9 – Frequency of RelP according to a [+Goal] vs. [-Goal] bias and [+ARG] vs. [-ARG] constituent structure types

This point has many implications, for Homeric Greek but also for Path-coding typology in general. First, within Homeric Greek, this [+Goal]-bias on the RelP extends well beyond multiple preverbatum. It actually affects any Path-coding element that functions adpositionally, i.e. as RelP in multiple preverbatum but also as a basic adposition outside

multiple preverbatation (cf. Imbert 2008a). Conversely, a clear [-Goal]-bias appears in any Path-coding element that functions as a satellite, i.e. as SatP in multiple preverbatation but also as a basic satellite preverb outside multiple preverbatation. For instance, all of the 14 Path morphemes presented in Table can work as adpositions in Homeric Greek; but the three [+Goal] Path morphemes *eis* 'to', *en* 'in' and *epi* 'at, onto' represent 49.55% of all the occurrences of adpositions in *the Iliad* and *the Odyssey* by themselves. This could be grounds to develop and redefine the central opposition made by Talmy (2000) between satellites and adposition in his definition of satellites.

Second, our findings for Homeric Greek can contribute to the current debate about asymmetries in languages that affect the treatment of Goal expressions. For instance, in Table , two of the [-Goal] elements more specifically code Source (*apó-* 'off' and *ek-* 'out'), representing 81% of all [-Goal] RelP in terms of token frequency. When compared to the three [+Goal] RelP (*eis*, *epi* and *en*) in terms of occurrences in [+ARG] vs. [-ARG] constituent structure types, [-Goal] RelP (including Source-coding RelP) show a much lesser tendency to appear in [+ARG] types, as illustrated in Figure 2:

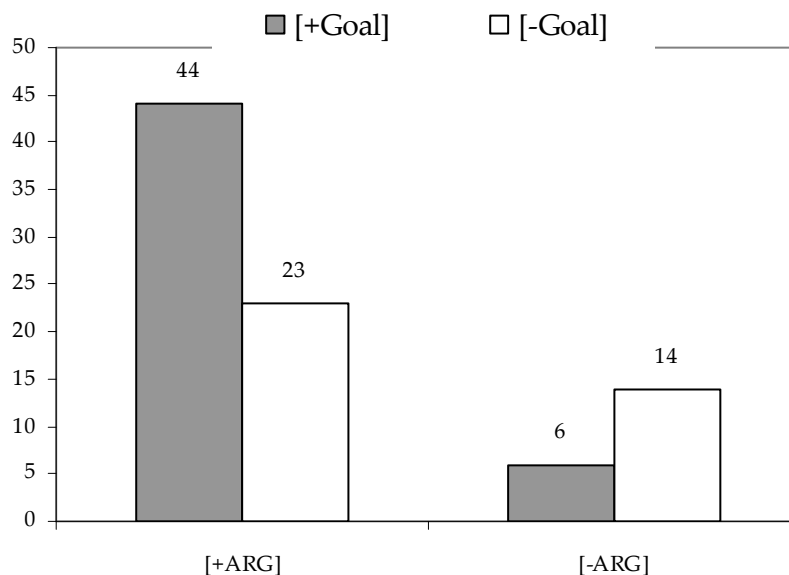


Figure 2 – [+ARG] vs. [-ARG] occurrences in [+Goal] RelP vs. [-Goal] RelP

These [+Goal] vs. [-Goal] asymmetry matters could not be much further explored in the Homeric data yet, but definitely constitute grounds for further research on the Homeric data and more generally in Path-coding typology.

5. Concluding remarks and perspectives

Extending insights from typological studies on multiple affixation systems in Amerindian languages to Homeric Greek, this paper has offered a more generally plausible account of multiple preverbatation, which complements what traditional reference grammars offer on this topic. Our main findings can be summarized as follows.

First, typologically, multiple preverbatation is a systematic type of prefixal construction involving a system of relational preverbs that contrast with more widely-known satellite preverbs. Basically, the affixation order of the preverbs is as follows: the preverb closest to the verb stem functions as a *satellite* preverb, while the preverb farthest from the verb stem functions as a *relational* preverb, i.e. it introduces the oblique verb argument and commands its case. In a more theoretical perspective, confronting both types of preverbs in one type of construction allows for a gradience-of-categories type of reanalysis of preverbs in Homeric Greek which seems to be typologically more accurate than the notion of a formal category of preverbs that “may behave” as adpositions or adverbs with or without tmesis and because of a lack a “status determinacy” in the language. As is often the case, this categorial gradience is the outcome of a process of grammaticalization, attested in the Homeric data, from the cliticization of a relational preverb to the lexicalization of the latter into the verb form, through a “satellite” status.

Second, the idea of multiple preverbatation as a systematic type of construction is reinforced by the existence of a fixed affixation order of preverbs on the verb stem with underlying semantic motivations and constraints. These motivations and constraints involve two different but interconnected semantic biases. First, the farther the preverb from the verb stem, the higher its relevance to the Ground and to how the Path relates to that Ground. This is confirmed by an exhaustive observation of all multiple preverbatation occurrences (and their frequencies) in Homeric Greek. This constraint has a morphosyntactic corollary. Iconically,

the Ground-biased semantic contents are morphologically farther away from the verb stem and thus morphosyntactically closer to the external arguments that code the Ground. Strikingly, these Ground-biased preverbs show a clear tendency to appear in constituent structure types where the oblique verb argument coding the Ground, is overtly expressed; conversely, they show a tendency to be absent from constituent structure types where that argument is absent. The second semantic bias is that preverbs which intrinsically code the Goal also tend to occur in [+ARG] constituent structure types and, more crucially so, tend to prevent the loss of the overt expression of the Ground, which constrains – or even prevents – the grammaticalization of the construction into a lexicalized verb form, which would result in a [–ARG] constituent structure type.

Third, while typology offers new perspectives on ancient languages, ancient languages provide interesting data for language typology. The present study of Homeric relational preverbs is in line with Craig & Hale's (1988) analysis on some Amerindian languages (Rama, Winnebago and Nadëb), especially with Craig's analysis of Rama (Chibchan family). Homeric Greek provides support for their analysis of the morphosyntax of RelP elements in these Amerindian languages and provides a documented insight into the diachrony of such elements cross-linguistically. Next, concerning affix ordering, Homeric Greek is ground for a further perspectives on multiple affixation systems such as Jakaltek directionals and their possible underlying Path-related motivations. Finally, Homeric Greek raises theoretical questions for current typologies of spatial expression, particularly about the notion of *satellite*. While Talmy (2000:II, 102) basically uses a strict opposition with the notion of "adpositions" to define his notion of "satellite", this paper suggests that adpositions and satellites are indeed opposed (although they may also represent two stages in the evolution of a form or system), but in a yet little explored conceptual fashion: that of an opposition between satellites as [–Goal] and adpositions as [+Goal]. This may be promising for further research and also a striking example of how conceptual biases may be mirrored in the structure and evolution of morphosyntactic systems.

Such assumptions definitely need to be further explored. For instance, it would be interesting to investigate the becoming of multiple preverbation in later stages of Ancient Greek; this

would be a further contribution to a panchronic perspective on the origin and evolution of satellite elements across languages.

ABBREVIATIONS

1	1st person
2	2nd person
3	3rd person
ACC	accusative
ADP	adposition
AOR	aoist
ARG	verb argument
DAT	dative
DEM	demonstrative
DL	dual
DIR	directional
GEN	genitive
IMPF	imperfect
INF	infinitive
LNK	link, discursive element
MID	middle voice
NEG	negation
NOM	nominative
OPT	optative
PART	participle
PASS	passive
PL	plural
PRES	present
PV	preverb
REL	relative
RelP	relational preverb
SatP	satellite preverb
SG	singular
V	verb

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