

# **Argument structure and the syntax-morphology interface.**

## **A case study in Latin and other languages**

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## List of abbreviations

N. B.: The abbreviations used in glosses are primarily those proposed by *The Leipzig Glossing Rules* of the Department of Linguistics of the Max Planck Institute for Evolutionary Anthropology, available at <http://www.eva.mpg.de/lingua/resources/glossing-rules.php> (20 September 2010).

1/2/3: first/second/third person

ABL: ablative

ACC: accusative

ALL: allative

AOR: aorist

APC: Absolute Participial Construction

Asp<sub>Q</sub>P: Aspect Quantity Phrase

AUX: auxiliary

BTL2: second edition of the *Bibliotheca Teubneriana Latina* (Tombour 2002)

CDMC: Complex Directed Motion Construction

CEOC: Complex Effected Object Construction

COL: Change-of-Location (alternant)

COMPAR: comparative

CONJ: conjunction

COS: Change-of-State (alternant)

DAT: dative

DECL: declarative

DEF: definite

DIM: diminutive

DM: Distributed Morphology

DOC: Double Object Construction

EA: external argument

ECP: Empty Category Principle

ELA: elative

EP: Event Phrase

EPP: Extended Projection Principle

ESS: essive

EST: Event Structure Template

EXT: external (prefix)  
F: feminine  
F<sup>SP</sup>: shell functional projection  
FUT: future  
GEN: genitive  
GER: gerund  
HMC: Head Movement Constraint  
ILL: illative  
IMP: imperative  
INTERR: interrogative  
INF: infinitive  
INSTR: instrumental  
INT: internal (prefix)  
IPFV: imperfective  
LA: Locative Alternation  
LOC: Locative Object Construction  
LOC: locative  
M: masculine  
MID: middle voice  
N: neutre  
NEG: negation  
NOM: nominative  
Num: number  
OPT: optative  
PART: particle  
PARTVE: partitive  
PASS: passive  
PFV: perfective  
PL: plural  
PLUPRF: pluperfect  
PRF: perfect  
PRS: present  
p-signature: phonological signature  
PST: past

PTCP: participle

REFL: reflexive

SBJV: subjunctive

s-framed: satellite-framed

SG: singular

SI: Secondary Imperfective

SUPERL: superlative

SUP: supine (a nominal form of the Latin verb)

TRANSL: translative

UOC: Unselected Object Construction

v-framed: verb-framed

VOC: vocative



# Chapter 1

## Introduction and layout

### 1 Aim and proposal

In this dissertation I put forth a syntactic theory of argument structure and the syntax-morphology interface and I apply it mainly to Early and Classical Latin, although comparison with other languages and discussion of the facts in these languages is conceded a considerable weight. Drawing on Mateu 2002f., Borer 2005b and Marantz 1995f., I argue for a view of argument structure where a basic distinction is drawn between the elements carrying *encyclopaedic* content, the *roots*, and the syntactic configuration built around functional heads. Argument structure properties exclusively depend on the latter. Furthermore, the syntactic configuration provides the *structural semantics* of the linguistic expression. I endorse a theory of the syntax-morphology interface like the one proposed in the Distributed Morphology framework: morphology is, by default, syntax, although some specific PF operations can disrupt the basic syntax-morphology isomorphism—an isomorphism which, I argue, is inherent to the syntax-semantics interface. Crucially, cross-linguistic variation shall be defended to depend exclusively on that lack of isomorphism between syntax and morphology. In particular, it is triggered ultimately by language-specific morphophonological properties of functional heads.

The empirical focus is set on the domain of events expressing a transition. I consider Talmy's (2000) theory of the cross-linguistic expression of events of change, where a basic divide is drawn between the languages in which the transition can be encoded by a non-verbal element—*satellite-framed* languages—and the languages in which the transition must be encoded by the verb—*verb-framed* languages. I couch Talmy's theory of transition events within a syntactic theory of argument structure, and I explore a wide range of constructions in Latin—either presenting new data or giving a new perspective on data from the Latin linguistics tradition—to show that Latin pertains to the class of satellite-framed languages. Following an idea in Mateu 2002:160 and Mateu & Rigau 2002, I propose that the s-/v-framed distinction is explainable in purely morphophonological terms. In particular, I make use of the theory of PF operations developed by Embick & Noyer (1999, 2001) within the Distributed Morphology framework, together with Hale & Keyser's (2002:60f.) and Harley's (2004) theory of *conflation*, to account for the distinction. Thus, in v-framed languages the eventive v head *lowers*, at PF, to the head encoding transition—Path—and *fuses* with it, yielding a unique locus for phonological realisation. On the other hand, in s-framed languages this Fusion operation does not take place, so v and Path are free to be phonologically realised independently from each other. Finally, I propose a refinement of Talmy's typology within the class of s-framed languages. First, there are *strong* s-framed languages, like the Germanic languages, where v and Path are not required to form one word, and, thus, allow constructions like complex adjectival resultative constructions. Second, there are *weak* s-framed languages, like Latin, where v and Path must form one word (if both are realised independently from each other) and disallow, hence, constructions like adjectival resultative constructions. This distinction is accounted for in terms of a v-to-Path (PF) Lowering operation for weak s-framed languages, which

creates a complex head. A three-way, gradual typology emerges encompassing strong s-framed languages (no v-to-Path Lowering and no Path-v Fusion), weak s-framed languages (v-to-Path Lowering, no Path-v Fusion) and v-framed languages (v-to-Path Lowering and Path-v Fusion).

## 2 Methodology

### 2.1 *The advantages of a theoretical approach to the grammar of unspoken languages*

This is, primarily, a dissertation on theoretical linguistics, in particular, on generative grammar. It is, secondarily, a dissertation on Latin. Since it has become a bit of a tradition in works like the present one to justify this seemingly unnatural marriage, I shall also say a few words about it.

Needless to say, the main problem in doing generative grammar on an unspoken language is the lack of native speakers. In particular, we do not have access to competence, but only to performance, since we cannot elicit grammatical judgements.<sup>1</sup> The data of closed corpora are, thus, natural data, not experimental data, and deny us the precious gift of *negative evidence*, i.e., the starred sentence. Moreover, we cannot be a hundred per cent sure that what has survived up to our times in the manuscripts is undoubtedly *positive evidence* —an unstarred sentence—and we can only confide in the expertise of the philologists to provide us with reliable editions.

I would like to assuage the dramatic scenario just depicted by pointing out how generative grammar—or any well articulated theory, for that matter—can shed light on the grammar of ancient languages. Interestingly, É. Kiss (2005) notes that there have been two major approaches to grammatical descriptions of unspoken languages. The traditional approach is *inductive*, in that it builds a description from the data available in the closed corpus. More recently, theoretical approaches, which are *deductive* in nature, formulate hypotheses couched within a general theory of grammar, and validate them against the data of the corpus. While the inductive approach has proved useful in “listing and interpreting the morphemes of a language” (É. Kiss 2005:2) and in making generalisations concerning the different levels of grammar, such an approach is, by necessity, considerably less heuristic than a deductive approach. Specifically, it is only when equipped with a theory that we are in a position to look for particular constructions—since we predict them to be possible or not—and that we can thus ask ourselves why a particular construction is not attested in the corpus. In this way, a deductive approach compensates for the lack of negative evidence characteristic of corpora.

This dissertation provides a perspicuous illustration of the advantage of a deductive approach in addressing data from unspoken languages. As an example, I will show, in Chapter 4, that Latin does not feature complex adjectival resultative constructions, i.e., constructions like *Sue hammered the metal flat*, in which *flat* encodes the final state attained by the metal and *hammered* encodes the way in which Sue brings the metal to that state. As far as I know, this claim about how argument structure is expressed in this language has never before been made in the Latin linguistics tradition or elsewhere.

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<sup>1</sup> Although we do have access to what ancient grammarians said about the facts of their languages. For Early and Classical Latin, specifically, we possess part of Varro’s *De lingua latina* (*On the Latin language*), of the 1st century BC. On the other hand, some contemporary authors, like Pfister (1983) or Miller (1993), advocate for the use of a *nonnative competence*, built after years of exposition to the texts.

Importantly, although the claim is empirical, and arrived at through a thorough corpus search which I shall describe in Chapter 4, Section 1.2, I would never have made it were it not for the fact that, from a particular theoretical perspective presented in Chapters 2 and 3, complex adjectival resultative constructions are expected to be allowed in languages like Latin (s-framed languages —see Section 1). The theory leads us to the data. In turn, the empirical finding in Latin leads me to non-trivial empirical and theoretical questions: Do other s-framed languages disallow these constructions? Is Talmy's (1991, 2000) typology to be refined? Can I accomplish the refinement through the theoretical tools which I assume?<sup>2</sup>

## 2.2 Data and corpus

The Latin data in this dissertation correspond to the periods of Early and Classical Latin, spanning, respectively, from the 3rd century BC to 100 BC and from 100 BC to the end of the 2nd century AD. Crucially, I follow Crocco Galèas & Iacobini (1993) in adopting a *broad* sense of the term *Classical Latin*, since this period is sometimes taken to correspond to the 1st century BC, excluding the so-called Silver Latin period, which encompasses the two first centuries of our era (see Haverling 2000:38). One of the reasons to assume an extended “version” of the Classical Latin period and to add also Early Latin into the relevant corpus has to do with what Crocco Galèas & Iacobini (1993:52) call the “relative homogeneity in the control of written norm” (my translation: VAM), applicable to Classical Latin in the broad sense, and, hence, encompassing Silver Latin. In particular, these authors point out that “in the literary texts of the first two centuries of the Empire <i.e., the first two centuries of our era: VAM> the prevalent norm is that of the Golden Age <i.e., the Classical period in the narrow sense: VAM>.” (Crocco Galèas & Iacobini 1993:52; my translation: VAM). A second reason is my suspicion that Late Latin (from the 3rd century to the 6th century AD) shows important differences as far as the empirical domain of this dissertation is concerned, i.e., argument structure and, secondarily, Aktionsart. It will become clear in Chapters 3 and 4 that Latin makes use of verbal prefixes in expressing argument structure changes and that there is a non-trivial relation between prefixation and telicity. However, as Haverling (2000:459) concludes in a monumental work on the Aktionsart properties of unprefixated vs. prefixed *sco*-suffixated verbs, the function of the prefix as a telicity marker is clearly lost by the end of the 2nd century AD. Having into account these two reasons, I adopt the working hypothesis that the periods of Early and Classical Latin (in the broad sense) constitute a homogeneous language stage as far as the morphosyntactic expression of argument structure and Aktionsart is concerned.

Unless otherwise stated, the data have been extracted from the CD-ROM corpus of the second edition of the *Bibliotheca Teubneriana Latina* (BTL2, Tombeur 2002), a digitalised collection of the highly reliable Teubner's Latin text editions. I restrict the corpus searches to the Antiquitas subcorpus of the BTL2, since this subcorpus corresponds to the relevant period described above, from the first written texts down to the end of the 2nd century AD. The Antiquitas subcorpus contains a total of 300,959 sentences. The procedure I have used to retrieve the data from the BTL2 consists in searches for combinations of particular elements within the mentioned Antiquitas subcorpus. For instance, a search for telic instances of the prefixed verb *advolo* ‘fly onto’ could involve the search of the combination of the sequence “advol\*”, which

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<sup>2</sup> For more considerations of the problems encountered when working on unspoken languages see Pinkster 1972:9-14.

yields all the registered forms of the verb without the inflectional endings, and telicity-signalling expressions such as *subito* ‘suddenly’. The BTL2, although not lemmatised, is remarkably flexible as far as search filters are concerned, permitting the use of boolean operators or useful devices such as the restriction in the number of words between the elements searched for.

Besides the BTL2, I draw on the data and descriptions thereof found in the rich tradition of works on Latin linguistics, from the 19th century on. Of particular importance, also, are the Latin dictionaries: Gaffiot’s (1934) *Dictionnaire Latin-Français* and Lewis & Short’s (1879) *Latin Dictionary*, available online at the *Perseus Digital Library Project* (Tufts University; Crane 2010). I have also found data in other online corpora, although I have always ascertained that the data were also registered in the Antiquitas subcorpus of the BTL2, and, accordingly, I have always labelled them with the reference provided in the BTL2. In particular, I have made use of the Greek and Roman Materials database at the *Perseus Digital Library Project*, the *LacusCurtius* database (University of Chicago; Thayer 2010) and the *Itinera Electronica* database (Université de Lovaine; Meurant 2010). For some of the texts found in these corpora there is a translation available, which I have often taken into account; however, I always provide a translation of my own for all Latin data, if not otherwise stated.

### **3 Layout of the dissertation**

The bulk of the dissertation is articulated in three chapters: Chapter 2, Chapter 3 and Chapter 4. Chapter 5 provides an overall summary and conclusions, gathering the challenges for the general proposal and the possible avenues for future research.

In Chapter 2 I put forth a theory of argument structure and the syntax-morphology interface. The theory to be presented pertains to the class of so-called *neo-constructionist* theories, that is, theories where argument structure properties do not emerge from lexical items, but are properties of the syntactic configurations built by the computational system. First I introduce the distinction between endo-skeletal theories and exo-skeletal theories: the former propose that syntax emerges from properties inherent to lexical items, while the latter propose that lexical items do not possess argument structure properties. In turn, I distinguish, within the latter class, constructionist theories, where syntactic configurations are lexical primitives, and neo-constructionist theories, where syntactic configurations are the result of derivations carried out by computational operations. As for the syntax-morphology interface, I adopt Embick & Noyer’s (1999, 2001) theory of operations applying at PF, enriching it with Hale & Keyser’s (2002:60f.) and Harley’s (2004) theory of conflation. These operations have to account for the lack of isomorphism between the syntactic-semantic representation and the morphophonological representation, and, thereby, for cross-linguistic variation, which is proposed to emerge from morphophonological properties of functional items.

Chapter 3 attempts to show that Latin is a s-framed language, in the sense of Talmy 2000: in predicates expressing a transition, the element conveying the transition and the verb correspond to different phonological units. First I introduce Talmy’s (1991, 2000) theory of transition events, and his distinction between v-framed languages (like Romance, where the transition cannot be expressed as an element different from the verb) and s-framed languages (like Latin). I make a syntactic interpretation of Talmy’s theory and propose that the s-/v-framed distinction is to be accounted for in



morphophonological terms: in v-framed languages a PF operation (Fusion) is triggered which converts the eventive *v* head and the head expressing transition, *Path*, into a single head. This operation makes it impossible for both heads to be realised independently. In s-framed languages, on the other hand, this PF operation is not triggered. After this theoretical introduction, I carry out an investigation of the expression of events of change in Latin, and I show that this language is indeed a s-framed one. I introduce data which, as far as I know, have not been tackled before in the Latin linguistic tradition —cf. Ground Unselected Object Constructions in Section 3.2.2 or Pseudoreversatives in Section 3.5. All the constructions receive a uniform analysis based on the status of Latin as an s-framed language. Importantly, I show, particularly when dealing with Figure Unselected Object Constructions (Sections 3.2.1), that a neo-constructionist approach to argument structure is more explanatory than traditional lexicalist approaches. Finally, within a scenario that exceeds Latin, I propose new hypotheses on the nature of phenomena like Complex Effected Motion Constructions (Section 3.3) or the constructions involved in the Locative Alternation (Section 3.4).

In Chapter 4 I compare Latin with other languages as far as the morphosyntactic expression of argument structure is concerned. I provide empirical evidence that Latin, although being an s-framed language, does not feature complex adjectival resultative constructions. I observe that a similar fact has been observed for another group of languages, namely, the Slavic languages. I furthermore note that neither of these languages seem to allow complex PP resultative constructions if the verb is not endowed with a prefix. I suggest that the disallowance of complex adjectival resultative constructions and that of unprefixated PP resultative constructions is related, and I propose that in these languages there is an affixal relation between the *v* head and the *Path* head which blocks the generation of the mentioned constructions. I call these languages weak s-framed languages, contrasting with strong s-framed languages, which do not require any such affixal relation between *v* and *Path*. In particular, I propose that the affixal relation between *v* and *Path* in weak s-framed languages is accounted for via a PF Lowering operation which brings the *v* head to the *Path* head, forming a complex head. I explore the empirical predictions of the proposal in a number of languages, inside and outside Indo-European. Finally I revise some of the works which have addressed the relationship of AP resultatives with other resultative constructions, and I face possible counterexamples.



## Chapter 2

### A neo-constructionist perspective on argument structure

In this chapter I present the view of the lexicon-syntax interface that will be defended throughout the dissertation. I adopt a perspective often referred to as *neo-constructionist* (Levin & Rappaport Hovav 2005:191), where the computational system of the language faculty creates structures independently of the semantic encyclopaedic features of lexical items, and where the compositional semantics of those expressions is directly read off the syntactic structure. The role of lexical items in the interpretation of linguistic expressions is reduced to that of contributing their encyclopaedic content. In Section 1 I describe the two main types of theories of the lexicon-syntax interface: the projectionist and the constructionist theories, making a distinction between constructionist and neo-constructionist theories, and highlighting the advantages of the latter. In Section 2 I revise three neo-constructionist frameworks: the theory of relational syntax and semantics of argument structure put forth by Mateu (2002), the exo-skeletal model of event structure by Borer (2003, 2005b), and the Distributed Morphology model (Halle & Marantz 1993, Marantz 1995f., among others). In Section 3 I put forth a model drawing on the three models presented in Section 2. The central idea around which the theory is built is the difference between elements conveying encyclopaedic content, *roots*, and elements conveying grammatical content, *functional heads*. Within the same section I expose a view of the morphology-syntax interface, based on the Distributed Morphology model, which will help me tackle the cross-linguistic differences in argument structure expression discussed in Chapters 3 and 4.

#### 1 Endo-skeletal versus exo-skeletal approaches to the lexicon-syntax interface

##### 1.1 *Properties of the lexical item vs. properties of the structure*

I am concerned here with theories of the lexicon-syntax interface.<sup>3</sup> If an interface is a region where two cognitive systems meet, that is, where there is a flux of information between both, the lexicon-syntax interface is the domain of the linguistic knowledge where both lexical and syntactic knowledge are at stake. A theory of the lexicon-syntax interface is, then, a theory of the relationship between the meaning of lexical items (lexical knowledge) and the syntactic environments they appear in (syntactic knowledge). The characterisation of that relationship has been approached in basically two different ways in the linguistic tradition: either from the point of view of the semantics of the lexical item or from the point of view of the syntactic environment in which it appears. The first point of view is at the origin of theories aiming at providing a necessary and sufficient characterisation of the semantic elements involved in a given lexical item which are relevant when determining its syntactic environment. Such theories are particularly concerned with the design of appropriate lexical semantic representations which adequately register those semantic elements crucial in determining the lexical item's syntactic properties.<sup>4</sup> To put it in Rappaport Hovav &

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<sup>3</sup> Other revisions of theories of the lexicon-syntax interface are to be found in Butt & Geuder 1998, Rappaport Hovav & Levin 1998, Mendikoetxea 2004, Levin & Rappaport Hovav 2005 or Demonte 2006.

<sup>4</sup> This point must be emphasised since it has been within this kind of theories that the difference between grammatically-relevant and grammatically-irrelevant semantic aspects of a lexical item has first been

Levin's (1998:97) terms, "on this approach, the lexical property of a verb that is taken to determine its syntactic behaviour is its meaning (e.g., Levin 1993; Levin & Rappaport Hovav 1995; Pinker 1989)". Complementarily, if the theory does not endow lexical items with a formal apparatus marking the syntactic expression of their semantic information, it shall design the algorithms necessary for deriving the lexical item's syntactic environment from the mentioned syntactically relevant semantic elements. And of course it is possible that both a representation of grammatically relevant properties of the lexical item and a lexicon-(morpho)syntax mapping algorithm are provided.

Conversely, there are theories of the lexicon-syntax interface that try to uncover which syntactic structures give rise to what semantic interpretations within a given syntactic domain, taking in that way some of the weight of the semantic interpretation from the lexical item itself and carrying it over to the syntax—in other words, to functional categories and functional structure. In such theories, there is no need for rich lexical semantic representations accounting for the lexical item's syntactic behaviour, nor special algorithms relating the relevant aspects of meaning to morphosyntactic expression. There exists, however, a requirement of accurately describing—often after enriching—the functional architecture of a sentence so as to account for its syntax and its compositional semantics, abstracting from the conceptual content of the lexical items it embeds. Borer (2003:33) calls the theories of the former kind *endo-skeletal* theories, and those of the latter, *exo-skeletal* theories. This is not, of course, the traditional nomenclature. Thus, Levin and Rappaport Hovav (2005) call the former theories *projectionist*, because the structure is projected from the lexical item, while the second ones are *constructionist*, because the compositional semantic and syntactic properties are part of the construction, and not of the lexical item embedded within. Borer's (2003) terms are based on the two basic types of skeletons we find in the animal kingdom: the *endoskeleton* or internal skeleton, found in vertebrates, and the *exoskeleton* or external

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pointed out (see Pinker 1989, Rappaport Hovav & Levin 1998). However, in some cases some lexical semantic aspect has been determined as grammatically relevant by some researcher which is then shown to be grammatically irrelevant by another one. This is the case with the notion of internal/external causation, a semantic element present in many verbs which, according to Levin & Rappaport Hovav (1995) determines the realisation of its arguments. In a nutshell, internally caused eventualities, those which are triggered by properties inherent to the entity participating in the event, as *bloom* or *shatter*, are encoded by verbs which, to give an example of their syntactic peculiarities, cannot participate in the causative alternation. On the contrary, those verbs representing events which are induced by an external cause, as *break* or *open*, readily participate in that alternation. A concrete example will make the point clearer: the Italian verb *arrossire* or its English equivalent *blush* is deemed an internally caused verb in Levin & Rappaport Hovav 1995, since it does not license a causative structure: \*{Il complimento/mio padre} mi ha arrossito. The fact, however, that *arrossire* takes auxiliary *essere* 'be' and not *avere* 'have' in the perfect tense is a pitfall for Levin and Rappaport Hovav's (1995) theory, where internally caused eventualities are taken to select *avere*. Levin & Rappaport Hovav (1995), who do not give up on the idea that *arrossire* involves an immediate cause (in clinging to the belief that the person who blushes is the immediate cause of the blushing), need to resort to a stipulative ordering of linking rules (that is, rules mapping arguments to syntactic constituents) to account for the alleged anomaly. By contrast, Mateu (2002:88f.) proposes that, although blushing might universally refer to a conceptual scene where it is the properties of the affected entity what causes the event, it is the case that *arrossire*—unlike some of its cross-linguistic "synonyms"—is semantically construed as a change-of-state eventuality; thus it comes as no surprise that it takes *essere* and not *avere* in the perfect. Crucially, in this perspective, there is no linguistic trace of the notion of immediate cause in *arrossire*, much as world knowledge tells us that it is properties of the blushing individual what makes him/her blush (that is, that there is some internal cause in the blushing event). This view predicts the possibility that other languages construe the event differently, and this is indeed the case: *bloezen*, in Dutch, takes *hebben* 'have' and not *zijn* 'be', since the blushing is semantically construed not as a change of state, but as an activity.

skeleton, found typically in arthropods. Similarly, in endo-skeletal theories, the structure is considered to be built from the inside, that is, from the lexical items embedded in the structure, as it is through the properties of these lexical items that linguistic expressions are built. In this sense, lexical items and their properties constitute the structure's skeleton (an endoskeleton).<sup>5</sup> On the contrary, in exo-skeletal theories functional structure is the skeleton—an exoskeleton—of linguistic expressions, in that it is this structure what determines the (compositional) semantic and syntactic features of the sentence. In turn, lexical items are embedded within this exoskeleton. Here I will adhere to Borer's terminology, and I will reserve the term *constructionist* for the exo-skeletal models where the syntactic structure corresponds, almost entirely, to lexically stored constructions. The exo-skeletal models where structure is built by the computational system, that is, where constructions are not primitive entities, shall be called *neo-constructionist*.<sup>6</sup> Importantly, the discussion in the present section is based almost entirely on the contrast between endo-skeletal and neo-constructionist approaches, in spite of the use of the term *exo-skeletal* in referring to the latter. See Section 1.3 for more discussion on the constructionist/neo-constructionist divide.<sup>7</sup>

In order to get a taste of how these general perspectives work out the relation between lexical semantics and syntax, let us have a look at the way they would approach that relation in the following sentence:

(1) The elephant broke the mirror.

In considering the relationship between the meaning of *break* and the syntactic properties of the sentence it appears in, an endo-skeletal approach postulates a lexical unit (stored among many others in some kind of lexicon), *break*, provided with a set of idiosyncratic formal properties: a category V, a lexical semantic representation and, perhaps, a subcategorisation frame. The lexical semantic representation could assume a variety of formats, for instance some kind of list of the theta-roles or semantic functions of the participants of the event described by *break*. In the case of *break* two theta-roles would be listed: the Agent or breaker and the Patient or thing broken. If a subcategorisation frame were also provided, it would contain information about the insertion context of *break*, such as +\_\_NP, meaning the obligatoriness of an NP in object position when *break* is inserted (all verbs have an (overt) subject in English, so there wouldn't be a need to state that for *break*).<sup>8</sup> In most endo-skeletal models, however, some general mapping mechanisms, either lexical or syntactic, convert our list [Agent, Patient] into syntactic knowledge—both its phrasal category and its syntactic function:

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<sup>5</sup> Goldberg (1995) uses “lexically based” or “bottom-up” approaches to refer to endo-skeletal approaches, considering the fact that these approaches construe the structure from the bottom, that is from the terminal elements (the lexical items) of the syntactic tree.

<sup>6</sup> Ramchand (2008:9f.) uses the term *generative-constructionist approaches*.

<sup>7</sup> Examples of endo-skeletal theories are Williams 1981f., Kaplan & Bresnan 1982, Pesetsky 1982, Di Sciullo & Williams 1987, Wunderlich 1987f., Grimshaw 1990, Van Valin 1993, Levin & Rappaport Hovav 1995, Rappaport Hovav & Levin 1998 or Reinhart 2000, 2002.

<sup>8</sup> Of course *break* may appear in an intransitive context where the subject is the thing being broken, as in *The mirror broke*. The endo-skeletal approach would probably posit mapping mechanisms (lexical or not) to derive one alternant from the other.

- (2)
- a. Agent  $\Rightarrow$  An NP subject (*The elephant*)
  - b. Patient  $\Rightarrow$  an NP object (*the mirror*)

Such an approach predicts that, as *break*, other verbs with the same theta-grid would resolve the mapping in the same way; *crush*, for instance, would incorporate the same solution, at least as the sentence in (1) is concerned: [crush], [“destroy by exerting a hard pressure”], [Agent, Patient]. This is indeed the case: *The elephant crushed the mirror*.

An exo-skeletal approach conceives of the structural properties of the expression in (1) as responsible for some aspects of its semantic interpretation, such as the notion of Agent or Theme, or its aspectual properties, and of its syntax, such as the presence of an object or of a subject. Many of these structural properties are covert, of course. In this approach, particular attention is paid to the presence of the same unit, *break*, in other very different syntactic contexts, as in (3), where the intended meaning is “the elephant went in violently”:

- (3) The elephant broke (\*the mirror) in.

Contradicting the prediction of the endo-skeletal approach, there seems to be no possible projection of the Theme argument in (3), an alleged idiosyncratic property of *break*.<sup>9</sup> The exo-skeletal approach would interpret the structure of the sentence in (3) as disabling the appearance of the object, and would try to give an account of that disallowance in terms of the syntactic structure.<sup>10</sup> Probably, in the face of the availability of *break* in (1) and (3) the endo-skeletal account would propose two *breaks*, an object-projecting *break* and a second lexical item *break in*, which would not count a Theme within its theta-grid (hence not projecting it in the syntax). The problem here would be the failure to capture the generality that other verbs which, as *break*, obligatorily project an object in certain structures (*The elephant broke \*(the mirror)*), cannot project it when appearing with some particles. This is the case of *smash*, another verb of compulsory object-projection (*The elephant smashed \*(the mirror)*) which is obligatorily intransitive when combined with *through*, as in (4) below in the interpretation that the elephant is entering somewhere after traversing some entity (the sentence accepts the direct object in the interpretation where the elephant does not traverse the mirror):

- (4) The elephant smashed (\*the mirror) through.

However, not only does the *break* case extend intra-linguistically, to other verbs within the same languages, but also cross-linguistically. Thus, the *break/break in* alternation parallels the one found in Latin between *rumpo* ‘break’ and prefixed *irrumo* ‘break in’ (cf. *in* ‘in, into’ + *rumpo* ‘break’):

<sup>9</sup> McIntyre (2004:1) calls this failure of a verb in linking its argument in particular environments *atransitivity*.

<sup>10</sup> In turn, this approach involves the assumption that the meaning of *break* is perhaps much more abstract than usually considered, excluding the affection exerted on some object.

- (5) *Latin*
- a. Elephans        \*(speculum)    rupit.  
    elephant.NOM   mirror.ACC   broke  
    ‘The elephant broke the mirror.’
  - b. Elephans        \*(speculum)    irrupit.  
    elephant.NOM   mirror.ACC   in-broke  
    ‘The elephant broke in.’

If, as probably assumed within the endo-skeletal approach, there are two lexically listed (although related, as said before) *breaks*, accounting for their different argument structure properties, the question is why a similar listing obtains in a different lexicon, namely that of Latin.<sup>11</sup> Conversely, the exo-skeletal approach would develop a theory of sentential architecture apt to host a position for the object in the case of (1), without resorting to any idiosyncratic properties of *break*. In doing this, it might run the risk of either creating nonexistent structure (an easy danger, provided that much of that structure is covert, as said above) or overgenerating, that is, predicting the existence of expressions which are not found.

Within such a scenario, a fundamental asymmetry arises between the articulations of these two types of theory. While in the former type, the endo-skeletal, the interface between the lexicon and the syntax is nontrivial, in the sense that it is the semantic properties of lexical items what derives their syntactic properties, in the exo-skeletal type the interface is considerably reduced, if existent at all, as can be gathered from the next quote from Borer 2005b:<sup>12</sup>

- (6) *Borer: 2005b:8*
- “Contrary to common assumptions, there is, in actuality, no direct interface, as such, between the conceptual system and the grammar, in that properties of concepts do not feed directly into the determination of any grammatical properties.”

In attributing all not purely conceptual semantic aspects of linguistics expressions to the syntactic structure, paradoxically, exo-skeletal theories turn out not to be theories of the lexicon-syntax interface any more, as they do not envision any such interface. They attempt to explain problems of the relationship between lexical semantics and syntax, distributing what has traditionally been packed together as lexical semantics into compositional semantics and conceptual semantics, and rethinking the former as an emergence of syntactic structure. Thus, in developing the appropriate functional

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<sup>11</sup> Within a classical constructionist approach, where constructions are primitive lexically listed units, the cross-linguistic facts are difficult to accommodate (see Section 1.3). In general, lexical marking is a problem when cross-linguistic parallels are found, since they remain, within frameworks which massively resort to lexical marking, as mere coincidences.

<sup>12</sup> A further qualification of the interface is found in Borer 2005a:12: “But listemes <roots, elements endowed only with conceptual content: VAM> are the matter of language. It is substantive vocabulary items that are placed within structures and which constitute the most salient aspect of our linguistic perception. Where, then, does the grammar meet the substantive listeme? At some very narrow portal, I suggest, where little conceptual packages, hermetically sealed, are passed from one side of the wall to the other, and where, at the receiving end, the grammar stamps them with an identifying mark, assigning to them a unique phonological index. Those packages, properly marked, are now embedded within structures, but as such, they may not affect those structures, nor can the structures affect them directly.”

architecture, which is often phonologically covert, they seek to explain the syntactic and compositional-semantic properties of the sentence.

The crucial difference just exposed is directly related to a difference in how each type of theory conceives of the minimal units the syntax plays with. As exemplified above, endo-skeletal theories typically work with units which, besides incorporating the Saussurean relationship between the phonological information and the conceptual information, also make explicit the semantic components (theta-roles, event structure, aspectual features, etc.) which are taken to be relevant for the construction of the syntactic environment in which the lexical item appears. These theories must also count with some formal code determining the syntactic behaviour of the lexical item, which is either predictable from the grammatically relevant aspects of meaning or not. In the frame of the Standard Theory (Chomsky 1965f.), there was no such predictability, and the formal code consisted in a category label and a list of *contextual features*, included in the list of lexical features of lexical entries: it was believed at that time that the syntactic properties should be listed independently of or alongside the selectional (that is, purely semantic) ones. From the eighties onward subcategorisation frames have been abandoned and general principles have been proposed to map semantic to syntactic properties (Grimshaw 1981, Pesetsky 1982, Chomsky 1986). By contrast, although there might be differences among various models, in exo-skeletal theories lexical items are typically units endowed exclusively with encyclopaedic content, given that grammatically relevant aspects of meaning are claimed to emerge from structural properties of the sentence.<sup>13</sup>

## 1.2 *A fuzzy frontier: Hale and Keyser, Levin and Rappaport Hovav*

Some of the theories of the lexicon-syntax interface defy the above classification, as I try to illustrate now through focusing on two of the most important ones: Hale & Keyser's (1992f.) theory of lexical syntax and Levin and Rappaport Hovav's theory of Event Structure Templates (in Levin & Rappaport Hovav 1995 and Rappaport Hovav & Levin 1998).

In recognising the distinction between grammatically relevant and grammatically irrelevant components of meaning, all theories of the lexicon-syntax interface assume that the projection of structure and the realisation of arguments cannot be carried out blindly from an atomic unanalysable semantic unit; rather, it is to be derived from an articulate structure which expresses that part of verbal meaning which is not idiosyncratic. Both Hale and Keyser's theory and Levin and Rappaport Hovav's theory acknowledge that important difference, providing different ways of representing the syntactically relevant part of verbal meaning. However, much as its role is acknowledged, structure is not separated from lexical entries (and see particularly the

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<sup>13</sup> In this vein, Goldberg (1995:29) remarks the need "[...] to distinguish the semantics of argument structure constructions from the verbs which instantiate them, and to allow the verbs to be associated with rich frame-semantic meanings." In Goldberg's (1995) framework, in fact, the semantics of verbs are reduced to Frame Semantics (Fillmore 1977, 1982). Syntactically relevant aspects of meaning are said to emerge from specific constructions. The meaning of a construction, however, is in some sense not predictable from that of the sum of its parts —see Section 1.3 for further comments on Construction Grammar. On the other hand, I want to emphasise that by drawing a contrast between encyclopaedic content and structural and grammatically relevant aspects of meaning I do not mean that encyclopaedic content is not structured, concurring with Borer (2005a:12): "[...] concepts are not simpletons but bundles of features, plausibly hierarchically arranged [...]".



discussion about the l-/s-syntax difference in Section 1.2.1). In this way, both theories can be said to be endo- rather than exo-skeletal. Nonetheless, it is only fair to point out that there is a non-trivial difference between both theories. Thus, Hale and Keyser provide a model where the number and shape of configurations is restricted by well-established *syntactic* principles (as based on X' theory). This is not the case in Levin and Rappaport Hovav's theory.

### 1.2.1 Hale & Keyser's theory of lexical syntax

Hale and Keyser's theory has undergone different phases during which it has fluctuated between two theoretical poles, one more semantic and the other one more syntactic. The syntactic stance has always been the foregrounded one, as the following quotes show:<sup>14</sup>

- (7) *Hale & Keyser 1993:53*

"[T]he proper representation of predicate argument structure is itself a syntax. That is to say, as a matter of strictly lexical representation, each lexical head projects its category to a phrasal level and determines within that projection an unambiguous system of structural relations holding between the head, its categorial projections, and its arguments (specifier, if present, and complements)."

- (8) *Hale & Keyser 1998:73*

"The term 'argument structure' is used here to refer to the syntactic configuration projected by a lexical item. It is the system of structural relations holding between heads (nuclei) and arguments linked to them in the roster of syntactic properties listed for individual items in the lexicon. While a lexical entry is much more than this, of course, argument structure in the sense intended here is precisely this and nothing more."

- (9) *Hale & Keyser 1999a:50*

"By the term 'argument structure,' we mean the syntactic configuration projected by a lexical item. Argument structure is the system of structural relations holding between heads (nuclei) and the arguments linked to them, as part of their entries in the lexicon. While a lexical entry is clearly more than this, argument structure in the sense intended here is just this."

- (10) *Hale & Keyser 2002:1*

"We use the term *argument structure* to refer to the syntactic configuration projected by a lexical item. It is the system of structural relations holding between heads (nuclei) and their arguments within the syntactic structures projected by nuclear items. While a lexical entry is more than this, of course, argument structure in the sense intended here is nothing more than this."

The syntactic character of their theory, as gathered from the above quotes, is based on the idea that the same principles that operate in syntax, accounting for both grammatical and ungrammatical syntactic patterns, can also explain patterns in the lexicon, such as lexical gaps, argument structure alternations or the syntactic behaviour of verbal classes. In particular, Hale & Keyser (1998) propose that argument structure types reduce to four basic syntactic configurations defined by the projecting properties of their lexical heads:

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<sup>14</sup> Consider the following excerpt as a particularly semantic remark on argument structure: "A mature theory of LRS <Lexical Relational Structures: VAM> would involve a universal theory of the categories and, in all likelihood, these would not be the traditional parts of speech but, rather, *semantic constructs* <my italics: VAM> such as activity, event, entity, state, spatio-temporal coincidence [...] which are 'canonically realized' [...] in d-structures as V, N, A, P." (Hale & Keyser 1992:119).

(11) *Hale & Keyser 1998:82*

- a. [<sub>h</sub> h cmp] (V)
- b. [<sub>h</sub> spc [<sub>h</sub> h cmp]] (P)
- c. [<sub>h\*</sub> spc [<sub>h\*</sub> h\* h]] (A)
- d. h (N)

The configuration in (11)a is headed by a category, *h*, which only takes complements. In (11)b the heading category takes both a specifier and a complement. In (11)c, *h* takes only a specifier and must thus combine with an ancillary category (*h\**) of the type of (11)a to project it. Finally, the configuration of (11)d corresponds to a category with zero valency, not taking any arguments. In the unmarked case, the configurations in (11) are realised, respectively, as V(erb), P (adposition), A(djective) and N(oun), in English. In (12) there is an example of an argument structure configuration, namely, that corresponding to the predicate *clear the screen*, headed by the deadjectival verb *clear*:

(12) *Hale & Keyser 1993:63*

[<sub>V'</sub> V [<sub>VP</sub> [<sub>NP</sub> [<sub>N</sub> screen]] [<sub>V'</sub> V [<sub>AP</sub> [<sub>A</sub> clear]]]]]

The A lexical head *clear* projects a specifier (*screen*) thanks to the fact that it is taken as complement by a V head, characterised by the selection of a complement (see (11)a and (11)c). In turn, the whole VP is taken as complement by another higher V which transitivises the predicate. In order to account for the fact that the verb *clear* is pronounced as such, Hale & Keyser propose that this verb is formed by an instance of head movement which they call *conflation* which takes *clear* up into the intermediate V and finally into the highest V:<sup>15</sup>

(13) [<sub>V'</sub> clear<sub>i</sub> [<sub>VP</sub> [<sub>NP</sub> [<sub>N</sub> screen]] [<sub>V'</sub> t<sub>i</sub> [<sub>AP</sub> [<sub>A</sub> t<sub>i</sub>]]]]] (cf. *To clear the screen*)

In this theory thematic roles are not primitive, but interpretations of the positions occupied by arguments in the configurations (and see Hale & Keyser 1993:68f. for considerations on the semantic interpretation of their argument structure configurations).

An example of how independently postulated syntactic principles account for patterns of lexical well-formedness is the following one: while it is possible to derive a predicate such as *clear the screen* as depicted in (13), it is impossible to derive such predicates as \*to metal flat, meaning “to flattened (the) metal”, or \*to spear straight, meaning “to straightened (the) spear” (Hale & Keyser 1993:63). This is due to the fact that conflation would be operating from specifier position:

(14) [<sub>V'</sub> metal<sub>i</sub> [<sub>VP</sub> [<sub>NP</sub> [<sub>N</sub> t<sub>i</sub>]] [<sub>V'</sub> V [<sub>AP</sub> [<sub>A</sub> flat]]]]] (cf. \*To metal flat)

The derivation in (14) is precluded by a locality condition, the Empty Category Principle, which states that empty categories must be governed and which was meant to account for a variety of different syntactic phenomena, such as the *that*-t effect, extraction of adjuncts crossing only one bounding node, extraction of subjects and incorporation. In particular, the ECP would rule (14) out on the grounds that the trace *t<sub>i</sub>*

<sup>15</sup> For a more extended discussion on conflation, see Section 3.3.3.

is not properly governed, since the VP counts as a barrier for government by  $\text{metal}_i$  (Hale & Keyser 1992:135).<sup>16</sup> The ECP can then explain a *lexical* fact: the non-existence, in English, of verbs whose root designates an object submitted to a change of state and which co-appear with an adjective expressing the resulting state. Crucially, this explanation depends on the assumption that there is a level of representation of the verb where its argument structure is *syntactically* displayed.

The scenario depicted seems to fit the characterisation of an exo-skeletal system, since argument structure properties and interpretation of arguments hang on syntactic projections. However, two features of the theory militate against this qualification:

- 1) the status of the category A
- 2) the l-syntax/s-syntax difference

As for 1), if one takes a closer look at Hale and Keyser's proposals, the projecting categories are precisely those that have neither phonological substance (or, when they do, this reduces to some derivative affix —as in the case of the suffix *-en* of deadjectival verbs; see, for instance, Hale & Keyser 2002:48) nor encyclopaedic content. If this were the case with the whole set of categories, their theory could be said to be an exo-skeletal one, as the power to project would be bestowed uniquely onto non-roots, roots being just embedded in the structure.<sup>17</sup> However the category A both projects structure (it takes a specifier through another category, V) and encodes encyclopaedic content, as shown in (15), where the root *clear*, of adjectival category, projects a specifier (*the sky*):<sup>18</sup>

- (15) Hale & Keyser 2002:16  
 [V [DP the sky] [V V [A clear]]]

Regarding 2), already in the definitions in (7) through (10) there are explicit references to a lexical encoding of syntactic properties, which are isolated in the following excerpts:

- (16) Hale & Keyser 1993:53  
 “[A]s a matter of strictly lexical representation, each lexical head projects its category to a phrasal level [...]”
- (17) Hale & Keyser 1998: 73
- a. “[T]he syntactic configuration projected by a lexical item.”
  - b. “[T]he roster of syntactic properties listed for individual items in the lexicon [...]”
  - c. “While a lexical entry is much more than this [...]”

<sup>16</sup> But see Section 3.3.3 and, particularly, footnote 83.

<sup>17</sup> See also Hale & Keyser 2002:3, where there is an explicit reference to the projecting properties of roots (in particular, to the non-projecting properties of nominal roots such as *cough* in contrast to the projecting properties of adjectival roots). Besides adjectives, there is a proposal in Hale & Keyser 2002:90 that at least some instances of category V, like unergative verbs, could project directly while hosting the element carrying the encyclopaedic content.

<sup>18</sup> It is true that, as Mateu (p. c.) points out, the claim that A projects a specifier must be relativised, since it is through its being taken as complement by V that it can project a specifier. However, it is not less true that V does not project a specifier unless taking A as complement (see (11)a): A (of (11)c) and N (of (11)d) are not the same category. See Section 2.1.3, for an exposition of how Mateu (2002) collapses the difference between the configurations of (11)b and (11)c, eliminating the problem pointed out here.

- (18) *Hale & Keyser 1999a:50*
- a. “[...] the syntactic configuration projected by a lexical item.”
  - b. “[...] as part of their entries in the lexicon.”
  - c. “While a lexical entry is clearly more than this [...].”
- (19) *Hale & Keyser 2002:1*
- a. “[...] the syntactic configuration projected by a lexical item.”
  - b. “[...] the syntactic structures projected by nuclear items.”
  - c. “While a lexical entry is more than this [...].”

According to the above quotes, Hale and Keyser’s argument structure configurations, much as being syntactic in a crucial sense, as I have argued before, are also part of a lexical item. Thus, Hale and Keyser’s position with respect to the lexicon and its relation to syntax can be considered innovative in that they seek to constrain the possible range of argument structures available (and the number of theta-roles, verb meanings and lexical categories, for that matter) through independently established principles of the syntax, but still heir to a classical conception of what a lexical item is in some respects: a projecting element.<sup>19</sup>

The co-existence of these two sides, the lexical and the syntactic sides, is explained once one assumes the concept of *l(lexical)-syntax*, that is, the syntax applying at the lexical level, as opposed to *s(yntactic)-syntax*, that applying to phrases. My purpose now is to show that l-syntax is a truly independent syntactic cycle. If this is true, to the extent that lexicon-syntax interface phenomena are explained through an appeal to l-syntax, Hale and Keyser’s theory would depart from a strict exo-skeletalism, where argument structure phenomena receive a plain syntactic account.

Hale and Keyser haven’t commented much on the difference between l- and s-syntax, much as the coexistence of these two seemingly independent syntaxes have been considered as constituting a weak point of their theory, according to some syntacticians, as Hale and Keyser themselves point out in Hale & Keyser 1993:94.<sup>20</sup> Besides some few references elsewhere (Hale & Keyser 1993:94, 105, note 8; Hale & Keyser 1998:75, note 2), the paper where the difference between l- and s-syntax is most extensively discussed on is Hale & Keyser 1992, where a contrast is made between l-syntactic representations and d-structures (which are of course s-syntactic representations) and some operations are proposed to derive the latter from the former. L-syntactic representations as the one represented in (15), repeated as (20) below, are configurations containing different elements:

- (20) *Hale & Keyser 2002:16*  
 [V [DP the sky] [V V [A clear]]]

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<sup>19</sup> See also Hale & Keyser 1993:64, where their research project is defined as stemming “from a general program of study implied by the Projection Principle (Chomsky 1981) and the notion that *syntax is projected from the lexicon* <my italics: VAM>.” See also Hale & Keyser 1999b: footnote 1 where they state that verbs must be listed in the lexicon, much as their formation is syntactic. This is how they explain why not all imaginable unergative birthing verbs are possible: The mare foaled, The shad roed, <sup>?</sup>The kangaroo joeyed, \*The cat kittened, \*The sow pigleted.

<sup>20</sup> Cf., for instance, Uriagereka 1998. See also section 4.1 of Hale & Keyser 1993, where they comment on the possible contradiction that is probably involved in claiming that argument structure configurations are lexical and also syntactic.

We can distinguish among 1) roots, as *clear*, endowed with encyclopaedic and non-defective phonological content; 2) lexical heads, as V; 3) variable positions, as the specifier position DP; and 4) the different levels of projection of the lexical head (here also marked as V). The root elements provide phonological content to the lexical heads by virtue of conflation. The most intuitive way of describing conflation is in terms of movement, and in fact that is what Hale & Keyser have done most times: in the case of (20), the root *clear* rises up to the empty V head.<sup>21</sup> This movement, envisioned as an instance of head movement, crucially conforms to the Head Movement Constraint (HMC), proposed by Travis (1984):<sup>22</sup>

(21) *Travis 1984:131*

An  $X^0$  may only move into the  $Y^0$  which properly governs it.

This is the fate of roots; what about the rest of the components of the argument structure configuration? Hale & Keyser (1992) propose that the argument nodes, as the one marked with DP in (20), are variables where full-fledged phrases are inserted at d-structure. The rest of the nodes are eliminated by some node-pruning operation. Both the node-pruning mechanism and the fact that argumental positions are refilled with DPs at d-structure clearly argue for the existence of some break between l- and s-syntax. If, in addition to this, we take into account the fact, observed by Hale & Keyser (1992:123), that there is no evidence that conflating elements leave traces, in the s-syntactic sense of the term, we get a quite separate cycle of syntactic computation.<sup>23</sup>

Besides the fact that l-syntax and s-syntax are different because they constitute different cycles and l-syntax includes at least one operation —conflation— which is not attested in s-syntax, Hale and Keyser resort to an ontological difference between both in which, in my view, a fallacy lurks that plagues some other works on syntax and the lexicon. Some of their statements could be taken as equating the operations of s-syntax with processing, and those of l-syntax with *static* (sic) linguistic knowledge.<sup>24</sup> Let me support my claim through a close look at one excerpt from Hale & Keyser 1992:

(22) *Hale & Keyser 1992:139*

“The idea that the grammatical properties of a lexical item are syntactic in character, and that they include dependencies of the type represented by the trace-antecedent relation, should not be taken to imply that the use of a lexical item entails the actual application of movement rules in *processing or producing* <my italics: VAM> the sentence. Thus, the use of the verb *saddle* does not involve *performing a derivation* <my italics: VAM>, relating (36) and (35) <two

<sup>21</sup> And further up into another empty V head in the case of the causative counterpart of the verb *clear*, as in *The wind clears the sky*.

<sup>22</sup> In turn, the HMC could be explained in terms of the ECP, which was mentioned above.

<sup>23</sup> And observe that, before their revision of their concept of conflation in the third chapter of Hale & Keyser 2002, the original sites of conflating elements could be occupied by overt material in s-syntax, as in the account of cognate objects (like *dance* in *She danced a silly dance*). This insertion would add to the counter-cyclicity of l-syntax with respect to s-syntax.

<sup>24</sup> Travis (2000:170), for instance, after accepting the halekeyserian computational analysis of denominal verbs like *shelve* (see Section 2.1.3) states the following: “My conclusion will be that there is a principled distinction which is not surprising —one <an *l-syntactic* process: VAM> appears to happen in the lexicon <my italics: VAM> and is therefore idiosyncratic, while the other <an *s-syntactic* process: VAM> arguably happens in the *computational system* <my italics: VAM> (i.e. syntax) and is therefore productive.” The relevant point here is the opposition of “lexicon” vs. “computational system”.

representations of the verb *saddle*: VAM>. Rather, the representation embodied in (36) and (35) is a *static* <my italics: VAM> lexical representation of the relevant grammatical properties of the verb *saddle*. It is, by hypothesis, present in the linguistic knowledge of speakers of English who happen to know the verb. But it is not “accessed” at s-syntax. It is not visible there.”

The first sentence in (22), for instance, implies the presupposition that trace-antecedent relations in s-syntax “entails the actual application of movement rules in processing or producing the sentence”. While I agree that movement is involved in trace-antecedent relations, I do not think that it is true, if we assume Chomsky’s (1965:4f.) distinction between competence and performance, that (s-)syntax is processing or production. Notwithstanding the way in which psycholinguists decide to treat production/processing, the fact is that generative syntacticians have proposed movement as a theoretical tool to explain facts which belong to the realm of competence, and not of performance. The dynamic sense of movement and of derivations in general has to be understood in an abstract sense, not implying processes occurring in real time. This having been said, I cannot think that Hale and Keyser commit the mistake of referring to performance when they use the expression “processing or producing”: they surely escape my critique the way I have worded it; but still, what are they referring to when establishing the distinction between something static (lexical) and something dynamic (syntactic)? If everything they are concerned with in their works belongs to competence, s-syntactic knowledge would be as “static” as they claim l-syntactic knowledge to be, and l-syntax would be as *dynamic* as s-syntax, involving the occurrence of “derivations”.

Similar remarks could be made of the following, later excerpt:

(23) *Hale & Keyser 1998:92*

“We will continue to use these diagrams <their usual arboreal representations of argument structure configurations: VAM>, where convenient, with the understanding that they are *abstract* <my italics: VAM> informal representations of argument structure properties and *not the representation of any actual point, initial, medial, or final, in the derivation of a verbal projection* <my italics: VAM>— they could not be that, under the assumptions of a “bare phrase structure” theory of lexical and syntactic projection (Chomsky 1995) or under the assumption of “late insertion”.”

Here they point out the assumptions of Bare Phrase Structure (Chomsky 1993) and Late Insertion (Halle & Marantz 1993), as these refer typically to properties of s-syntactic derivations (to be precise, Late Insertion refers to derivations in the phonological branch of the derivation), and argument structure configurations do not comply with them. They still oppose “abstract” to “actual”, and the same fallacy obtains.<sup>25</sup>

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<sup>25</sup> Erteschik-Shir and Rapoport (2004) develop a theory of argument structure which draws heavily on the one we have just focused on. Despite their contention that “[w]hereas our structures are freely derived by component projection, H&K’s structures are associated with a verb in its lexical representation.” (Erteschik-Shir & Rapoport 2004:220), in their theory verbs are decomposed in different meaning components (M(anner/means/instrument), S(tate), L(ocation), P(ath)) which are responsible of projecting structure. In that way, the construction of structure depends on lexical elements, not functional elements. Cf., in this sense, the next quote, where the fact that these components are part of the lexical entry is made clear: “We propose a minimal lexical entry for the meaning of verbs, consisting solely of their meaning components [...]” (Erteschik-Shir & Rapoport 2004:217).

### 1.2.2 Levin and Rappaport Hovav's Event Structure Templates

Levin & Rappaport Hovav's (1995) and Rappaport Hovav & Levin's (1998) theories are, unlike Hale and Keyser's, basically concerned with the nature of lexical semantic representations, although they incorporate general mapping mechanisms—their *linking rules* (Levin & Rappaport Hovav 1995)—to project syntax from the representations they propose. Levin & Rappaport Hovav (1995:20f.) assume the existence of two lexical representations: a lexical conceptual structure called *lexical semantic template* or *E(vent) S(tructure) T(emplate)* (in Rappaport Hovav & Levin 1998:197), which encodes the syntactically relevant aspects of meaning of lexical items, and a *lexical syntactic representation*, or *argument structure*, which contains the syntactically relevant argument-taking properties of a verb. As said above, they also develop a set of linking rules mapping the former onto the latter, provided that there exists a non-trivial or *non-isomorphic* relationship between both. The relationship between the lexical syntactic representation and the properly syntactic representation (the D-structure of Government and Binding theory) is said to be trivial or *isomorphic*, however, and is mediated via the Projection Principle and the Theta-criterion (Levin & Rappaport Hovav 1995:21-22).

ESTs, in representing the syntactically relevant part of a verb's meaning, determine its syntactic behaviour.<sup>26</sup> ESTs are made up of primitive predicates like CAUSE or BECOME, taken from a universal set and laid out following specific configurational rules—which are, however, not made explicit. The ESTs feature, as well, those elements which encode the encyclopaedic, syntactically irrelevant aspects of meaning, which merely distinguish one verb from another of the same class; these units are what Rappaport Hovav & Levin (1998:107) call the *constants*. In the nexts ESTs the primitive predicates are set in capitals and the constants are set between angular brackets in italic capitals; x and y are variables ranging over arguments:

(24) *Rappaport Hovav & Levin 1998:108*

- a. [x ACT<sub><MANNER></sub>] as in Sue jogged during the morning
- b. [x <STATE>] as in The tree blossomed
- c. [BECOME [x <STATE>]] as in The train arrived
- d. [x CAUSE [BECOME [y <STATE>]]] as in Sue broke the dishes

That syntax is determined from the configurational properties of the EST and the nature of the primitive predicates and not from the properties of the constant could be taken as an exo-skeletal trait of the theory, as, again, syntactic properties and grammatically-relevant meaning are provided by a certain configuration which is, to some extent, independent of a stored unit. However, Levin and Rappaport Hovav place these templates in the lexicon, and not in the syntax, and the constants have “an ontological categorization (Jackendoff 1990, Pinker 1989), drawn from a fixed set of types (e.g., state, thing, place, manner, etc.)” (Rappaport Hovav & Levin 1998:108), which determines its *basic* association with a particular template. Again, we are presented with lexical items, understood as sound-meaning pairs, endowed with some label, drawn from a fixed set, which determines the kind of template slot in which the constant is insertable. Constants contain other information which can be syntactically relevant: the information about the so-called *constant participants* (see also Goldberg 1995), that is, the participants of the event involved in the (encyclopaedic) content of the constant. Constant participants may optionally not be projected syntactically, although they must

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<sup>26</sup> They also correspond to the aspectual classes of events identified by Vendler (1967).

be recoverable, that is, they must be able to be projected or pragmatically recovered (Rappaport Hovav & Levin 1998:113). In principle, these participants must match up with variables in the EST (Rappaport Hovav & Levin 1998:110). However, as Marantz (2003) points out, in the ESTs of (24) there is no structural place for the constant participants of activities, like *the floor* in *Phil swept the floor*. Rappaport Hovav & Levin 1998:119 and Levin 1999 simply represent these participants as underlined variables right after the ACT predicate in the EST:

- (25) *Levin 1999, apud Marantz 2003:1*  
 Leslie swept the floor.  
 [x ACT<sub><SWEEP></sub> y]

Marantz (2003:1) remarks that “this is a bit vague about the semantics of event-internal arguments that are not themes”. More importantly maybe, as pointed out by Marantz (2003:2), in the representation of (25) it is not clear that the object is treated as event-internal. Rather, it seems to be external to the event, much as the x variable.

### 1.3 Constructionism and neo-constructionism

As pointed out in Section 1.1, there is a difference, within the exo-skeletal model, between constructionist and neo-constructionist theories. In spite of what their somehow misleading names might suggest, constructionist theories and neo-constructionist theories should not, in my opinion, be placed at the same level, as Rappaport Hovav & Levin (1998:127f.) suggest. Thus, the main thesis here is that constructionism is closer to a theory such as Rappaport Hovav & Levin’s (1998) than to a neo-constructionist theory such as Borer’s (2003, 2005b).<sup>27</sup>

Constructionist theories, such as Goldberg 1995, 2006 or Croft 2001, are built around the concept of *constructions*, that is, chunks of syntactic structure which constitute sound-meaning pairs, in the Saussurean sense of the term.<sup>28</sup> Constructions are, thus, units listed in the lexicon and, although they can be distributed in families or groups according to a *central sense* (Goldberg 1995:34), they bear each an idiosyncratic meaning. As far as the formal properties and interpretation of linguistic expressions are seen as derived from the construction, rather than from particular lexical entries which are embedded within, constructionist theories share the basic tenet of exo-skeletal models. Also, similar phenomena are paid attention to when developing both constructionist and neo-constructionist theories. Thus, for instance, as pointed out in Rappaport Hovav & Levin 1998 and Levin & Rappaport Hovav 2005, the realisation that syntactic polysemy in verbs is much more widespread than commonly thought has boosted the birth of approaches which avoid postulating a multiplicity of lexical entries (albeit with the same phonological and encyclopaedic properties) in favour of the existence of different configurations where the same lexical entry is freely inserted.

<sup>27</sup> And see Goldberg 2006, where Levin and Rappaport Hovav’s model is explicitly considered constructionist. See Mateu 2001a:1-5 for a discussion on the primitive/non-primitive status of constructions.

<sup>28</sup> Goldberg 1995:4 provides the following technical definition: “According to Construction Grammar, a distinct construction is defined to exist if one or more of its properties are not strictly predictable from knowledge of other constructions existing in the grammar: [...] C is a construction iff<sub>def</sub> C is a form-meaning pair <F<sub>i</sub>, S<sub>i</sub>> such that some aspect of F<sub>i</sub> or some aspect of S<sub>i</sub> is not strictly predictable from C’s component parts or from other previously established constructions.”



Despite these similarities, there are several factors which make constructionism and neo-constructionism remarkably different. The central one is the ontological status bestowed upon constructions by each one of these theories: while in constructionism, as said, constructions are primitive, underived blocks with an idiosyncratic meaning, in neo-constructionism they are just structures formed from the syntactic combination of functional categories, and their meaning is compositionally computed from both those categories and the structure they create.<sup>29</sup> As a result, constructions are language-specific in constructionism and epiphenomena in neo-constructionism, since they are taken to be made up of more basic building blocks (the functional elements, provided by Universal Grammar).<sup>30</sup> I will illustrate this difference through the analysis of the Double Object Construction (DOC) in a constructionist and a neo-constructionist account. I will refer, specifically, to Goldberg's (1995:141f.) and Marantz's (2003, 2005) account, respectively.

Goldberg (1995:141f.) approaches DOCs by stipulating a construction which describes their syntactic and semantic behaviour and by giving arguments supporting the syntactic and semantic uniqueness of the construction, which is the rationale for the mentioned stipulation. The Ditransitive Construction, as Goldberg calls it, has the following shape:

(26) *Goldberg 1995:142*

Sem	CAUSE-RECEIVE	< agt	rec	pat>
	R			
R: instance, means	PRED	<		>
	↓	↓	↓	↓
Syn	V	SUBJ	OBJ	OBJ <sub>2</sub>

This is the abstract representation of the Ditransitive Construction. Constructions are fused with verbs whose semantics are compatible with those of the construction. The verb then is substituted for the slot labelled PRED in (26). Consider the representation of the DOC use of *kick*, as in *Joe kicked Bill the ball*:

(27) *Goldberg 1995:54*

Sem	CAUSE-RECEIVE	<agt	rec	pat>
	R			
R: means	KICK	<kicker		kicked>
	↓	↓	↓	↓
Syn	V	SUBJ	OBJ	OBJ <sub>2</sub>

<sup>29</sup> Cf. Goldberg 1995:13: "[...] a construction is only posited in the grammar if and only if something about its form, meaning, or use is not strictly predictable from other aspects of the grammar, including previously established constructions".

<sup>30</sup> Goldberg 2006:205f., in a review of what she calls Syntactic Argument Structure accounts, forgets to point out this main difference between constructionism and neo-constructionism.

The tier called *Sem* represents the semantics of the construction, which consists of a predicative piece, in this case CAUSE-RECEIVE, and a list of so called *argument roles* (Goldberg 1995:43), that is, arguments of the construction, which can be equated with traditional theta-roles, in this case an Agent, a Recipient and a Patient. The middle tier specifies at its left extreme the type of relation (R) which the semantics of the verb inserted bears to that of the construction. As *kick* expresses the means by which Joe causes Bill to get the ball, *means* is the chosen R(elation). The rest of this tier is occupied by the predicate, KICK, and a list of *participant roles* (Goldberg 1995:43), that is, roles associated with the encyclopaedic content of the verb in question (in this case, a kicker and a kicked entity). The argument roles are linked to participant roles conforming to some principles. Crucially, the construction provides an argument which does not occur in the “lexical” list of the verb, that is, an argument which cannot be linked to any participant role: the Recipient. The last tier is the syntactic tier, which specifies the syntactic form of both the predicate and its arguments.

Regular polysemy in verbs (as that displayed by *kick* in, for instance, *Joe kicked*, *Joe kicked the ball* and *Joe kicked Bill the ball*), one of the motivations for this framework, is accounted for through the possibility of a construction to be associated with different verbs, provided, as said, that the verb is semantically compatible with the construction. In the case of the Ditransitive Construction, we find verbs of so different semantics as the abovementioned *kick* (a semelfactive, activity verb) and *bake* (a creation verb): *Sally baked Harry a cake* (Goldberg 1995:65). The semantic compatibility constraint is at work in cases such as <sup>#</sup>*Joe angered Bob the pink slip*, meaning “Joe gave Bob a pink slip, causing Bob to become angry”, presumably because the encyclopaedic features of *anger* cannot match with the semantics of the construction (someone’s intentional and successful transfer of something onto someone).

Goldberg (1995) justifies the existence of the Ditransitive Construction on the grounds of its alleged syntactic and semantic uniqueness. As for the syntax, she notes that it is the only construction in English which allows two non-predicative noun phrases to occur after the verb. As for the semantics, she remarks that the DOC is “[...] a highly specific semantic structure, that of successful transfer between a volitional agent and a willing recipient” (Goldberg 1995:151). The fact is that she focuses exclusively on the semantic constraints on the construction, particularly on the volitionality of the agent and the willingness of the recipient. Cases which seem not to meet those constraints, and which thus escape from a *central sense*, are explained away via a battery of metaphors which map the central sense onto figurative senses.

The model shows some endo-skeletal features, as constitute, for instance, the abovementioned participant roles (also important in Rappaport Hovav and Levin’s theory, as pointed out in Section 1.2.2). These roles are traits of the lexical verb and, in order to be *fused* (i.e., roughly, identified) with argumental roles, they must be semantically compatible with them, which is regulated through the Semantic Coherence Principle (Goldberg 1995:50). This principle, allegedly a principle of grammar, governs elements which are conceptual, namely participant roles. In this sense the conceptual, encyclopaedic content of the verb grammatically determines the felicity of the verb-construction matching, thus departing from exo-skeletal desiderata.<sup>31</sup>

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<sup>31</sup> To be fair, it must be pointed out that Goldberg’s framework, and cognitive linguistics in general, is well known to deny a difference between grammar and the conceptual realm of cognition (consider, for

Another remarkable fact about Goldberg's (1995) approach is that there is to be found no reference to the syntactic properties of the construction, except for the fact, already noted, that it happens to be the only construction which licenses two argumental NPs. This is the most salient difference from the analysis in Marantz 2003, 2005. Marantz does not propose any special primitive construction, but presents the DOC as the following syntactic structure, with elements to be found in other constructions:

(28) *Marantz 2005:3*

[VoiceP DP [Voice [<sub>VP</sub> [<sub>V</sub> v  $\sqrt{\text{HAND}}$ ] [<sub>AppIP</sub> [DP John] [Appl [<sub>DP</sub> an apple]]]]]]]

The *v* head is the head introducing an event, typically found in, at least, eventive VPs. The (low) applicative head, Appl, is a functional head with possessive semantics, in that it relates a possessor (*John*) to a possession (*an apple*). This head is found cross-linguistically in so-called low applicative constructions, that is constructions indicating transfer of possession, and other constructions with the same syntactic properties.<sup>32</sup> Importantly, the lexical verb is reduced to a category-less root in this framework ( $\sqrt{\text{HAND}}$ ), which appears as an adjunct to the eventive *v* head (see Section 3.1.4). Finally, the external argument is introduced—here *and in any structure needing one*—as the specifier of a functional head Voice (Kratzer 1994, 1996).

This structure explains a series of syntactic phenomena involved in DOCs. As noted in Larson 1988 or Bruening 2001, among others, there appear to be striking asymmetries between the two objects of a DOC as far as binding and scopal properties are concerned. For instance, as noted in (29) while the goal object *a child* may take scope over the theme, *each doll*, the reverse scope is impossible:

(29) *Bruening 2001:234*

I gave a child each doll: *a* > each, \* each > *a*

The above sentence may only mean that one child ends up getting all dolls, and not possibly that each doll was given to a different child. This fact suggests, in a configurational framework, an asymmetry in syntactic position, as expressed in Marantz's proposal in (28).<sup>33</sup>

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instance, Frame Semantics in Fillmore 1977, 1982). The observation is justified, then, only within a comparison of a generative-like approach and a cognitive-like approach, my aim here.

<sup>32</sup> See Pytkäinen 2002 for an extensive neo-constructionist discussion on applicative constructions, including the distinction between low and high applicatives. See also Jeong 2007 for a minimalist analysis of applicatives.

<sup>33</sup> Note, importantly, that this asymmetry does not obtain with the Oblique Dative Construction, ODC (Larson's 1988 term):

(i) I gave each doll to a child: *a* > each, each > *a*

Here both interpretations are possible. Marantz (2003:8), following Bruening (2001), proposes that this hints at a structural symmetry between the object and the PP, which form a small clause with the object as subject and the PP as predicate. However, it is not clear to me in which sense the subject and the predicate in a small clause are in a symmetrical relation (see Section 3.1.3, where I treat small clauses as an asymmetric object, namely PlaceP).

Another crucial syntactic fact is that these asymmetries are also to be found in Locative Object Constructions (LOCs) that is, the locative-object alternates of the locative alternation (see also Larson 1990).<sup>34</sup>

(30) *Marantz 2003:9*

Spray a floor with every solution: a > every, \* every > a

The sentence in (30) can only be read as meaning that all solutions were sprayed onto the same floor, and never that there was a different floor for each one of them. The similarities between DOCs and LOCs, as well as a common abstract semantics shared by both constructions (that of transferal), lead Marantz (2003, 2005) to propose the same account for both, based on a low applicative head which is non-overt on the case of DOCs and which corresponds to the preposition *with* in LOCs.<sup>35</sup>

On the semantic side, Marantz's (2003, 2005) analysis involves considering a more coarse-grained semantics for the DOC than that assumed in Goldberg 1995, since the structure must accommodate a wider range of constructions (like the LOC). In fact, for Marantz structural semantics is read off the syntactic representation: homomorphism between syntax and (structural) semantics is one of the clearest dividing lines between neo-constructionism and constructionism. Compositional semantics constitutes, in a framework like that of Marantz's, a purely interpretive module, reading the syntactic structure in a systematically compositional way. Thus, the compositional meaning of a DOC is also dictated by its syntax.<sup>36</sup>

I conclude with a note on methodological differences which go hand in hand with the main distinction drawn around the ontological status of constructions. Constructionism pays special attention to semantic subtleties, and considers those subtleties to be part, in some way, of linguistic knowledge/use.<sup>37</sup> The importance of those subtle semantic nuances and their status as linguistic features triggers the postulation of many different constructions, each endowed with an idiosyncratic meaning and syntax. Neo-constructionism, on the other hand, advocates a more coarse-grained semantics, able to match the syntactic structures in a homomorphic way. Subtleties are taken to emerge from grammar-encyclopaedia or grammar-pragmatics interactions, and special attention

<sup>34</sup> In Chapter 3, Section 3.4.1 I will call these constructions change-of-state (COS) variants of the Locative Alternation.

<sup>35</sup> Interestingly, as noted by Larson (1990:605), this preposition appears in DOCs headed by giving verbs like *award*, *provide*, *present* or *supply*:

(i) Sally provided/presented/supplied her sister \*(with) a cake.

(ii) Sally awarded her sister (with) a cake.

As expected, an asymmetry in scope is also to be found between the object and the *with*-PP in these structures:

(iii) Sally provided/presented a child with each doll: a > each, \* each > a

<sup>36</sup> Goldberg (2006:211) remarks that "[...] meaning cannot simply be *read off* syntactic trees [...].". This is, in my opinion, an impeccable assertion, once one understands *meaning* as the conjunction of two factors: structural meaning (which *is* read off syntactic trees) and encyclopaedic meaning (encoded in roots) (see Section 3.2.1). It is appropriate to remark here that the distinction is very neatly traced and accounted for in Marantz 1995, where the proposal is made that LF (a *syntactic* representation encoding compositional meaning) plus the roots freely inserted therein (non-compositional meaning) furnish the meaning (comprehensively understood) of linguistic expressions.

<sup>37</sup> There is no dividing line between these two concepts, both in constructionism and in related frameworks (Cf. Noonan 1999:23).

is paid to syntactic phenomena which may group together apparently different constructions, hence undermining their alleged primitive status.<sup>38</sup>

#### *1.4 Summary*

In this section I have introduced the two main available models of the lexicon-syntax interface: the endo-skeletal model, in which syntactic and semantic properties of linguistic expressions emerge, as projections, from lexical items, and the exo-skeletal model, where lexical items contribute only grammatically opaque encyclopaedic meaning, and the structure determines the syntactic properties and all other aspects of meaning. I have shown, through a description of Hale & Keyser's (1992f.) and Levin & Rappaport Hovav's (1995) and Rappaport Hovav & Levin's (1998) theories that the division between the endo- and exo-skeletal models is not neat. Thus, in Hale and Keyser's theory the syntactic properties of verbs are determined by a configuration which is itself syntactic, and that makes their model considerably more explanatory than that of Levin and Rappaport Hovav's. However, although argument structure configurations are syntactic in nature, they involve an arguably different cycle of syntactic computation (l-syntax). Moreover, the adjectival category has been shown to violate the desired distinction between relational elements and elements conveying encyclopaedic content. On the other hand, Levin and Rappaport Hovav's model separates the grammatically relevant and irrelevant components of meaning in their representations and encodes the former in lexical representations. But the constants encapsulating the grammatically irrelevant aspects of meaning are still deterministically linked to particular lexical representations and can "project" constant participants even if these do not match with any variable position in the lexical representation. Finally, I have shown the distinction, within the exo-skeletal model, between so-called constructionist and neo-constructionist models, focusing, respectively for each model, on Goldberg's (1995, 2006) and Marantz's (2003, 2005) approach to the Double Object Construction.

## **2 Three neo-constructionist frameworks**

In this section I describe the three neo-constructionist frameworks which I will draw on most heavily: the one put forth by Mateu (2002) —in turn inspired in Hale & Keyser's (1993f.)—, Borer's (2003, 2005b) exo-skeletal model of event structure and the implementation of the Minimalist program represented by Distributed Morphology (Halle & Marantz 1993f., Marantz 1995f., etc.). While the former two provide in-depth explorations of the nature of argument structure and event structure, Distributed Morphology is a non-lexicalist model integrating discussions on argument and event structure within the more general domain of the architecture of grammar, with particular concern for the syntax-morphology interface. I will also point out some possible weaknesses of the three theories.<sup>39</sup>

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<sup>38</sup> See also Harley & Noyer 1998, 2000.

<sup>39</sup> Other frameworks which could be considered neo-constructionist to different degrees and which I shall not consider here are Ghomeshi & Massam 1994, Arad 1996, 1998, 2003, Kratzer 1996, van Hout 1996, 2000, Ritter & Rosen 1998, Ramchand 1997, 1998, 2008, Travis 2000, McIntyre 2004, Åfarli 2007 and Starke 2009, among others.

## 2.1 Mateu 2002

### 2.1.1 Semantic construal and conceptual content

Mateu (2002) adopts Hale & Keyser's configurational theory of argument structure (see Section 1.2.1), and endeavours to provide a semantic interpretation thereof through his theory of *relational semantics*. In particular, Mateu's guiding principle in structuring his theory, and one that makes him deviate from Hale & Keyser's view in some nontrivial points, is the following one:

(31) *Mateu & Amadas 2001:1*

Meaning is a function of both (non-syntactically transparent) *conceptual content* and (syntactically transparent) *semantic construal*.

The statement in (31) is the natural effect of the conceptual necessity that those aspects of meaning which are compositional must be so in syntactic terms, while those aspects of meaning which are not compositional cannot be stated in syntactic terms. That is, semantic construal cannot be at the same time syntactically non-transparent, and conceptual content cannot be at the same time syntactically transparent. In this way, there is a strong (and natural) correlation between computation (syntax) and compositional meaning, on the one hand, and the non-computational bits of linguistic expressions and non-compositional meaning, on the other. To put it in Marantz's (1995:4) words, "the syntax (and thus LF) provides the only way the mind has to represent compositional meanings".

In full conformity with (31), Mateu makes a crucial distinction between *relational* and *non-relational* elements. Relational elements form a closed set, and constitute the articulators of argument structure configurations, in that, besides being endowed with certain highly abstract semantic content, they interrelate the building blocks of the structure. Non-relational elements crucially do not have any syntactic properties (not even syntactic category), only conceptual ones: they cannot project a specifier or a complement.

### 2.1.2 Argument structure configurations

The relational heads proposed in Mateu 2002 are basically two, although the second one comes in two varieties: one head, [r], is semantically interpreted as a non-eventive relation, and projects both a complement and a specifier; the second one is an eventive head projecting a complement but only optionally projecting an external argument (EA) as the specifier of some higher functional head (F). The EA-projecting eventive head is [R], the *source* relation, while the one which does not project it is [T], the *transitional* relation. These three heads are specified for a  $\pm$  value. Notwithstanding this non-configurational property, the interpretation of [R], [T] and [r] can be said to emerge purely from configuration. In particular, these heads are to be found in the following configurations (F = functional head introducing the EA; X = a non-relational element):

(32) *Argument structure configurations in Mateu 2002*

[<sub>F</sub> EA ... F ... [ $\pm$ R X]]: unergative structure

[<sub>F</sub> EA ... F ... [ $\pm$ R [X [ $\pm$ r X]]]]: transitive structure

[ $\pm$ T [X [ $\pm$ r X]]]: unaccusative structure

Provided that each relational head is endowed with a non-configurational  $\pm$  value, the combinations in (33) to (35) obtain:

- (33) *Unergative predicates; based on Mateu 2002:36*  
 a. John rolls (deliberately): [<sub>F</sub> John ... F ... [+R *ROLL*]]  
 b. John stank: [<sub>F</sub> John ... F ... [-R *STINK*]]
- (34) *Transitive predicates; based on Mateu 2002:36*  
 a. John killed the horse: [<sub>F</sub> John ... F ... [+R [horse [+r *KILL*]]]]  
 b. John pushed the horse: [<sub>F</sub> John ... F ... [+R [horse [-r *PUSH*]]]]  
 c. John loved the horse: [<sub>F</sub> John ... F ... [-R [horse [-r *LOVE*]]]]
- (35) *Unaccusative predicates; based on Mateu 2002:37*  
 a. John died: [+T [John [+r *DIE*]]]  
 b. The ball rolled: [+T [ball [-r *ROLL*]]]  
 c. John lived: [-T [John [-r *LIVE*]]]

As can be gathered from (33) to (35), the + value for [R] is associated to agentivity (e.g., in *John rolled deliberately* vs. *John stank*), the + value for [T] is associated to dynamicity (e.g., in *The ball rolled* vs. *John lived*), and the + value for [r] is related to change and telicity (e.g., in *John killed the horse* or *John died* vs. *John pushed the horse* or *The ball rolled*).

The combinations of (33) to (35) are not all the logical ones given the number of relational heads and the number of values: as observed by Real Puigdollers (2006:18) there are two surprisingly similar gaps in the paradigm of transitives and in the paradigm of unaccusatives:

- (36) \* [<sub>F</sub> X ... F ... [-R [X [+r X]]]  
 (37) \* [-T [X [+r X]]]

In semantic terms, a transitive non-agentive telic event (see (36)) and an unaccusative stative telic event (see (37)) do not seem to be possible. If we take into account the fact that T and R are eventive as opposed to r, which is non-eventive, we can collapse (36) and (37) as the unavailability of the combination of a negatively valued eventive head with a positively valued non-eventive head. As long as there is nothing in Mateu's system that prevents those combinations to be formed, the question emerges why they are not licit. In Section 3.2.2 I show that a radically configurational theory which does away with values for functional heads naturally derives the facts in (36) and (37).

### 2.1.3 Adjectives as non-basic categories

One of the most salient advances of Mateu's (2002) theory with respect to Hale & Keyser's (1993f.) is the reduction of the number of basic argument structure configurations (see (38)) based on the non-basic nature of the adjectival head (h in (38)c):

- (38) *Hale & Keyser 1998:82*
- |   |   |
|---|---|
| a. [ <sub>h</sub> h cmp]                      | [realised as V in English]  |
| b. [ <sub>h</sub> spc [ <sub>h</sub> h cmp]]  | [realised as P in English]  |
| c. [ <sub>h*</sub> spc [ <sub>h*</sub> h* h]] | [realised as A in English; h* is an ancillary category —V in deadjectival verbs— allowing h to project a specifier] |
| d. h  | [realised as N in English]  |

Mateu (2002:11f.) puts into question Hale & Keyser's (1993f.) distinction between so-called locatum and location verbs like *saddle* and *shelve*, respectively, and deadjectival verbs like *clear*. First he demonstrates the spurious character of the locatum/location divide. Hale & Keyser (1998, 1999) argue that these verbs differ in the nature of the abstract preposition they incorporate: locatum verbs involve a preposition encoding a central coincidence relation, while location verbs involve a preposition encoding a terminal coincidence relation. In a nutshell, whereas locatum *saddle* may be paraphrased as "provide X with a saddle", location *shelve* may be paraphrased "as place X onto a shelf". Mateu argues that this difference is not grammatically encoded, and that both types of verbs correspond to the type [<sub>F</sub> EA ... F ... [+R [X [+r SADDLE/SHELVE]]]].<sup>40</sup> That they encode a [+r] relation, inducing telicity, is argued for on the basis of the following Catalan data:

(39) *Catalan; Mateu 2002:13-14*

- a. Ella ensellà el cavall { \*durant/en } cinc segons.  
     she (in)saddled the horse { \*for/in } five seconds  
     'She saddled the horse in five seconds.'
- b. En Joan encaixà cinc morts { \*durant/en } dos minuts.  
     the Joan (in)boxed five dead (men) { \*for/in } two minutes  
     'Joan confined five dead men in two minutes.'

Verbs incorporating an abstract preposition are, in Hale & Keyser's (1993f.) theory, different from those incorporating an adjectival head, like *clear*. The difference is related to the fact that only the latter are claimed to enter in the so-called causative alternation:

(40) *Hale & Keyser 1998:84 and 111*

- a. The screen cleared
- b. \*The book shelved.
- c. \*The horse saddled.

Configurationally, transitive *clear* has two V layers, a transitivity layer and an unaccusative one. Thus, if the outer layer is taken off, the structure is still a verb, and its specifier counts as the surface unaccusative subject (see (40)a and (41)a). The presence of the internal V layer is due to the fact that the head A, which projects only a specifier, needs the complement-projecting head V to project that specifier. On the other hand, verbs involving a P projection have only one V layer, which is both the verbalising head and the transitivity head (P, in projecting both a complement and a specifier, does not need any other head to project) (see (40)b, (40)c and (41)b):

(41) *Hale & Keyser 1998: 85 and 86*

- a. [<sub>V</sub> [<sub>DP</sub> the screen] [<sub>V</sub> V A (= *clear*)]]
- b. [<sub>V</sub> V [<sub>P</sub> [<sub>DP</sub> the books/the horse] [<sub>P</sub> P [<sub>N</sub> shelf/saddle]]]]

Mateu (2002), however, basing on Kiparsky 1997, argues that the facts in (40) are due not to a grammatically encoded distinction, but to world knowledge. Thus, if the action described by the predicate can be understood as non-agentive, locatum/location verbs

<sup>40</sup> The non-grammatical character of the locatum/location distinction is also argued for by Harley (2005).



may license an unaccusative use (see (42), where the helicopter is a self-propelled object); the same applies to deadjectival verbs like *clear*, which may (see (43)d) or may not (see (43)b) appear in unaccusative predicates on the grounds of the same non-agentive/agentive reading.<sup>41</sup>

(42) *Catalan; Mateu 2002:27*

L'helicòpter aterrà tard.  
the=helicopter (to)landed late  
'The helicopter landed late.'

(43) *Levin & Rappaport-Hovav 1995:104-105, apud Mateu 2002:27*

- a. The waiter cleared the table.
- b. \*The table cleared.
- c. The wind cleared the sky.
- d. The sky cleared.

Once these facts have been acknowledged there is no evidence that locatum/location and deadjectival verbs differ grammatically. More generally, there remains no evidence for a distinction between structures (38)b and (38)c. In particular, the h head in (38)c, which is defined as the head projecting a specifier but no complement, and which is unmarkedly realised as A in English and many other languages, is non-basic. Instead, it is amenable to a decomposition into an [r] relation (P in Hale and Keyser's terms) and a non-relational element (N in Hale and Keyser's terms). I recall, last, what I pointed out in Section 1.2.1: that this move has a welcome consequence not sufficiently emphasised by Mateu (2002). Specifically, Mateu (2002) eliminates the undesirable situation of having an element (h in (38)c) be relational and convey conceptual content, simultaneously. In that sense, Mateu's (2002) theory can be argued to approach the neo-constructionist desideratum of neatly separating roots (non-relational elements) from the material able to create structure (relational elements).<sup>42</sup>

Finally, I would like to point out that some lexicalist traces can be found in Mateu's (2002) theory. Turning back to the discussion on the telic nature of location/locatum verbs (see (39) above), he points out some apparent counterexamples:

<sup>41</sup> In Acedo-Matellán 2006a I provide more examples of uncontroversially locatum/location verbs which, depending on the interpretation, may or may not enter into the causative alternation. Thus, for instance, locatum *emperlar*, incorporating the prepositional prefix *en-* 'in', may be used to mean 'bead (a necklace)' or 'cover with bead-like elements, like dew drops'. Thus, in the former use *emperlar* invokes an agent-controlled scene, but not in the latter. Accordingly, *emperlar* may only appear as intransitive in the latter use (see (ib)):

(i) *Catalan; Acedo-Matellán 2006a:46*

- a. \*El collar s'ha em-perlat. (Acceptable in the impersonal reading)  
the necklace REFL=has in-pearl.PTCP
- b. Els camps s'em-perlen de rosada cada matí  
the fields REFL=in-pearl.3PL of dew every morning  
'The fields get beaded with dew every morning.'

Also following the *en*-NOUN morphological pattern are (mainly) unaccusative *ennuvolar-se* 'get cloudy' (cf. *núvol* 'cloud') or *emboirar-se* 'get foggy' (cf. *boira* 'fog').

<sup>42</sup> See also Amritavalli & Jayaseelan 2003, Amritavalli 2007, and Kayne 2009 for the proposal that adjectives are to be analysed as non-primitive categories, but from the combination of a non-relational element and an adpositional element.

(44) *Catalan; Mateu 2002:14*

- a. En Joan enfarinà les mandonguilles {durant/en} deu segons.  
 the Joan (in)floured the meatballs {for/in} ten seconds  
 ‘Joan floured the meatballs {for/in} ten seconds.’
- b. Ell engabià el seu ocell preferit {durant/en} un minut.  
 he (in)caged his bird favourite {for/in} one minute  
 ‘He caged his favourite bird {for/in} one minute.’

These examples would jeopardise his proposal that both location and locatum verbs incorporate a [+r] relation, inducing telicity. With respect to examples like (44)b, Mateu observes that their telicity is due to a measurement of the resulting state: in this case, *durant un minut* expresses the time span spent by the bird in the cage after having been caged therein. With respect to examples like (44)a, Mateu points out that the non-relational element involved refers to a mass entity, in this case flour (*farina*), and that this fact licenses an atelic reading of the predicate. Thus, since the root does not refer to a bounded entity, the action of putting that entity somewhere (the meatballs) cannot be measured out: *enfarinar* would turn out to be like *ruixar* ‘spray’, which can also license an atelic reading for exactly the same reason in *John sprayed the wall with paint for five minutes* (Mateu 2002:15).<sup>43</sup> Crucially, though, *enfarinar* cannot be said to involve a [-r] relation —present in verbs like *empènyer* ‘push’— which would on the other hand account for its atelic reading straightforwardly. The *enfarinar/empènyer* dissociation and the *enfarinar/ruixar* association are based on diagnostics as the following one, involving licensing of adjectival passives:

(45) *Catalan; Mateu 2002:15-16*

- a. Les mandonguilles estan enfarinades.  
 the meatballs PFV.be.3PL (in)floured  
 ‘The meatballs are floured.’
- b. La paret està ruixada de pintura.  
 the wall PFV.be.3PL sprayed of paint  
 ‘The wall is sprayed with paint.’
- c. \*El carro està empès.  
 the cart PFV.be.3PL pushed

According to this test, verbs like *enfarinar*, which involve a final state, pattern with verbs like *ruixar* in involving a final state and licensing thereby the adjectival passive construction; on the contrary, verbs like *push*, which do not involve a final state, disallow the adjectival passive construction. Note, however, that the discussion is set, literally, in terms of verbs, that is, *lexical units*, and in terms of what they involve as such. My claim here is that neither does *enfarinar* necessarily involve a [+r] head nor does *empènyer* necessarily involve a [-r] head. Accordingly, *enfarinar* can be claimed to reflect either a [+R [X [+r X]]] configuration, in which case a change of state is readily interpreted and telicity is thereby licensed, or a [+R [X [-r X]]] configuration, in which case no final state is entailed to be attained and atelicity arises. I believe that what the diagnostics in (45) is really showing us is that a very special context is needed for *empènyer* to be interpreted as telic/change-of-state, unlike *enfarinar* and *ruixar*. Thus, while it is possible to conceive of a (bounded) quantity of flour or spray which would qualify as standard in defining an end state for a flouring or spraying event,

<sup>43</sup> See Harley 2005 for the inner-aspectual effects of the (un)boundedness properties of roots.

respectively, it is considerably more difficult to evoke a standard “pushedness”. However, it is not impossible, as the next example from Kratzer 2000, mentioned in Acedo-Matellán & Mateu 2010:footnote 15, shows:

(46) *German; Kratzer 2000:4*

Dieser Kinderwagen ist schon geschoben.  
this baby carriage is already pushed.

In Kratzer’s (2000:4) words, “[a] natural setting for [(46)] would be a factory that produces baby carriages and employs workers whose job it is to push new baby carriages a few times to test their wheels”.

More generally, I think that diagnostic tests like the one in (45), involving the licensing of particular constructions, are not diagnostics about the adscription of a certain verb to a particular grammatically defined class: they could not be, once an *exo-skeletal* perspective has been adopted, where category-free roots are freely inserted in the structures generated by syntax, and hence, the only reason a root does not fit into a structure is an incompatibility between the semantics emerging from the structure and the conceptual content of the root.<sup>44</sup> The adjectival passive *construction* illustrated in (45) most probably involves some grammatical formative like Mateu’s (2002) [+r] relation, but *enfarinar* or *ruixar*, or, more specifically, the roots involved in them, do not.

## 2.2 *Borer 2005b*

### 2.2.1 Listemes and functional structure. Coercion

As pointed out above, the term *exo-skeletal* (and *endo-skeletal*) is due to Borer (2003).<sup>45</sup> She develops a highly articulated theory of the lexicon-syntax interface characterised by the idea that the conceptual system and the grammar do not interact. Rather, the grammar yields structures where the units of conceptual content or *listemes*, sound-meaning correspondences without any grammatical information (notably, category and argument structure properties), act as mere modifiers. In such a system, many instances of sequences commonly considered as ungrammatical are explained away as semantically devious, due to a clash between the interpretation of the structure, which cannot be overridden, and the conceptual content of the listemes. For instance, the sequences *#three bloods* and *#a lot of dog* (Borer 2005a:101 and 102) are odd because the conceptual properties of the listemes *blood* and *dog* do not fit well in structures which oblige to interpret them, respectively, as count (through plural marking and a numeral) and mass (through the mass quantifier *a lot of*). However, these sequences are by no means ungrammatical (and consider, with respect to *a lot of dog*, the absolute normality of *a lot of chicken*); rather they present a *coerced* interpretation of the listemes embedded. On the contrary, sequences like *much blood* and *many dogs* cannot appear in the same environments and cannot be coerced in any way, since they give rise to severe ungrammaticality: *\*much three bloods*, *\*many a lot of dog*. The interpretation

<sup>44</sup> Mateu (2002:footnote 38) does express his sympathy towards free-insertion theories, accounting for variation in argument structure like the transitive/unergative alternation illustrated by *push the car* and *push* (in Mateu’s terms, [+R [[the car] [-r PUSH]]] / [+R PUSH]).

<sup>45</sup> My description of Borer’s theory is mainly based on Borer 2005b, the second volume of the *Structuring Sense* trilogy, dedicated to event structure. However, I will make incursions into the first volume (particularly Borer 2005a:3-60), dedicated to nominals, where she most extensively expounds her theory.

of *structures* like *much blood* or *many dogs* is, then, a matter of grammar, and cannot be overridden.

Many of the properties traditionally assigned to lexical items are transferred, then, to functional structure. The listemes are, as mentioned, grammatically opaque entities consisting purely of a conceptual package and a phonological specification. Hence, the listeme *blood* is not [mass], nor is the listeme *dog* [count]. In the same way, the listemes *run* or *rain* are not unergative, transitive or unaccusative. Rather, all these properties belong to the structures where these listemes, stored in the *encyclopaedia*, are inserted. Functional structure, on the other hand, is built around functional categories taken from a functional lexicon.

### 2.2.2 Range assignment to functional categories

Within the domain of functional categories there is a remarkably original advance in Borer's (2005) theory. Borer (2005a:34) proposes that functional heads are, in fact, *open values*, that is, variables which are in need of being assigned *range*.<sup>46</sup> These variables convey a syntactic category and the corresponding (functional) interpretation. For instance, the determiner projection is headed by the open value  $\langle e \rangle_d$ , which induces the category D for the projection and introduces a definite entity. However,  $\langle e \rangle_d$  needs to be assigned range by some appropriate *operator*, to be interpretable. This can be achieved basically in two ways: through *direct* or *indirect range assignment*. Direct range assignment is accomplished when a *grammatical formative* is merged directly into the open value. Grammatical formatives are of two kinds: independent grammatical formatives or *f-morphs*, like *the* or *will*, and phonologically abstract *head features*. While the former are morphemes in the classical sense, the latter are non-morphemic, and are phonologically realised only in conjunction with some head. This is why head features trigger head movement. The past tense in English,  $\langle pst \rangle$ , is an example of an abstract head feature: it assigns range to the open value heading TP,  $\langle e \rangle_T$ . If the listeme *sink*, embedded below TP, moves up to  $\langle pst \rangle$  the phonology shall retrieve the sequence *sank*; if it is *read* which moves up to  $\langle pst \rangle$ , *read* shall be retrieved, etc.<sup>47</sup> An f-morph like *will*, which can also assign range to  $\langle e \rangle_T$ , does not trigger head movement (cf. *He will surely like it*). Indirect range assignment can be instantiated through adverbs or discourse operators or, alternatively, through the specifier-head relation. An example of the former case is the induction of a telic reading of predicates by adverbs such as *once* or *twice* in English. In Borer's (2005) system, a telic interpretation of a predicate depends uniquely on the existence and licensing of a dedicated projection, AspQP (Aspectual Quantity Phrase), headed by the open value  $_{Asp} \langle e \rangle_{\#}$ . Borer argues that adverbs like *once* or *twice* may assign range to  $_{Asp} \langle e \rangle_{\#}$ , telicising the event. This is shown in the following examples:

(47) Borer 2005b:201

- a. Robin danced once in five days.
- b. Pat laughed twice in three days.

<sup>46</sup> As a matter of fact, not all functional heads are open values in need of range. The functional projection heading atelic transitive non-stative predicates is one such example. See below.

<sup>47</sup> It must be clear, therefore, that at least for grammatical formatives, Borer (2005) endorses some version of Late Insertion, postulating in fact a "Great Phonological Dispenser" (Borer 2005a:33), which retrieves the phonological specifications, if they are available, for particular structures. Failure to retrieve such phonological specifications makes the derivation crash.

The open value  $_{\text{Asp}}\langle e \rangle_{\#}$  can be assigned range through specifier-head agreement, however, and, in fact, that is the usual way of attaining telicity in English and many other languages. In particular, if a DP with the right characteristics is merged as the specifier of  $\text{Asp}_{\text{QP}}$ ,  $_{\text{Asp}}\langle e \rangle_{\#}$  is licensed and telicity arises. Specifically, the DP must have a *quantity* interpretation. In turn, a quantity interpretation is one which is neither *divisive* nor *cumulative*. For a predicate P to be divisive, it must describe a property applicable to some entity and to any subdivision of that entity. For instance, the expression *water* can denote whatever amount of water one can imagine and any subdivision of that amount, no matter the size. The expression *water*, then, is divisive. It is also cumulative, since if the original amount of water is increased in whatever degree, it will still fall under the denotation of *water*. By contrast, the expression *more than enough water* is not divisive, since for any amount of water counting as more than enough water, there is always some portion which cannot be defined as more than enough water. On the other hand, *less than enough water* is not cumulative, since, being applicable to some amount of water, X, it cannot be applied to amounts bigger than X. The DPs *more than enough water* and *less than enough water* count as quantity DPs. Definite DPs like *the water* are also quantity (they are neither divisive nor cumulative): *the water* specifies a definite amount of water (already introduced in the discourse) and cannot, therefore, be applied to a smaller or a bigger amount.

With these considerations in mind, we can understand why in the next example (where range assignment is marked through numerical coindexing and the functional projections above  $\text{Asp}_{\text{QP}}$  have been omitted) the quantity DP *the flower* is able to assign range, through a specifier-head relation, to  $_{\text{Asp}}\langle e \rangle_{\#}$ :

(48) *Based on Borer 2005b:72*

The flower wilted (in three days).

$[_{\text{AspQP}} [_{\text{the flower}}]^2 [_{\langle e^2 \rangle_{\#}} [_{\text{VP}} \text{wilt}]]]$

### 2.2.3 Event structure with arguments: range assignment through specifier-head relations

Specifically within the domain of argument and event structure, and having into account the previous exposition of range assignment, Borer puts forth a theory where argument structure and event structure are dissociated. In particular, the projection of arguments and their association with event structure is expected (and needed) only as one of the possible ways of licensing, through specifier-head agreement, the functional categories forming the spine of the event structure configuration. These functional categories are, from bottom to top,  $_{\text{Asp}}\langle e \rangle_{\#}$ , which creates telic predicates and assigns accusative case in transitive derivations,  $\langle e \rangle_{\text{T}}$ , heading TP and assigning nominative case, and  $\langle e \rangle_{\text{E}}$ , heading EP (Event Phrase) and introducing the event argument.<sup>48</sup> An example of the co-appearance of the three of them are unaccusative predicates in English, as illustrated below:

(49) *Borer 2005b:84*

$[_{\text{EP}} [_{\text{the flower}}]^3 \langle e^3 \rangle_{\text{E}} [_{\text{TP}} [_{\text{the flower}}] \text{wilt} \langle \text{pst} \rangle \langle e \rangle_{\text{T}} [_{\text{AspQP}} [_{\text{the flower}}]^2 [_{\langle e^2 \rangle_{\#}} [_{\text{VP}} \text{wilt}]]]]]$

<sup>48</sup> I shall not expose here why TP is lower than EP. See Borer 2005b:261-272 for relevant discussion.

The quantity DP *the flower* provides range to  $_{\text{Asp}}\langle e \rangle_{\#}$ , generating a telic reading of the predicate. The same DP moves to the specifier of EP, through that of TP, to provide range to  $\langle e \rangle_E$  ( $\langle e \rangle_T$  is assigned range directly by the head feature  $\langle \text{pst} \rangle$ , which triggers head movement of the listeme *wilt*). The DPs assigning range to the relevant open values receive an interpretation “as an entailment of the event structure” (Borer 2005b:64). Thus, the specifier of  $\text{Asp}_Q\text{P}$  is interpreted as subject-of-quantity (in Tenny’s 1994 terms, it *measures out* the event), since it is the subject of a quantity predicate, namely  $\text{Asp}_Q\text{P}$ . As a specifier of EP, the DP is interpreted as an Originator, as originating the (*wilting*) event. Note, crucially, that these interpretations are independent of the listeme which ends up being the verb (*wilt* in (49)). In unaccusatives, therefore, the subject is taken to be interpreted as both subject-of-quantity and originator. On the other hand, unaccusatives are, within this perspective, always telic. If, however, a DP different from that at the specifier of  $\text{Asp}_Q\text{P}$  is merged as the specifier of EP to provide range to  $\langle e \rangle_E$ , a telic transitive predicate emerges:

(50) Borer 2005b:85

$[_{\text{EP}} [\text{Anna}]^3 \langle e^3 \rangle_E [_{\text{TP}} [\text{Anna}] \text{read} \langle \text{pst} \rangle \langle e \rangle_T [_{\text{Asp}_Q\text{P}} [\text{the book}]^2 [\langle e^2 \rangle_{\#} [_{\text{VP}} \text{read}]]]]]$

In this case, of course, *Anna* is interpreted as originator of the reading event, while *the book* is only interpreted as subject-of-quantity, measuring out the reading event.

On the other hand, if  $\text{Asp}_Q\text{P}$  is absent, an atelic unergative predicate arises:

(51) Borer 2005b:84

$[_{\text{EP}} [\text{the flower}]^3 \langle e^3 \rangle_E [_{\text{TP}} [\text{the flower}] \text{wilt} \langle \text{pst} \rangle \langle e \rangle_T [_{\text{VP}} \text{wilt}]]]$

In this predicate, which could correspond to *The flower wilted for three days, the flower* cannot be interpreted as subject-of-quantity, since  $_{\text{Asp}}\langle e \rangle_{\#}$  has not been merged.

Finally, Borer discusses non-stative atelic transitive predicates, both with quantity and non-quantity objects.<sup>49</sup> She argues that these objects are the specifiers of a semantically empty projection, the *shell functional projection*,  $\text{F}^{\text{SP}}$ . The head of this projection is licensed not by range assignment, but phonologically, by assigning case to a DP (quantity or not) at its specifier. Specifically,  $\text{F}^{\text{S}}$  assigns partitive case, as manifested in some languages like Finnish, where the presence of partitive on an object DP automatically cancels a telic reading of the predicate.<sup>50</sup> An illustration of the derivation of these predicates is given below:

(52) Borer 2005b:109

- a.  $[_{\text{EP}} [\text{Kim}]^3 \langle e^3 \rangle_E [_{\text{TP}} [\text{Kim}] \text{build} \langle \text{pst} \rangle \langle e \rangle_T [_{\text{F}^{\text{SP}}} [\text{houses}] [_{\text{F}^{\text{S}}} [_{\text{VP}} \text{build}]]]]]$
- b.  $[_{\text{EP}} [\text{Kim}]^3 \langle e^3 \rangle_E [_{\text{TP}} [\text{Kim}] \text{push} \langle \text{pst} \rangle \langle e \rangle_T [_{\text{F}^{\text{SP}}} [\text{the cart}] [_{\text{F}^{\text{S}}} [_{\text{VP}} \text{push}]]]]]$

<sup>49</sup> Borer 2005 does not discuss stative predicates in depth, pointing out only that they cannot be equated with predicates involving an  $\text{F}^{\text{SP}}$ .

<sup>50</sup> Borer (2005b:108f.), basing on ideas in Speas 1994, suggests that  $\text{F}^{\text{SP}}$  is a kind of semantically vacuous counterpart of  $\text{Asp}_Q\text{P}$ : while the former is not semantically interpreted but must by necessity assign (partitive) case, the latter is semantically interpreted (it introduces a quantity predicate to be predicated of the event) but does not necessarily assign case (for instance, it does not assign accusative case to the subject-of-quantity in unaccusative predicates).

Since F<sup>S</sup>P is not a semantic projection, the DP at its specifier must receive “a default participant interpretation, to be calculated on the basis of other fully specified components of the event” (Borer 2005b:111). For instance, in the examples of (52), if Kim is interpreted as the originator of the building and pushing events, respectively, the DPs *houses* and *the cart* must refer to the entities being built or pushed, but, crucially, not measuring out the event, as do subjects-of-quantity in Asp<sub>Q</sub>P structures.

#### 2.2.4 Event structure without arguments

Licensing of event structure, that is, assignment of range to the open values heading the relevant functional categories, can be carried out through means different to the one shown above, which involves a specifier-head relation between a DP and the open value, with the concomitant assignment of an event role to the DP. These other ways of assigning range are, I recall, direct, by an f-morph or a head feature, or indirect, by some element in the structure different from a specifier. We have already seen an illustration of indirect range assignment to <e><sub>#</sub> by adverbs (see (47)). In this case, telicity arises in the absence of a subject-of-quantity. This would also be the case with PPs expressing a bounded path in motion predicates; they too would indirectly assign range to Asp<e><sub>#</sub>.

(53) *Borer 2005b:208*

- a. John ran to the store
- b. Jane swam into the room
- c. Pat danced into the corridor

For Borer, in these cases the subjects are not first merged at the specifier of Asp<e><sub>#</sub> which, as said, is given range by the PP. As a result, the predicates in (53) would not be unaccusative. However, I observe, analogous predicates in Dutch select the BE-auxiliary in the perfect tense (see (54)b in comparison with (54)a, without the PP), strongly suggesting an unaccusative analysis for the predicate and a non-originator analysis of the subject:<sup>51</sup>

(54) *Dutch; Borer 2005b:32*

- a. Jan heeft gesprogen.  
Jan has jumped
- b. Jan is in de sloot gesprongen.  
Jan is in the ditch jumped  
'Jan has jumped into the ditch.'

As for direct range assignment to Asp<e><sub>#</sub> Borer proposes that this is the usual way in the Slavic languages. For instance, the semelfactive suffix *-nu*, as in the predicate below, is taken to be a grammatical formative assigning range directly to Asp<e><sub>#</sub> and,

<sup>51</sup> Borer (2005b:208, footnote 17) does note that her analysis of (53) as (telic) unergative predicates is in contradiction with the fact that similar predicates in Italian allow *ne*-cliticisation, a traditional unaccusativity diagnostic. However, she claims that *ne*-cliticisation does not necessarily signal unaccusativity, but, rather, a postverbal location of the subject. Even if her approach to (53) can escape the critique based on *ne*-cliticisation, it does not escape, I observe, the one based on auxiliary selection in Dutch, which she herself mentions as unaccusativity diagnostics in Borer 2005b:33.

thus, making a telic reading of the predicate possible in the absence of a subject-of-quantity:<sup>52</sup>

- (55) *Russian; Borer 2005b:185*  
 Ja morgnula (\*casami). (In the non-repetitive reading.)  
 I blinked for hours

All in all, Borer (2005b) proposes that argument structure, as the (structured) set of arguments of a predicate, is purely epiphenomenal: the presence and the interpretation of arguments is ancillary to the construction and licensing of event structure, which, on the other hand, can be licensed without arguments.<sup>53</sup>

I have already pointed out a problem with such a neat dissociation of event and argument structure. In particular, the Dutch data in (54)b suggest that the presence of the bounded PP must be related to an unaccusative reading of the predicate and a subject-of-quantity reading of the subject. That this might be the case is further supported by the fact that when the subject of such predicates is a mass DP, telicity does not arise:

- (56) Marine wildlife swam into the room (for hours/\*in five minutes)

Thus, the subject of this type of sentences does seem to bear on their aspectual interpretation. We have reasons to believe, therefore, that the presence of the PP cannot be dissociated from the status of the subject as a subject-of-quantity. However, this relation between the two is straightforwardly accounted for in theories proposing a small-clause projection where the PP acts as the predicate and the surface subject is in fact the small clause subject (see, among others, Hoekstra 1988:134, Hoekstra & Mulder 1990:4 or Mateu & Rigau 2002:11).

<sup>52</sup> Borer (2005b:186-187) provides evidence that the subject of *nu*-suffixed verbs is not an internal argument, thereby rejecting the possible objection that these predicates be in reality unaccusative, with the subject being first merged as the specifier of  $Asp_Q$  and assigning range to  $\langle e \rangle_{\#}$ .

<sup>53</sup> The eventive projection EP can also be licensed without any argument DP merged at its specifier. A case in point are predicates like *It rained* or *There arrived three trains at the station* (Borer 2005b:265 and 268) where an expletive (*it*, *there*) licenses EP without receiving an originator role,  $\langle e \rangle_E$ . On the other hand, direct range assignment of  $\langle e \rangle_E$  is illustrated, according to Borer, by data such as the next Catalan sentence:

(i) *Rigau 1997, apud Borer 2005b:284*

Hi=canten nens.  
 LOC=sing.PL children  
 ‘There are children who sing (there).’  
 $[_{EP} \text{ hi}^3 \text{ canten} \langle e \rangle^3_E [_{TP} [\text{nens}] \text{ hi canten} \langle e \rangle_T [_{VP} ]]]$

In (i) the clitic *hi* (cliticised onto the verb), directly licenses the event argument introduced by  $\langle e \rangle_E$  (this amounts to existential binding, representing by the superindex <sup>3</sup>). The postverbal subject *nens* raises to TP, where it is assigned nominative case, but does not have anything to do whatsoever with range assignment to  $\langle e \rangle_E$ . As long as *nens* is interpreted as an originator of a singing event, it receives this role from the fact that there is no other DP to which it could be assigned.

On the other hand, by no means do I want to imply that Borer’s theory does not make a distinction between arguments and adjuncts. In fact, the distinction is very clear, since arguments are meant to be exclusively those XPs merged as specifiers of functional projections and providing range to their open values.



On the other hand, it is not clear that unaccusativity —within Borer’s framework, the licensing of Asp<sub>Q</sub> through a quantity DP merged at its specifier and the licensing of EP through the same DP raised onto its specifier— should automatically imply telicity. Thus, returning to the BE-auxiliary diagnostics, this time in Italian, we find BE-selecting intransitive predicates which allow, nonetheless, an atelic interpretation:<sup>54</sup>

(57) *Italian; Sorace 2000:869 and Folli 2002:128*

- a. I dinosauri {sono esistiti / <sup>??</sup>hanno esistito} 65 milioni di anni fa.  
the dinosaurs are existed / have existed 65 millions of years ago  
‘The dinosaurs existed 65 million years ago.’
- b. La casa è bruciata (per un’ ora), ma non è bruciata.  
the house is burned for an hour but not is burned  
‘The house has burned (for an hour) but has not burned down.’

Moreover, it is also unclear how Borer’s (2005b) analysis can account for data such as the following:

(58) *Italian; Mateu 2008a*

- La giumenta {ha figliato/ \*è figliata} in/<sup>??</sup>per due ore.  
the mare(F) has foaled.M.SG is foaled.F.SG in/for two hours  
‘The mare has foaled in two hours’

The above example is not unaccusative, since the HAVE-auxiliary is selected; but, crucially, it is not atelic. However, there is no apparent licenser for Asp<sub>Q</sub> either (nor any sub-word licenser akin to the suffix *nu* in Russian —see (55)). Rather, it seems, as argued by Mateu (2008a) and Acedo-Matellán & Mateu (2010), the telicity in (58) is not grammatically represented and must depend solely on the conceptual properties of the root, here one referring to an entity unmarkedly interpreted as bounded (*figlio* ‘son’).<sup>55</sup>

## 2.3 Distributed Morphology

### 2.3.1 A single generative engine. The Narrow Lexicon

A glance at such works as Marantz 1995, 1997 or Harley & Noyer 1999, 2000 reveals that Distributed Morphology (DM) is not simply a theory of morphology, although maybe its motivations were, in the beginning, of a morphological nature (see Halle 1992, 1997, Halle & Marantz 1993): it implies a revision of the generative model of grammar, with particular attention to the syntax-morphology interface, and basically assuming a minimalist design (Chomsky 1995f.). The main tenet in the theory is that syntax is the only generative engine of the faculty of language, and, hence, that whatever stores of idiosyncratic information must be postulated are exclusively of a non-computational nature (but see below for a qualification). In this way, it is denied that there could be any operations in the lexicon, and, in fact, the traditional lexicon is split up in three different stores or lists, as shown below (Marantz 1995, 1997):

<sup>54</sup> See Levin & Rappaport Hovav 1992, 2004 and Reinhart 2000, 2002 for more discussion on the dissociation of unaccusativity and telicity.

<sup>55</sup> See Chapter 4, Section 1.1.3 for a critique of Borer’s treatment of resultative constructions.

(59) *Based on Marantz 1997:203-204*

- a. *List 1* or *Narrow Lexicon*, containing bundles of purely morphosyntactic features called *morphemes*.
- b. *List 2* or *Vocabulary*, containing *Vocabulary Items*, which are rules of correspondence between a phonological exponent and an underspecified set of morphosyntactic features and other contextual instructions.
- c. *List 3* or *Encyclopaedia*, containing *Encyclopaedia Entries*, which are rules of correspondence between a phonological exponent and a set of world-knowledge properties (for *cat*, for instance, “fuzzy animal”, “domestic”, etc.).

Syntax exclusively operates with morphemes provided by the Narrow Lexicon to yield hierarchic representations feeding both the phonological and semantic interpretations of linguistic expressions. These morphemes, as mentioned above, are bundles of abstract features taken from a common pool provided by UG. Marantz (1997:203) contends that “[t]he sets of grammatical features are determined by Universal Grammar and perhaps by language-particular (but language-wide) principles. Since these sets are freely formed, subject to principles of formation, List 1 is “generative.”” I note that, as long as one of the lists is generative, the goal of having a single generative engine, expressed as the basic postulate of the theory, is not achieved.<sup>56</sup> On the other hand, Marantz (1997:204) characterises the Vocabulary and the Encyclopaedia as “non-generative but expandable”.

### 2.3.2 The Vocabulary

No phonological or encyclopaedic information is present in syntactic computations: DM endorses the hypothesis of Late Insertion, by virtue of which phonological information is retrieved once the syntactic representation is delivered at the PF interface, after Spell-Out. At the moment of Vocabulary Insertion, the insertion of Vocabulary Items into the nodes of the syntactic configuration, the distinction between *f-morphemes* and *l-morphemes* becomes important (Harley & Noyer 1998, 2000). The former correspond to functional nodes like *v* or *T*, conveying only morphosyntactic meaning like the values for number, tense, person, etc., and triggering an almost automatic Vocabulary Insertion. For instance, the *f-morphemes* of plural number in nouns and past tense may receive, in English, the phonological exponents specified, respectively, by the following Vocabulary Items:

(60) *Harley & Noyer 1999:3*

/-s/ ⇔ [Num] [pl]

/did/ ⇔ [pst]

Vocabulary Insertion for *f-morphemes* is automatic, in the sense that there is not a free choice of Vocabulary Items for a given *f-morpheme*. Rather, it is regulated through a process of competition between different Vocabulary Items whose set of contextual features must be a subset of those making up the *f-morpheme*. In this competition the most highly specified Vocabulary Item will be inserted, pre-empting insertion of any of the rest (for instance, *-en* will be inserted at a plural node if the root embedded is  $\sqrt{\text{OX}}$  or  $\sqrt{\text{CHILD}}$ , accounting for *oxen*, *children*, *\*oxes* and *\*childs*). On the contrary, Vocabulary Insertion into *l-morphemes* (*lexical morphemes*) is arbitrary, non-

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<sup>56</sup> A critique based in Starke 2010. In Starke’s (2009) nanosyntactic theory the nodes of the syntax are, in fact, individual features, so there is no need for a pre-syntactic generative narrow lexicon. However, see Section 3.3.3 for a critique of so-called *phrasal spell-out* within the nanosyntactic framework.

deterministic: in principle there is a choice as to inserting either *cat*, *dog*, *table* or *idea* into an l-morpheme. This aims at accounting for the fact that the phonological variation in roots is significantly less dramatic than that in functional material. For instance, syncretism (as in *-ed* for both past tense and past participle), contextual allomorphy (as in *a/an* for the indefinite article, *-abl(e)/-bil* for the same derivational morpheme in *reliable/reliability*) and suppletion (variation with no possible phonological relation between the variants, as in plural *-(e)s* vs. *-en*) are pervasive in functional items, but not in roots. However, some authors (Harley & Noyer 1998, 2000) have emphasised the need to elaborate a theory of *licensing*, where root Vocabulary Items are endowed with contextual specification as to be insertable only in particular nodes.<sup>57</sup> In that sense the difference between f-morphemes and l-morphemes is significantly weakened. In Section 3.3.2 I will propose that roots are *early inserted* and that the Vocabulary Insertion of l-morphemes is dramatically different from that of f-morphemes. Importantly, no theory of licensing is needed.

### 2.3.3 Semantic interpretation. The Encyclopaedia

On the semantic side, the configuration generated by the syntax arrives at LF, where it is automatically interpreted on the basis of both the featural content of f-morphemes and their position in the configuration (which confers them different “flavours”, like “cause” or “become” for the v head —see Harley 1995, Marantz 2003). Marantz (1995:4) emphasises the fact that the semantic interpretation of a linguistic expression partakes in both its LF representation and the “derivation as a whole”, in particular, “any and all unforced choices made”. Presumably he is referring to the roots freely inserted during Vocabulary Insertion, for which, as mentioned above, there is an *unforced* choice. Under a Late Insertion approach to roots we must conclude that the only possible way for the conceptual system to access the non-compositional meaning encapsulated in roots like  $\sqrt{\text{DOG}}$  or  $\sqrt{\text{CAT}}$  is by accessing Vocabulary Insertion, where the choice is made, and then looking up the correspondent entry listed in the Encyclopaedia (for instance, *dog*  $\Leftrightarrow$  [“four legs”, “canine”, “pet”, “sometimes bites”, etc.] —see Harley & Noyer 1999:3). Of course that architectural complication (graphically represented in Harley & Noyer’s 1999:3 diagram as the Encyclopaedia being linked by different arrows) is not required if roots, as opposed to f-morphemes, are early inserted and, hence, present before Spell-Out. See Marantz 1995, 1997 and Embick 2000 for discussion, and also Section 3.3.2.

The interpretation of roots turns out to be, to a certain extent, context-dependent. Crucially, the context within which a special meaning of a root may be triggered is locally defined. In Marantz 1995:13f., for instance, the observation is made that the little v (verbalising) head defines one such domain, as vPs like *take a leap* are interpreted as simple verbs like *leap*. On the contrary, the causative verb *make* can only trigger idiomatic interpretation if the verb it embeds does not itself project an external argument. For instance, *make ends meet* receives an idiomatic interpretation “earn and spend equal amounts of money” due to the special meanings retrieved for the roots involved ( $\sqrt{\text{END}}$ ,  $\sqrt{\text{MEET}}$ ) within a local domain (vP). That the meanings can be retrieved is possible because unaccusative *meet* does not involve the projection of a head selecting an external argument, which would count as a boundary between *make* and

<sup>57</sup> For instance, in Harley & Noyer 2000:13 the l-morpheme *destroy* is endowed with the constellation of features  $\{[+v], [+DP], [+cause]\}$ . These features determine, respectively, that *destroy* is only insertable in the context of v, that it needs an object and that it cannot appear in an unaccusative predicate (cf. \*The city destroyed). See also Ramchand 2008 for another instance of a licensing theory outside DM.

*ends meet*. That boundary is present in constructions like *make (someone) swim/fly a kite/etc.*, which, accordingly, may only receive an interpretation where *make* is a causative verb and the embedded verb retains its usual meaning —see also Harley 1995. Crucially, much as special meaning might be triggered for roots within well-defined contexts, the whole structure is not assigned a special meaning. That could not never be the case, since the LF-semantics inherent to the configuration generated by syntax is compositional and cannot be overridden. Marantz (1995:12f.) makes the claim, for instance, that in the idiom *kick the bucket* a special interpretation is retrieved for *kick* and *bucket* (specifically, for  $\sqrt{\text{KICK}}$  and  $\sqrt{\text{BUCKET}}$ ). However, the meaning associated to a transitive structure with a definite DP as object, that is, the LF of that expression, is computed, and, thus, *kick the bucket* is not the same as *die* (cf. *He was dying for days/\*He was kicking the bucket for days*).

Finally, the local domain in which a particular interpretation of a root is triggered has eventually come to be identified with the *phase* (Chomsky 2000f.). Accordingly, there has been theorising, within the DM tradition, on what categories define phases, based on the evidence of particular interpretations arising within well-defined contexts (cf. Arad 2003, 2005 and Marantz 2001, 2008, among others.).<sup>58</sup>

#### 2.3.4 Operations along the PF-branch

One of the main tenets of DM is *Syntactic Hierarchical Structure All the Way Down*. In Harley & Noyer's (1999:3) words, it "entails that elements within syntax and within morphology enter into the same types of constituent structures (such as can be diagrammed through binary branching trees). DM is piece-based in the sense that the elements of both syntax and of morphology are understood as discrete constituents instead of as (the results of) morphophonological processes." In the same vein, Embick & Noyer (2007:302f.) emphasise that the interface between syntax and morphology is, by default, transparent. However, it is of course well-known, and correspondingly observed within the DM tradition (Halle & Marantz 1993f.), that syntax/morphology mismatches do occur and that, hence, the interface can be non-isomorphic or non-transparent. With respect to such cases of mismatch, Embick & Noyer (2007:304) "assume that one of the primary tasks of morphological theory is to identify the set of PF operations that are responsible for these deviations from the default case. Although this option weakens the theory by allowing PF to alter syntactic structures, it does so in a way that maintains the most direct possible correspondence between syntactic and morphological (i.e. PF) structures." A range of PF operations have been proposed but here I will concentrate on Fusion and Lowering.<sup>59</sup> Importantly, both operations take place before Vocabulary Insertion, that is, before the representation is endowed with phonological matrixes.<sup>60</sup>

Lowering (Embick & Noyer 1999) allows the adjunction of syntactic terminal nodes that have not been put together either by Merge or by Attract/Move in overt syntax. In

<sup>58</sup> Borer (2005b:25f., 354f.) proposes a treatment of idioms as idiosyncratic relations between a phonological representation and a chunk of structure (in fact, *pluralia tantum* like *trousers* or *scissors* or verbs with an obligatorily telic unaccusative interpretation, like *arrive*, are considered by her idioms). However, she does not establish principles to define the domain of an idiomatic interpretation, missing the generalisation captured by Marantz (1995f.).

<sup>59</sup> See Embick & Noyer 1999, 2001.

<sup>60</sup> But see Kandybowicz 2007 for arguments that Fusion must apply after Vocabulary Insertion.

particular, it brings a head down to the head of its complement, creating a new, complex node, as stated below:

- (61) *Lowering of  $X^0$  to  $Y^0$ ; Embick & Noyer 2001:561*  
 $[_{XP} X^0 \dots [_{YP} \dots Y^0 \dots ]]$   $\Rightarrow$   $[_{XP} \dots [_{YP} \dots [_{Y^0} Y^0 + X^0] \dots ]]$

An illustration of Lowering is the movement of T to v in English. Observe that, since Lowering occurs before Vocabulary Insertion, it is not sensitive to linear adjacency. As a result, it might skip intervening material, like the adverb *loudly*:

- (62) *Lowering of  $T^0$  to  $v^0$  in English; Embick & Noyer 2001:562*  
 Mary  $[_{TP} t_1 [_{vP} \text{loudly play-}[_{ed}]_1 \text{the trumpet}]]$

Fusion (Halle & Marantz 1993, 1994) obtains one single simple node out of two sister nodes. In that sense, it “was designed primarily to account for a particular syntax-morphology mismatch involving the phonetic realization of fewer vocabulary items at PF than there are terminal nodes in the narrow syntactic output.” (Kandybowicz 2007:3). As an illustration of Fusion, Miyagawa (1998) claims, for instance, that in some cases the causative v and the “become” v are fused in Japanese, and that, hence, only one Vocabulary Item corresponds to these two syntactic nodes.<sup>61</sup>

## 2.4 Summary

I have revised the models proposed by Mateu (2002), Borer (2005b) and the DM model (Halle & Marantz 1993, Marantz 1995f., among others). Mateu’s (2002) model inherits Hale & Keyser’s (1993f.) view of argument structure, where argument structure configurations are syntactic projections defined on the relational properties of a limited set of projecting or relational elements. Mateu (2002) achieves a more parsimonious theory in reducing the number of basic relational elements by showing that adjectival categories and adpositional categories behave in the same way, as far as argument structure is concerned. Borer (2005b) puts forth a model based on a very neat separation of grammatical knowledge and conceptual knowledge. Technically, and for the matters of concern here, the model consists in a highly articulated syntactic treatment of event structure, which, crucially, can be licensed without arguments. Thus, for Borer argument structure is ancillary to event structure. Finally, the DM model can be considered a research program on the architecture of grammar, with a particular concern for the syntax-morphology interface, but also with a special regard for the relation between phonological and semantic interpretation.

## 3 The present framework

In this section I present the framework within which I approach the argument structure phenomena dealt with in the dissertation. Although I have been primarily inspired by the configurational theory of thematic interpretation to be found in Hale & Keyser 1993f. (see Section 1.2.1), Mateu 2002f. (see Section 2.1), and Acedo-Matellán & Mateu 2010, I also draw on insights from Borer 2005b (see Section 2.2) and DM (see Section 2.3). Thus, on the one hand, assuming as desirable a theory of grammar with only one generative engine (cf. Marantz 1995), I endeavour to do away with the l-/s-

<sup>61</sup> Other post-syntactic operations are: Impoverishment (Bonet 1991), Fission (Noyer 1997), the introduction of dissociated features or dissociated morphemes (Embick 1997, 1998, Embick & Noyer 2007) or Local Dislocation (Embick & Noyer 1999, 2001). See also Harley & Noyer 1999.

syntax distinction. On the other hand, I emphasise Borer's (2005b) view of roots as grammatically opaque elements and I also try to incorporate her insights on the syntactic representation of telicity into a theory of argument structure. First I will lay out how argument structure is syntactically built (Section 3.1). Then I will discuss how the syntactic configuration is interpreted semantically (Section 3.2) and morphophonologically (Section 3.3). I pursue the idea that cross-linguistic variation boils down to differences in the morphophonological interpretation of the structures yielded by syntax.

### 3.1 *Argument structure is syntax*

Argument structure is a syntactic configuration; as such, it is built by freely applying Merge to primitive *relational* elements, able to project, and *non-relational* elements, unable to project. Since argument structure is syntax, there is no sense in maintaining a distinction between an l-syntax and an s-syntax: syntax is the only generative engine. In turn, syntax delivers representations which are to be interpreted at PF (morphophonology) and at LF (semantics).

#### 3.1.1 No l-/s-syntax distinction

In Section 1.2.1 I have provided evidence that l-syntax, as portrayed in the works of Hale and Keyser, constitutes an independent cycle of syntactic computation. I will assume, along with the DM framework, that there is only one generative engine responsible for the generation of every (morpho)syntactic object. In particular, roots and DPs will be shown to be merged as arguments (that is, as complements or specifiers of argument structure configurations), and, hence, to be interspersed in the configuration. I am of course not arguing for a cycle-less syntax. Rather, the phase, as cycle (Chomsky 2000f.), has to account for any phonological and semantic opacity-effects traditionally attributed to the word/non-word, lexicon/syntax or l-syntax/s-syntax distinction (cf. Marantz 2001). I will assume that vP is a phase. Phases are mostly important, within this work, as locality domains for semantic and phonological interpretation (see Section 3.2.5).

#### 3.1.2 Relational and non-relational elements

I adopt Mateu's (2002) important distinction between relational and non-relational elements as the basic building blocks of argument structure. Relational elements are functional heads, universally provided by UG, and are able to project structure. There are two basic relational elements within the vP: v and p.<sup>62</sup> The former is the eventive head, while the latter is the adpositional head. In turn, v and p may acquire "flavours", that is, different semantic interpretations depending on configurational properties. In particular, if v takes a specifier it is interpreted as causative; if it does not, it is interpreted as unaccusative. As for p, a single pP projection is interpreted as a *predicative relation* between two entities; an ulterior p taking pP as complement is

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<sup>62</sup> Ultimately, v and p could be conflated into one relational head, the distinction derived from configurational properties. See Boeckx 2010 for the proposal that there are only two basic categories, a nominal category n and an adpositional category p, the distinction between them, in turn, being derived from phase-theoretic considerations. In turn, all other categories are derived configurationally. See Mateu 2002:32 for the contention that the difference between his R, T and r heads (see Section 2.1) is of configurational nature. However, the  $\pm$  value with which they are endowed is grammatically relevant but non-configurational. Mateu (p. c.) points out that the  $\pm$  value of R and T could also turn out to be translated into configurational terms. However, I believe that the  $\pm$  difference is not grammatically relevant when applied to R and, as for T, the dynamic/static difference emerges precisely from the Path/Place difference which I am introducing as configurational. See Section 3.2.2.

interpreted as a *transition* and may induce a telic reading of the resulting predicate (see Section 3.2.4.2). In this way, a single p-projection corresponds, semantically, to Hale and Keyser's *central coincidence* relation, while two p-projections correspond to their *terminal coincidence* relation (Hale 1986, Hale & Keyser 1997a). Roughly, while a central coincidence relation like the one involved in *Sue is in the room* is equalled to stasis, a terminal coincidence relation like the one involved in *Sue goes into the room* is equalled to change (Hale & Keyser 1997a).<sup>63</sup> For the sake of simplicity, and to parallel (not entirely, though) a distinction made within studies of the PP, from the seminal work of Jackendoff 1983f. through works such as Koopman 1997, Svenonius 2007 or Gehrke 2008, among others, I call the single p-projection *PlaceP*, a projection of *Place*, and the double p-projection *PathP*, a projection of *Path*. No ontological difference is meant thereby, though.<sup>64</sup> Importantly, Place and Path are purely formal terms here. Place is to be equated with predication, while Path transforms that predication into a final state/location.

Non-relational elements are unable to project structure, and are of two kinds: roots (represented in small caps and preceded by the symbol  $\sqrt{\phantom{x}}$ ) and DPs. Roots are deprived of category and cannot project; they are grammatically opaque, pretty much as are Borer's (2005a) listemes. Since roots cannot project, there is no syntactic object of the form RootP.<sup>65</sup> DPs, on the other hand, may be expanded by adjuncts, but no new structure is created thereby. That non-relational elements should be of these two kinds is a natural consequence of eliminating the l-/s-syntax distinction: once a single computation is assumed, the merger of roots and DPs is expected to be interspersed in the structure. Non-relational elements appear either at Complement or Specifier position, although roots are precluded from the specifier position presumably for phonological reasons, as will be discussed in Section 3.3.3.<sup>66</sup>

### 3.1.3 Argument structure configurations

Application of the operation Merge to relational and non-relational elements yields the different types of vP which correspond to the different argument structure configurations, as illustrated in (63) to (67). The examples and nomenclature are mostly taken from Acedo-Matellán & Mateu 2010:

(63) *Unergative/Transitive creation/consumption event*

- a. Sue danced.  
[<sub>VP</sub> [<sub>DP</sub> Sue] [<sub>v'</sub> v  $\sqrt{\text{DANCE}}$ ]]
- b. Sue did a dance.  
[<sub>VP</sub> [<sub>DP</sub> Sue] [<sub>v'</sub> v [<sub>DP</sub> a dance]]]

<sup>63</sup> The possibility of reducing this ontological difference to a configurational difference is also suggested by Hale & Keyser (1997a) themselves.

<sup>64</sup> Note that I am dispensing with selectional features within functional heads. The difference between a transitive/unergative v and an unaccusative v depends on the fact that a DP is merged as specifier in the former case and no specifier is merged in the latter case. See Chomsky 2001:10-11, for arguments against the existence of selectional features.

<sup>65</sup> Other exo-skeletal frameworks, such as Harley 2005, allow roots to project.

<sup>66</sup> Needless to say, DPs are themselves projections and, as such, must embed relational heads, such as D. It is of course true that DPs are referential entities, unlike roots. What I am claiming here is that both DPs and roots may receive a similar *argumental* interpretation derived from their position in the configuration.

- (64) *Atelic unaccusative event (Dutch example from van Hout 1993:7, apud Sorace 2000:866)*
- Die temperatur is 3 uurlang gestegen.  
the temperature is 3 hours long rise.PTCP.PST  
[<sub>VP</sub> V [<sub>PlaceP</sub> [<sub>DP</sub> Die temperatur] [<sub>Place'</sub> Place  $\sqrt{\text{STIJG}}$ ]]]
  - Dinosaurs existed (for a long time).  
[<sub>VP</sub> V [<sub>PlaceP</sub> [<sub>DP</sub> Dinosaurs] [<sub>Place'</sub> Place  $\sqrt{\text{EXIST}}$ ]]]
  - Sue is in Barcelona.  
[<sub>PlaceP</sub> [<sub>DP</sub> Sue] [<sub>Place'</sub> [<sub>Place</sub> Place  $\sqrt{\text{IN}}$ ] [<sub>DP</sub> Barcelona]]]
- (65) *Unaccusative event of change of state/location*
- The sky cleared (in five minutes):  
[<sub>VP</sub> V [<sub>PathP</sub> [<sub>DP</sub> The sky] [<sub>Path'</sub> Path [<sub>PlaceP</sub> ~~[<sub>DP</sub> The sky]~~ [<sub>Place'</sub> Place  $\sqrt{\text{CLEAR}}$ ]]]]]
  - Sue went to Barcelona.  
[<sub>VP</sub> V (= GO) [<sub>PathP</sub> [<sub>DP</sub> Sue] [<sub>Path'</sub> Path (= to) [<sub>PlaceP</sub> ~~[<sub>DP</sub> Sue]~~ [<sub>Place'</sub> Place [<sub>DP</sub> Barcelona]]]]]]]
- (66) *Atelic transitive event*
- Sue pushed the car.  
[<sub>VP</sub> [<sub>DP</sub> Sue] [<sub>V'</sub> V [<sub>PlaceP</sub> [<sub>DP</sub> the car] [<sub>Place'</sub> Place  $\sqrt{\text{PUSH}}$ ]]]]]
  - Sue lengthened the rope (for five minutes).  
[<sub>VP</sub> [<sub>DP</sub> Sue] [<sub>V'</sub> V (= -en) [<sub>PlaceP</sub> [<sub>DP</sub> the rope] [<sub>Place'</sub> Place  $\sqrt{\text{LONG}}$ ]]]]]
  - Sue kept the car in the garage.  
[<sub>VP</sub> [<sub>DP</sub> Sue] [<sub>V'</sub> V (= keep) [<sub>PlaceP</sub> [<sub>DP</sub> the car] [<sub>Place'</sub> [<sub>Place</sub> Place  $\sqrt{\text{IN}}$ ] [<sub>DP</sub> the garage]]]]]]]
- (67) *Transitive event of change of state/location*
- The strong winds cleared the sky.  
[<sub>VP</sub> [<sub>DP</sub> The strong winds] [<sub>V'</sub> V [<sub>PathP</sub> [<sub>DP</sub> the sky] [<sub>Path'</sub> Path ~~[<sub>DP</sub> the sky]~~ [<sub>PlaceP</sub> Place  $\sqrt{\text{CLEAR}}$ ]]]]]
  - Sue shelved the books.  
[<sub>VP</sub> [<sub>DP</sub> Sue] [<sub>V'</sub> V [<sub>PathP</sub> [<sub>DP</sub> the books] [<sub>Path'</sub> Path ~~[<sub>DP</sub> the books]~~ [<sub>PlaceP</sub> Place  $\sqrt{\text{SHELVE}}$ ]]]]]
  - Sue put the books on the shelf.  
[<sub>VP</sub> [<sub>DP</sub> Sue] [<sub>V'</sub> V (= put) [<sub>PathP</sub> [<sub>DP</sub> the books] [<sub>Path'</sub> Path [<sub>PlaceP</sub> ~~[<sub>DP</sub> the books]~~ [<sub>Place'</sub> [<sub>Place</sub> Place  $\sqrt{\text{ON}}$ ] [<sub>DP</sub> the shelf]]]]]]]

Some remarks must be made about how these configurations relate to syntactic facts. First, I follow Hale & Keyser's (1993f.) or Mateu's (2002) proposal that unergative predicates (see (63)a) are underlyingly transitive predicates. Specifically, within the present proposal unergative verbs like *dance* correspond to a vP where Compl-v is a root, and not a DP/NP. The structure of unergative verbs as transitives is forced by the properties of the system: it is not possible for a functional head to project a specifier without projecting any complement, since the first DP/root merged with a functional head must be its complement (and roots are independently ruled out as specifiers for phonological reasons: see Section 3.3.3). Hence, unergatives must be transitives (that is, they must feature a complement—a root).<sup>67</sup>

On the other hand, unaccusativity (see (64) and (65)) is the absence of a Spec-v. Unaccusatives may be causativised (transitivised) if a DP merges as specifier, as shown

<sup>67</sup> The same rationale underlies the treatment of particles as “unergative” prepositions. See Section 3.1.4.



through the contrast between (65)a and (67)a.<sup>68</sup> The difference between an unaccusative structure with PlaceP as Compl-v (64) and one with PathP as Compl-v (65) has to do with the interpretational difference between a stative predicative relation and a transition (see Sections 3.2.2 and 3.2.4.2). However, a unifying syntactic phenomenon for all unaccusatives, hence for both (64) and (65), is the fact that these predicates select or admit selection of a BE-auxiliary for the perfect tenses in languages like Italian, as shown below.<sup>69</sup>

(68) *Italian; Folli 2002:128*

- a. Il cioccolato è fuso per pochi secondi.  
 the chocolate is melt.PTCP.PST.M.SG for few seconds  
 ‘The chocolate melted for a few seconds.’
- b. Il cioccolato è fuso in pochi secondi.  
 The chocolate is melt.PTCP.PST.M.SG in few seconds  
 ‘The chocolate melted in a few seconds.’

Finally, observe that the DP at Spec-Place rises to Spec-Path when it is available (for instance, [<sub>DP</sub> the sky] in (67)a). This movement, and the semantic interpretation of the above structures will be discussed in Section 3.2.4.2. In turn, the phonological interpretation of these structures, here highly abstract, will be discussed in Section 3.3.<sup>70</sup>

### 3.1.4 Adjunction of roots to functional heads

Alongside the complement position, roots may appear as adjuncts to the functional heads. This is what happens in (67)c of Section 3.1.3 above: the root  $\sqrt{\text{ON}}$  is adjoined to the functional Place head. That the preposition *on* should involve a root, that is, a non-relational element, might seem striking at first, but once a strict delimitation between conceptual and grammatical content is accepted, it must be acknowledged that the difference between, say, *in the box* and *on the box* cannot be of grammatical nature, and that the choice between both is of the same status as that between *The cat is on the mat* and *The dog is on the mat* (see Section 2.3.2 for the different conditions of Vocabulary Insertion for l-morphemes and f-morphemes, in these respect).<sup>71</sup> Moreover, dissociation

<sup>68</sup> The causativisation process might be more productive than is usually realised. For instance, in some varieties of Iberian Spanish unaccusative *caer* ‘fall’ and *quedarse* ‘stay’ can be transitivised:

- (i) *Iberian Spanish*  
 Juan ha caído el agua.  
 Juan has fallen the water  
 ‘Juan has dropped the water.’
- (ii) *Iberian Spanish*  
 Juan ha quedado la carpeta en casa.  
 Juan has stayed the folder at home  
 ‘Juan has left the folder at home.’

Similarly, Greek *páo* ‘go’, may be also transitive:

- (iii) *Modern Greek*  
 I Dímitra me píge sto stathmó.  
 the Dímitra me.ACC go.PRF.3SG in\_the.ACC station.ACC  
 ‘Dímitra took me to the station.’

<sup>69</sup> If BE-selection in Italian is a reliable diagnostic for unaccusativity, the fact that the same sentence with the BE-auxiliary licenses an atelic and a telic interpretations is against the view that unaccusatives are necessarily telic, as argued by Borer (2005b) (see Section 2.2.4).

<sup>70</sup> In the representations I have also abstracted away from other movements, for instance movement of the internal argument for case-reasons (to Spec-v or to Spec-T).

<sup>71</sup> My proposal that the spatial value of adpositions is encoded as a root adjoined to the functional element Place is also in accordance with Baker’s (2003:304, footnote 1) or Svenonius’s (2007) observation that “P

of prepositions into a functional and a non-functional straightforwardly implements the well-established idea that particles are intransitive prepositions (see Cappelle 2005:82f. and references cited therein). In particular, while PPs like *on the shelf* correspond to PlaceP structures where the root of the preposition is adjoined to Place and Compl-Place is a DP (*the shelf*), particles like *on* correspond to PlacePs where the root of the preposition sits directly at Compl-Place. The difference is illustrated below:

- (69) *An analysis of* The books (are) on the shelf  
 [PlaceP [DP the books] [Place' [Place Place  $\sqrt{\text{ON}}$ ] [DP the shelf]]  
 (70) *An analysis of* on (as in The lights (are) on)  
 [PlaceP [DP The lights] [Place' Place  $\sqrt{\text{ON}}$ ]]

Thus, particles (and, as shall be argued in Chapter 4, also verbal prefixes) turn out to be, specifically, unergative prepositions, as illustrated in (70) (see also Kayne 1985).<sup>72</sup>

A root can also adjoin to *v*. Thus, the roots  $\sqrt{\text{DANCE}}$  and  $\sqrt{\text{HAMMER}}$  are adjuncts to *v* in (71)a and (71)b, respectively:

- (71) *Root-adjunction to v*  
 a. Sue danced into the room.  
 [<sub>VP</sub> [<sub>V</sub> *v*  $\sqrt{\text{DANCE}}$ ] [<sub>PathP</sub> [DP Sue] [<sub>Path'</sub> Path (=to) [PlaceP [~~DP Sue~~] [Place' [Place Place  $\sqrt{\text{IN}}$ ] [DP the room]]]]]]]  
 b. Sue hammered the metal flat.  
 [<sub>VP</sub> [DP Sue] [<sub>V'</sub> [<sub>V</sub> *v*  $\sqrt{\text{HAMMER}}$ ] [<sub>PathP</sub> [DP the metal] [<sub>Path'</sub> Path [~~DP the metal~~]]] [PlaceP Place  $\sqrt{\text{FLAT}}$ ]]]]]

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is essentially a functional category, despite its association with encyclopedic information” (Svenonius: 2007:65). Actually, Baker himself suggests that “English might have a relatively large number of prepositions on the surface because it permits relational nouns to *conflate* <my italics: VAM> into an abstract P head prior to lexical insertion. This proposal would capture nicely the fact that preposition seems to be a hybrid category in English, neither clearly functional nor clearly lexical” (Baker 2003:304). The fact that inventories of adpositions are made up of much fewer elements than those of nouns is, in my opinion, due to the fact that the *spatial relations* conveyed by adpositions are much fewer than the *entities* conveyed by nouns (although see the abovementioned works for remarks on the cross-linguistic fluctuation of the size of adpositional inventories). For more discussion on the functional or lexical status of P see Koopman 1997 or Den Dikken 2003, among others. In relation to this last point, I believe that an argument can be made in favour of the open-class (i.e., “lexical”; here, “root”) nature of the category of adpositions focusing on the status this class displays in sign languages. According to Talmy (2009), the set of spatial relations expressible in these languages, if restricted at all, is much broader than that available in spoken languages. If, as Talmy suggests, that set is an open one, the question arises why should adpositions form a closed-class system in spoken languages and an open-class system in sign languages. However, if one assumes that adpositions involve elements constituting in fact an open-class system, the difference in their number with respect to the sign/spoken distinction can be accounted through the different nature of the Saussurean form-concept relationship in either kind of language: very often *iconic* in sign languages, and almost always *symbolic* in spoken languages. While iconic signs need not be memorised, and can actually be created at the moment of utterance, symbolic signs, due to the purely conventional nature of the relation between *signifiant* and *signifié*, must be memorised. The reduced number of adpositions in any given spoken language would then turn out to be the result of an external condition: a memory restriction.

<sup>72</sup> As we will see in Chapter 3, Section 2.1, particles and, in the case of Latin and other languages, prefixes, may also receive an analysis where the root of the particle/prefix is an adjunct to Place and Compl-Place is occupied by an empty category. Ultimately, the right analysis shall depend, in my opinion, on whether there is an anaphoric interpretation involved or not. I do not see such an interpretation in *The lights are on*, but it is arguably available in predicates like *He walked in* (uttered after *He arrived at the room*).

Root-adjunction to *v*, which shall be crucial in understanding the data dealt with in this dissertation, is designed to capture so-called *lexical subordination* constructions (Levin & Rapoport 1988), that is, constructions involving a complex event where the main event is identified with an accompanying co-event. Thus, for instance, in (71)a the unaccusative event whereby Sue enters the room is accompanied by a *subordinate* event of dancing (although the dancing, note, is not linguistically represented as a separate event, that is, through a separate *v* head). For similar treatments of lexical subordination see Embick 2004, McIntyre 2004, Zubizarreta & Oh 2007 and Mateu 2008b, among others.

### 3.1.5 A small note on case

I assume that a DP which arrives at Spec-Path receives accusative case if *v* has a specifier, although I remain agnostic about the locus of accusative-assignment: it could be Path (see Borer 2005b:81 for an analogous proposal on her Asp<sub>Q</sub>) or maybe the transitive *v* head (Chomsky 1995). Thus, in many cases accusative case is related to an assignment of a measure role to the object (Tenny 1994), and, hence, to a telic interpretation of the event; in the next example, telicity is signalled by the delimiting adverbial *paucis diebus*:

(72) *Latin*; Bell. Afr. 25, 2

<u>Cirtam=que</u>	<u>oppidum</u>	[...]	paucis	diebus [...]	capit.
Cirta.ACC=and	town.ACC		few.ABL.PL	day.ABL.PL	take.PRF.3SG

‘And he conquers the town of Cirta in a few days.’

However, in Latin there are cases of accusative case assigned to quantity DPs which do not yield telic predicates, that is, to Figure DPs within Path-less vPs:

(73) *Latin*; Nep. 11, 2

[Veniebant]	Multi etiam,	qui [...]	cognoscere	studebant [...]
come.IPFV.3PL	many also	who.NOM.PL	get_to_know.INF	be_eager.IPFV.3PL

<u>quem</u>	tam	diu [...]	timuissent.
who.ACC	so	for_a_long_time	fear.PLUPRF.SBJV.3PL

‘Many came, also, who were eager to get to know the one whom they had feared for such a long time.’

In (73) the accusative *quem*, object of *timuissent*, cannot measure out the event, since the event is atelic, as hallmarked by the durative adverbial *diu*: PathP is not projected — see Section 3.2.4.2 for details. Hence, the relation between accusative case and Path is unidirectional: Path triggers accusative, but not all accusatives rely on the projection of a PathP.<sup>73</sup>

As regards nominative, I make the usual assumption that it is assigned to any DP agreeing with T, whether it comes from Spec-*v* or Spec-Path. Finally, in Chapter 3,

<sup>73</sup> In this sense, Latin does not pattern with Finnish, where objects which do not measure out the event are assigned partitive case except in stative predicates (Borer 2005b:99f., Kiparsky 1998). Rather, Latin behaves like many languages (English included) in not making a morphological distinction between objects which measure out and those which do not measure out, except for some alternations (notably, involving accusative and dative) which I will not go into (see Pinkster 1995:60f. and Echarte Cossío 1994, among others).

Section 2.7, I will discuss some issues on the assignment of case to Compl-Place in Latin.

### 3.2 *The semantics of argument structure: a localist-aspectual approach*

#### 3.2.1 Structural and encyclopaedic semantics

An important distinction must be drawn between the semantic interpretation of the configurations delivered by the syntax, as shown in Section 3.1, and the conceptual semantics encapsulated within roots. Let us call the former *structural semantics*, following Harley & Noyer (2000), and the latter, *encyclopaedic semantics*, since it must be listed, for every root, in a storage called Encyclopaedia (Marantz 1995:3). It is the integration of the encyclopaedic content of the roots with the structural semantics read off the syntactic configuration what corresponds to the semantic interpretation of the whole derivation (Marantz 1995:4). These two dimensions of meaning correspond to *compositional* and *non-compositional* meaning, respectively. In particular, I follow Marantz (1995) in the idea that syntax alone is responsible for the derivation of compositional meaning (that is, compositional meaning is *built up* or *derived*), while the Encyclopaedia alone is responsible for the storage of non-compositional meaning (that is, non-compositional meaning is *stored* and *underived*). Thus, any object created by the syntax must bear compositional meaning, although, of course, it embeds minimal pieces endowed with non-compositional meaning. See Section 3.2.5 for remarks on the locality constraints on the retrieval of (special) non-compositional meaning.

#### 3.2.2 Interpretation of functional heads and arguments

As was briefly introduced in Section 3.1.2, *v* is an eventive head, introducing an event in the structural semantics. This event might be interpreted as *externally originated* (brought about) if a DP—the external argument—is merged as Spec-*v* (see (74)a), and as *non-externally originated* if no DP is merged as Spec-*v* (see (74)b):

(74) *Externally vs. non-externally originated events*

- a. The strong winds cleared the sky.
- b. The sky cleared.

In turn, a causative *v* is interpreted as a creation/consumption event if its complement is a root (see (75)a) or a DP (see (75)b), as a transitive atelic event if its complement is a PlaceP, embedding a root (see (76)a) or a DP (see (76)b) as Compl-Place, and an externally originated change of state/location event if its complement is a PathP, again, embedding either a root (see (77)a) or a DP (see (77)b) as Compl-Place:

(75) *Creation/consumption event*

- a. Sue danced.
- b. Sue did a dance.

(76) *Transitive atelic event*

- a. Sue pushed the car, Sue lengthened the rope for five minutes.
- b. Sue kept the car in the garage.

(77) *Externally originated change of state/location*

- a. The strong winds cleared the sky, Sue shelved the books.
- b. Sue put the books on the shelf.

Finally, a *v* without any specifier is interpreted, if its complement is a PlaceP, as a stative event (see (78)a) or an atelic unaccusative event (see (78)b). I have also included the case of unaccusative predicates with a DP as Compl-Place. The most perspicuous example of such a configuration is simple locative copular sentences like (78)c, although I doubt that these sentences include a *v* head: they may turn out to be reducible to a PlaceP merged directly with T (see footnote 74):

(78) *Stative or atelic unaccusative event*

- a. Dinosaurs existed (for a long time).
- b. Die temperatur is 3 uurlang gestegen.  
the temperature is 3 hours\_long rise.PTCP.PST
- c. (Sue is in Barcelona.)

In turn, if the complement of unaccusative *v* is a PathP, it is interpreted as a non-externally originated change of state/location, embedding either a root (see (79)a) or a DP as Compl-Place (see (79)b) (the preposition *to* in (79)b is a direct phonological realisation of Path in English):

(79) *Unaccusative event of change of state/location*

- a. The sky cleared (in five minutes).
- b. Sue went to Barcelona.

The adpositional head, *p*, receives two possible interpretations as a result of configurational properties. A single *p* projection is interpreted as PlaceP, which establishes a *predicative relation* between two entities. Thus, in *The sky cleared (for/in five minutes)* and *The sky is clear* there is a predicative relation between *The sky* and the root  $\sqrt{\text{CLEAR}}$ . Similarly, in *Sue went to Barcelona* and *Sue is in Barcelona* there is a predicative relation between *Sue* and (*in*) *Barcelona*. If a further *p* head is merged taking PlaceP as complement, it is interpreted as Path, introducing the notion of *transition* and inducing telicity in the predicate if a quantity DP is *internally* merged as its specifier. See Section 3.2.4.2 for more details on situation aspect and argument structure.

Arguments, be they DPs or roots, are semantically interpreted as a result of the position they occupy in the structure. This interpretation does not correspond to traditional theta roles, but it is more abstract in nature. Next I list these interpretations, each one of them linked to a precise position in the configuration (based, partly, on Acedo-Matellán & Mateu 2010):

(80) *Interpretation of arguments (DPs and roots)*

- a. *Originator*: a DP at Spec-*v*  
Sue danced, Sue did a dance, Sue pushed the car, Sue kept the car in the garage, The strong winds cleared the sky, Sue shelved the books, Sue put the books on the shelf
- b. *Incremental Theme*: a DP or root at Compl-*v*  
Sue did a dance, Sue danced
- c. *Figure*: a DP at Spec-Place  
Dinosaurs existed, The sky cleared, Sue went to Barcelona, Sue is in Barcelona, Sue put the books on the shelf, Sue pushed the car, Sue kept the car

- in the garage, The strong winds cleared the sky, Sue shelved the books, Sue put the books on the shelf
- d. *Central Ground*: a DP or root at Compl-Place when no PathP is projected  
Dinosaurs existed, Die temperatur is gestegen, Sue is in Barcelona, Sue pushed the car, Sue kept the car in the garage
  - e. *Terminal Ground*: a DP or root at Compl-Place when PathP is projected  
Sue went to Barcelona, The sky cleared (in five minutes), The strong winds cleared the sky, Sue shelved the books, Sue put the books on the shelf
  - f. *Measurer*: a DP raised from Spec-Place to Spec-Path  
Sue went to Barcelona, The sky cleared (in five minutes), The strong winds cleared the sky, Sue shelved (the) books, Sue put (the) books on the shelf
  - g. *Manner*: a root adjoined to a functional category  
Sue danced into the room, Sue hammered the metal flat

These interpretations are in part localistic and in part aspectual, that is, Aktionsart-related. The notions Figure and Central or Terminal Ground are localistic. The Figure, in Talmy's (1975f.) terms, is the entity which is located or moving with respect to some other entity, which is the Ground. For instance, *Sue* is a Figure and *Barcelona* is a Ground both in *Sue went to Barcelona* and *Sue is in Barcelona*. The relation between Figure and Ground can also be metaphorical, in terms of the predication of some property: the Figure is an entity to which some property, encoded by the Ground, is ascribed. Thus, *the sky* and *clear* are, respectively, a Figure and a Ground in *The sky cleared in/for five minutes* and in *The sky is clear*.<sup>74</sup>

The Ground, in turn, can be either a Central Ground or a Terminal Ground, a localistic-aspectual distinction. A Central Ground corresponds to a location/state which is not presented as a result of a transition, and can correspond to either a static description, as in *The sky is clear* or a dynamic atelic description, as in *The sky cleared for five minutes*. In the latter sentence the sky is described as acquiring degrees of clearness without however attaining a pragmatically defined state of clearness. Atelicity, as absence of a quantised transition (see Section 3.2.4.2), unifies both variants (cf. *The sky has been clear for days*), as does BE-selection in the Perfect tense in Italian, which proves their common unaccusativity (cf. *Il cielo è stato chiaro molti giorni* 'The sky has been clear for many days'). The static/dynamic difference between both emerges from the fact that the former involves no *v* head (hence, no event), as opposed to the latter. On the other hand, a Terminal Ground corresponds to a final or resulting location/state. For instance, in *Sue went to Barcelona* and *The sky cleared in five minutes* it is entailed that Sue ends up in Barcelona and that the sky ends up in a pragmatically defined state of clearness after five minutes.

The Originator, the Incremental Theme and the Measurer are basically event-structural notions. An Originator is the entity which originates the event, as, for instance, is *The strong winds* in *The strong winds cleared the sky*. An Incremental Theme is an entity which comes into existence or disappears as the event evolves. For instance, in *Sue*

<sup>74</sup> As is commonly assumed, I take copular BE to be the phonological instantiation of T. Hence, copular sentences do not have a *v* head (they are not eventive). However, they integrate a PlaceP where the predication is codified, and this is why I illustrate Figure and Ground with such sentences as *Sue is in Barcelona* and *The sky is clear*. In this sense there is of course a grammatical difference between stative copular sentences like *The sky is clear* and atelic sentences like *The sky cleared for several days*, based on the absence vs. presence, respectively, of an event.

*danced*, the root  $\sqrt{\text{DANCE}}$ , an Incremental Theme, refers to the activity of dancing, which unfolds along with the event introduced by *v*. In *Sue did a dance*, *a dance* is the Incremental Theme, with the same interpretation. Last, a Measurer is an entity, encoded by a DP at Spec-Path, which induces a measure for the transition into a location/state introduced by PathP. Thus, for instance, in *Sue shelved the books in five minutes* or *The sky cleared in five minutes*, *the books* and *The sky* are Measurers (they move to Spec-Path from their original Spec-Place position, where they are interpreted as Figures) in that they establish a measure for the events of shelving and clearing. Thus, these events will be completed (and, hence, measured) as soon as the entities denoted by the Measurers attain the location/state denoted by PlaceP, that is, when all the books denoted by *the books* are shelved and when the whole entity of the sky denoted by *The sky* is clear. However, note that I also call Measurer a non-quantity DP like *books* in *Sue put books on the shelf* or *Marine life in Marine life swam into the room for hours*. In these predicates there is also a transition encoded by PathP, but since the quantity conveyed by the object is not definite, telicity cannot arise. See Section 3.2.4.2 for more details on the relation between Path and (a)telicity and the interpretation and syntax of the Measurer.

As pointed out in Section 3.1.4, the roots adjoined to functional categories, notably to *v*, are interpreted as *Manners* of the event: they specify the way in which the event introduced by *v* is carried out. Thus, in *Sue hammered the metal flat*, the externally originated event of change of state (of a metal which becomes flat) is identified with a hammering activity, since *v* forms an adjunct structure with root  $\sqrt{\text{HAMMER}}$ .

I point out, finally, a crucial difference between Mateu's (2002) theory, and the present theory, which concerns the interpretation of functional heads (relational heads in Mateu's terminology). Recall from Section 2.1.2. that relational heads are endowed with either a + or a - value, characterising agentivity/non-agentivity (for R), transition/non-transition (for T) and telicity/atelicity (for r). Recall, also, that within structures featuring the *r* relation, two structures were missing in Mateu's (2002) model:

- (81)  $*[_F X \dots F \dots [-R [X [+r X]]]$  (a transitive non-agentive telic event)  
 (82)  $*[-T [X [+r X]]]$  (an unaccusative stative telic event)

I want to claim that to the extent that the present account eliminates (non-configurational) features in the interpretation of relational heads, the non-existence of the above combinations is explained away. With respect to (81), since I have not taken agentivity to be linguistically represented I do not make a difference between +R (*Sue sings*:  $[_F \text{ Sue } \dots F \dots [+R \text{ SING}]]$ ) and -R (*Sue stinks*:  $[_F \text{ Sue } \dots F \dots [-R \text{ STINK}]]$ ). Thus, I have no non-existing combination to account for. As regards (82), the +T/-T difference relates to a dynamic/stative difference. However, I do not encode this difference on the eventive head. Rather, a dynamic unaccusative predicate, if telic, is endowed with a double p-projection; if atelic, it is endowed with a single p-projection. On the other hand, a stative unaccusative predicate, atelic by definition, involves a single p-projection and the absence of the eventive head *v* (cf. the discussion on the Central Ground). In this scenario a configuration equivalent to that in (82) could never be generated.

### 3.2.3 Against root ontologies

Drawing on Acedo-Matellán & Mateu 2010, I argue that roots must be treated on a par with DP arguments (leaving aside the cases where roots are precluded from some positions like the specifier position —see Section 3.3.3). That means that roots, as DPs, receive a particular interpretation depending on their position in the structure. For instance, a root like  $\sqrt{\text{HAMMER}}$  may be interpreted as Central Ground (see (83)), Terminal Ground (see (84)) or Manner (see (85)), depending on the configuration where it is merged:

- (83) Sue hammered the metal for hours.  
 $[_{VP} [_{DP} \text{Sue}] [_{v'} v [_{PlaceP} [_{DP} \text{the metal}] [_{Place'} \text{Place } \sqrt{\text{HAMMER}}]]]]]$
- (84) Sue hammered the metal in five minutes.  
 $[_{VP} [_{DP} \text{Sue}] [_{v'} v [_{PathP} [_{DP} \text{the metal}] [_{Path'} \text{Path } \{\cancel{DP} \text{the metal}\} [_{PlaceP} \text{Place } \sqrt{\text{HAMMER}}]]]]]]]$
- (85) Sue hammered the metal flat.  
 $[_{VP} [_{DP} \text{Sue}] [_{v'} [_{v} \sqrt{\text{HAMMER}}] [_{PathP} [_{DP} \text{the metal}] [_{Path'} \text{Path } \{\cancel{DP} \text{the metal}\} [_{PlaceP} \text{Place } \sqrt{\text{FLAT}}]]]]]]]$

In (83), the root  $\sqrt{\text{HAMMER}}$  is understood as a Central Ground, since it is embedded in a single p-projection or PlaceP; as such, it describes a state presented as not final, and, accordingly, is compatible with an atelic reading of the predicate. In (84), the root is understood as a Terminal Ground, since it is embedded in a PathP. Therefore, it depicts a final state, which, accordingly, habilitates a telic interpretation. Finally, in (85) the root is interpreted as Manner by virtue of its being merged as an adjunct to v: it specifies the way in which the event, here an externally-originated change of state, takes place.

Assuming that roots are freely merged as arguments —again, with the proviso that they are excluded from specifier position— I explicitly reject root ontologies, that is, classifications of roots according to the possibilities they display to be inserted in the structure as based on their semantic properties. This position is assumed in works such as Harley 2005, who proposes that instrument-naming verbs, such as *hammer* or *rake*, involve a root which names an instrument (a hammer, a rake) and that this fact would preclude the root to be merged in an argumental position within the structure. I claim instead that if  $\sqrt{\text{HAMMER}}$  or  $\sqrt{\text{RAKE}}$  name an instrument that fact clearly belongs to encyclopaedic semantics and, hence, cannot determine where in the structure the root can be merged. In turn, the interpretation of the root as instrument or, as has been called here, Manner, depends on the fact that the root be merged as an adjunct to v (see (85)).<sup>75</sup>

### 3.2.4 Aspect and argument structure

#### 3.2.4.1 Two-component theory of aspect

I assume a two-component theory of aspect in the sense of Smith 1991 or MacDonald 2008, among others, a theory that distinguishes between *situation* or *inner* aspect and *viewpoint* or *outer* aspect. Situation aspect has to do with properties internal to the event and, hence, can be related to what has traditionally been called the type of situation or Aktionsart. Situation aspect is what distinguishes between states (*The sky is clear*), activities (*Sue danced*), achievements (*Sue spotted Jane in the crowd*) and

<sup>75</sup> See Levinson 2007, 2010 for another approach assuming some kind of root ontology.



accomplishments (*The strong winds cleared the sky*) (cf. Vendler 1967). In this work I concentrate on the Aktionsart property of (a)telicity, the property distinguishing events with an explicit endpoint —telic events— and those without an explicit endpoint —atelic events (see Section 3.2.4.2).

On the other hand, viewpoint aspect encodes properties external to the eventuality: it is related to how the eventuality is presented. Specifically, if the viewpoint aspect is *imperfective*, only an internal part of the event is asserted; if it is *perfective* the whole event is asserted, with initial and final bounds. This can be exemplified with Latin, where the contrast is marked morphologically:

(86) *Latin; Plaut. Merc. 884 and Caes. Gall. 1, 4, 2, apud Pinkster 1995:295 and 299*

- a. Quo            nunc        ibas?  
     To\_where now        go.IPFV.2SG  
     ‘Where were you going to?’
- b. Orgetorix [...] suam            familiam [...]            co-egit.  
     Orgetorix            his.F.ACC.SG household(F)ACC.SG    together-lead.PRF.3SG  
     ‘Orgetorix gathered his household.’

The imperfective *ibas* in (86)a licenses an interpretation where the going event is visualised from the inside, and is not asserted to have been carried out. By contrast, in (86)b the perfect form *coegit* yields an interpretation where the gathering event is seen as completed.

Situation aspect and viewpoint aspect are independent from each other. Specifically, telic events can be either imperfective (see (87)a) or perfective (see (87)b), while atelic events can be also imperfective (see (88)a) or perfective (see (88)b), as shown with the next Catalan examples, which incorporate the traditional test of temporal *in-* and *for-* adverbials:

(87) *Catalan: imperfective and perfective telic predicates*

- a. En    Pol    pintava                    un    quadre    en dues hores.  
     the    Pol    paint.IPFV.3SG    a    picture    in two    hours  
     ‘Pol was painting/used to paint a picture in two hours.’
- b. En    Pol    va            pintar            un    quadre    en dues hores.  
     the    Pol    PFR.3SG paint.INF    a    picture    in two    hours  
     ‘Pol painted a picture in two hours.’

(88) *Catalan: imperfective and perfective atelic predicates*

- a. En    Pol    ballava                    durant hores (cada    dia).  
     the    Pol    dance.IPFV.3SG    during hours every    day  
     ‘Pol used to dance for hours everyday.’
- b. En    Pol    va            ballar            durant hores.  
     the    Pol    PFR.3SG dance.INF    during hours  
     ‘Pol danced during hours.’

Finally, situation aspect is linked to properties traditionally called *lexical* (i.e., related to particular verbs or verb classes), while viewpoint aspect is usually highly grammaticalised, and expressed through inflectional morphology (that is, morphology which enters into paradigms). In this dissertation, where the term *lexical* could only refer to idiosyncratic, non-grammatical properties of roots, the distinction between

situation aspect and viewpoint aspect is structural: situation aspect is encoded within the vP, as shall be specified in Section 3.2.4.2, while viewpoint aspect is encoded above the vP, maybe at an aspectual head, Asp, situated between v and T (see, for instance, Demirdache & Uribe-Extbarria 2004).

### 3.2.4.2 The computation of situation aspect

I argue for a certain relation between argument structure and situation aspect. Drawing partly on Borer's (2005b) account, I take telicity to emerge from a certain configuration involving the projection of a vP-internal PathP.<sup>76</sup> This projection yields the interpretation of a bounded transition, with a resulting location/state, the Terminal Ground, which is taken as the endpoint for the telic eventuality. However, a PathP, though forcing the interpretation of a transition, is not enough to yield a telic interpretation: a DP with the relevant quantificational properties, a *quantity* DP, in Borer's (2005b) terms, is what licenses that interpretation (Verkuyl 1972, 1993). The DP must have a quantity interpretation (see Section 2.2.2) in order for the event to be measured out (Tenny 1994, Borer 2005b) and, hence, to be telic. Consider the following example:<sup>77</sup>

(89) Sue put {the books/books/paper} on the shelf.

[<sub>vP</sub> [<sub>DP</sub> Sue] [<sub>v'</sub> v (= *put*) [<sub>PathP</sub> [<sub>DP</sub> (the) books/paper] [<sub>Path'</sub> Path [<sub>PlaceP</sub> [~~DP~~ (the) books/paper] [<sub>Place'</sub> [<sub>Place</sub> Place <sub>√ON</sub>] [<sub>DP</sub> the shelf]]]]]]]]

The Path head, when PathP is sister to v, triggers movement of the nearest DP in its c-command domain, usually the Figure DP at Spec-Place. However, as shall be argued in Chapter 3, Section 3.2.2, the Ground moves to Spec-Path when the Figure is not present. It is at this position where the Figure or Ground DP is interpreted as a Measurer for the event. Hence, there is a dissociation of the Measurer interpretation and of the Figure/Ground interpretation, as shown by the next examples:

(90) *Figure vs. Ground DP as the Measurer*

- a. Pour the water out of the bucket in three minutes.
- b. Pour the bucket out in three minutes.

This dissociation motivates providing different structural positions for the Measurer, the Figure and the Ground, and to posit movement to Spec-Path to explain why a single DP can be simultaneously interpreted as Figure and Measurer or as Ground and Measurer.

Mainly three possibilities arise as to the type of DP internally merged as Measurer and the type of inner-aspectual interpretation yielded in conjunction with PathP: that the DP be a quantity description (*the books*, *some books*, *three books*, etc.), a bare plural (*books*) or a mass DP (*paper*):

<sup>76</sup> But see Section 2.2.4 for evidence that there are instances of telicity which are not grammatically represented.

<sup>77</sup> Path is of course not completely equivalent to Borer's (2005b) Asp<sub>Q</sub>: on the one hand, Asp<sub>Q</sub>P, though entailing a measured change, does not entail the interpretation of a final location/state —recall that Borer's (2005b) theory is not in the least localistic. On the other hand, Borer contends that although in some languages the only way to license Asp<sub>Q</sub> is by merging a DP conveying a definite quantity as its specifier, in some other languages/constructions Asp<sub>Q</sub> is argued to be licensed independently, through particles, for example (see Borer 2005b, Chapters 6 and 7).

(91) *Different kinds of Measurers (Spec-Path)*

- a. Sue put {the/some/three books} on the shelf in ten minutes.
- b. Sue put books on the shelf {for ten minutes/in five seconds}.
- c. Sue put paper on the shelf for/\*in ten minutes.

When a quantity DP is merged as Measurer, it licenses a telic interpretation of the event. For instance, in (91)a a quantity of books which qualifies as quantity (*the books* or *three books* is neither cumulative nor divisive; *some books*, on the other hand, is cumulative but is not divisive) is asserted to have been put on the shelf, and the event is over (in ten minutes) when all the books are on the shelf. When a bare plural is merged as Measurer, two interpretations may emerge: an atelic one, which depends on the fact that there is no definite number of elements (*books*, in (91)b), and a telic one, called by MacDonald (2008:45) *Sequence of Similar Events* interpretation, which hangs on the fact that the transition codified by PathP may be measured out by each book. Thus, in (91)b the telic interpretation involves an indefinite number of telic events of putting each book on the shelf in five seconds. Finally, when a mass DP is merged as Measurer, since it corresponds to an indefinite quantity and although the transition codified by PathP is entailed to take place, the whole event cannot be measured out. For example in (91)c some paper is entailed to end up on the shelf: in other words, (91)c cannot mean that the amount of paper is moved towards the shelf by Sue for ten minutes without ever reaching the shelf. However, since the amount of paper is not quantity, the event cannot be measured out and atelicity arises.

Telicity seems to be licensed also when a quantity DP is merged as Incremental Theme, at Compl-v (see (92)a). However, an Incremental Theme DP may also license an atelic reading (see (92)b):

(92) *(A)telicity with Incremental Themes*

- a. Sue ate the peanuts in five minutes.
- b. Sue did a dance for an hour.

Since the bulk of data in this dissertation does not have to do with Incremental Theme predicates, I leave the puzzle of (92) at that (but see below; see also Ramchand 2008).

Atelicity can be claimed to emerge from a greater variety of situations in comparison to telicity. First, Incremental Theme predicates license an atelic interpretation, when they are roots (see (93)a; but see footnote 76), quantity DPs (see (93)b), bare plurals (see (93)c) or mass DPs (see (93)d):

(93) *Atelicity with Incremental Themes*

- a. Sue danced for an hour.
- b. Sue did a dance for an hour.
- c. Sue did dances for an hour.
- d. Sue ate bread for an hour.

Predicates with a single p-projection, PlaceP, and, hence, a Central Ground, are atelic, since they cannot present the location/state as final or resulting. This atelicity obtains independently of the quantificational properties of the DP merged as Spec-Place (see (94)c):

(94) *Atelicity with Central Grounds*

- a. Sue has been in Barcelona for a day.
- b. The sky cleared for five minutes.
- c. Sue lengthened the rope/ropes/rope for five minutes.

A PathP which is sister to *v* may license an atelic interpretation of three kinds. The first one has already been pointed out through (91)b and (91)c: a non-quantity Measurer (*books, paper*) yields an atelic interpretation in which the transition encoded by PathP is entailed to have been *partly* carried out but, since the quantity denoted by the DP is not definite, the transition corresponding to the whole event cannot be calculated and, hence, the event cannot be telic. On the other hand, PathPs structures may yield an atelic interpretation by virtue of their embedding a PlaceP, which, as has been shown above, always licenses this kind of aspectual interpretations. In particular, a PlaceP embedded within a PathP may license an interpretation in which the resultant location/state is measured through the *for*-temporal adverbial:

(95) *Atelicity emerging from the resulting location/state*

- a. *MacDonald 2008:72*  
George shelved the book for an hour.
- b. Sue came down for a moment.
- c. The sky cleared for a whole day.

In (95)a the book is entailed to remain on the shelf for an hour after it has been put there, in (95)b Sue stays for a moment after she has come down and in (95)c the sky remains clear for a whole day after it has cleared. Note that (95)c is not to be mistaken with (94)b, where no PathP projects and, hence, there is no entailment of a resulting state.

Finally, an atelic interpretation of PathP structures is related to cases such as the following one:

(96) *MacDonald 2008:72*

- George shelved the book for an hour.

The relevant interpretation here is called by MacDonald (2008:41) *Sequence of Identical Events interpretation*: for an hour long a succession of identical events of shelving the same book is entailed to have been carried out by George.

To conclude the section, I would like to return now to the mechanism via which Path raises the nearest DP in its c-command domain to Spec-Path. Note that the condition for Path to behave in such a way, that is, as a probe in search for a goal, is that PathP be a sister to *v*. The probing powers of Path in search of a Measurer DP are claimed to depend, therefore, on the presence of *v*. This parallels Chomsky's (2008) proposal on the primordial role of C in relation with T: C is the phase head, and the (real) probe, and T is a repository of the  $\phi$ -features contained in C, through which C triggers movement of a DP to Spec-T. The intuition behind the proposal for *v* and Path is quite transparent: Path only introduces a transition if the phrase it heads is a sister to *v*. There are clear empirical reasons for this, as presented in Chapter 3, Sections 3.1.1 and 3.1.2, and Chapter 4, Section 3.4: a PathP which is external to *v*P does not trigger telicity; morphologically, it does not trigger Path-prefixation to *v* in Latin and Slavic. A PathP

which is sister to *v* triggers telicity (if a quantity DP is merged at Spec-Path, as described above) and prefixation in Latin and Slavic. I shall not pursue the technical implementation of such a proposal, in terms of feature inheritance or otherwise, but I note that the vP-internal/external nature of PathP shall become particularly relevant in the discussion on the relation between atelicity and prefixation in Latin and Slavic in Chapter 4, Section 3.4.

### 3.2.5 Phase theory and semantic interpretation: locality domains for special meaning

With Marantz (1995, 1997, 2000, 2008), I strongly claim that the special meaning ascribed to either word-sized units (semantically idiosyncratic combination of morphemes) or bigger units (semantically idiosyncratic combination of morphemes), must boil down to contextually-determined special meaning for roots, and that those special meanings, as any non-compositional meaning, is listed in the Encyclopaedia. Indeed, on the one hand, the Encyclopaedia cannot store chunks of structure, since, from a strictly derivational point of view, structure cannot be stored (see Section 1.2.1 for a critique of the l-/s-syntax difference within the same spirit); on the other hand, structure cannot carry special meaning, since it depends uniquely on functional heads, whose semantic interpretation is determined by features provided by UG. In particular, the Encyclopaedic entry of a given root may list a special meaning of that root providing the context within which that meaning is triggered. Crucially, though, the context is a local domain: the phase.

Latin prefixed verbs provide an example of how the phase delimits a domain where special meaning of roots can be triggered. In particular, prefixed verbs in Latin are well known to show idiosyncratic meanings presumably not derived from the sum of the parts (the prefix and the verb).<sup>78</sup> Thus, for instance, the verb *occurro*, literally “against-run”, is found with the fairly transparent meaning of ‘run to meet, meet after a run’, derived from *curro* ‘run’ and *ob* ‘against, in front of, facing’ (see (97)a); however, it also licenses the special meaning ‘present itself, occur’ (see (97)b):

(97) *Latin; Caes. Gall. 2, 27, 1 and Cic. Orat. 115*

- a. Ut [...] calones [...] etiam inermes  
that soldier’s\_servant.NOM.PL even unarmed.NOM.PL  
armatis oc-current.  
armed.DAT.PL against-run.IPFV.SBJV.3PL  
‘That the soldiers’ servants, although unarmed, ran against the armed men.’
- b. Haec tenenda sunt oratori —saepe  
this.ACC.N.PL hold.PTCP.FUT.PASS.ACC.N.PL be.3PL orator.DAT often  
enim oc-currunt.  
since against-run.3PL  
‘These things shall have to be regarded by the orator, since they often present themselves.’

In Chapter 3 I will argue that predicates headed by verbs like *occurro* correspond to a non-externally originated change of location/state. For instance, (97)a is analysed as follows:

<sup>78</sup> This is a claim made also for prefixes in the Slavic languages, particularly for so-called *internal prefixes*, merged, by assumption, within the vP. See Chapter 4, Section 2.2 for relevant examples and references.

(98) *An analysis of (97)a*

[<sub>VP</sub> [<sub>v</sub> v  $\sqrt{\text{CURR}}$ ] [<sub>PathP</sub> [<sub>DP</sub> *calones*] [<sub>Path'</sub> Path [<sub>PlaceP</sub> [~~<sub>DP</sub> *calones*~~] [<sub>Place'</sub> [<sub>Place</sub> Place  $\sqrt{\text{OB}}$ ] [<sub>DP</sub> *armatis*]]]]]]

The semantic transparency of (97)a is reflected on the analysis of (98): the PlaceP *ob armatis* ‘against the unarmed men, in front of the unarmed men’ is interpreted as a Terminal Ground, since it forms a PlaceP embedded within a PathP structure: it depicts the final location of the Figure *calones* (note that *ob* ends up prefixed to the verb —see Section 3.3.4). The Figure *calones* rises to Spec-Path, where it is interpreted as a Measurer for the event: the event is over when all the *calones* end up in front of the unarmed men (*armatis*). The predicate is unaccusative, since there is no DP at Spec-v. To v is adjoined the root  $\sqrt{\text{CURR}}$ , which specifies the way in which the change of location takes place (running). On the other hand, (97)b is not less transparent than (97)a, and it receives a similar analysis:

(99) *An analysis of (97)b*

[<sub>VP</sub> [<sub>v</sub> v  $\sqrt{\text{CURR}}$ ] [<sub>PathP</sub> [<sub>DP</sub> *haec*] [<sub>Path'</sub> Path [<sub>PlaceP</sub> [~~<sub>DP</sub> *haec*~~] [<sub>Place'</sub> Place  $\sqrt{\text{OB}}$ ]]]]]]

I claim that the structural semantics of *occurro* in (97)b is the very same as that of *occurro* in (97)a. It could not be otherwise, since the meaning of syntactic configuration simply cannot be overridden. Both describe a telic change of state/location. In (97)b the root  $\sqrt{\text{OB}}$  is directly interpreted as Terminal Ground, since it sits at Compl-Place. However, since the roots  $\sqrt{\text{CURR}}$  and  $\sqrt{\text{OB}}$  find themselves within the same local domain for interpretation, the vP, they can trigger special meanings for each other. In particular, I propose that the Encyclopaedic entries of both  $\sqrt{\text{CURR}}$  and  $\sqrt{\text{OB}}$  specify that a special metaphorical meaning may be triggered in the presence of each other. Possibly  $\sqrt{\text{CURR}}$  is bleached out into conveying something like suddenness, while  $\sqrt{\text{OB}}$  is reduced to a deictic marker. The Encyclopaedia need not specify the extension of the domain within which that special meaning may be triggered: that is provided by the syntax. Specifically, both roots are “visible” to each other if and only if they fall within the same phase, here the vP, by assumption.

### 3.3 The syntax-morphophonology interface

I adopt the DM view that the morphophonological dimension of linguistic expressions is construed on the basis of a previously built syntactic representation, and that these two representations are, by default, isomorphic (Embick & Noyer 2007). However, they are not always isomorphic. In particular, words are phonological units, and may correspond to stretches of more than one syntactic atom (node). The PF branch of grammar consists of a series of operations which may generate the mentioned lack of isomorphism between the morphophonological representation and the syntactic representation delivered at LF. In this dissertation the strong position is adopted that cross-linguistic (and intra-linguistic) variation is to be seen as the possibility of mapping one LF to different PF representations, depending on the language. In that sense, it is accounted for exclusively on the grounds of language-specific morphophonological properties of the nodes, responsible for the triggering of a series of post-syntactic operations.

#### 3.3.1 Words and structure. Cross-linguistic variation

It is often taken for granted that words, as units which can be pronounced in isolation, are the atoms of syntactic computation. But the most superficial look at the relation

between so defined phonological words and the units assumed as syntactic atoms tells otherwise. For instance, as shown in (100), the Latin conjunction *-que* ‘and’ encliticises to the word on its right and triggers stress shift, revealing that the whole string is behaving like a phonological word:

- (100) *Latin; Nespor & Vogel 1986:146, apud Julien 2002:19*  
 virum            ['wi:rʊm] / virum=que        [wi: 'rʊmk<sup>w</sup>e]  
 man.ACC.SG                                      man.ACC.SG=and

Thus, *virumque* behaves prosodically in exactly the same way as any other word of more than two syllables where the penultimate syllable is heavy. However, on no sound syntactic account could *-que* and the host be analysed as one and the same syntactic atom. Out of the domain of clitics, situations exist where arguably the same components can be found within a phonological word or distributed in different phonological words, depending on the context, as the ones underlined in the following pairs of sentences:

- (101) *Marantz 2001, apud Newell 2008:10*  
 a. John cried.  
 b. Did John cry?  
 (102) *Marantz 2001, apud Newell 2008:10*  
 a. John is bigger.  
 b. John is more intelligent.  
 (103) *Marantz 2001, apud Newell 2008:10*  
 a. John took a leap.  
 b. John leapt.

These are some of the very numerous cases of the indirect relation between words and syntactic atoms. In this vein, I defend the view that phrases interact syntactically and semantically with sub-word units. As was shown in Section 3.1.3, DPs and roots may both occupy argumental positions in the structure. Observe the predicates in (104): they are argued to correspond to the same configuration and, hence, to yield the same structural semantics:

- (104) *Latin and English*  
 a. Marcus *ex*-iit.  
    Marcus out-go.PRF.3SG  
    ‘Marcus went out.’  
 b. Marcus went out.  
    [<sub>VP</sub> v (= i/GO) [<sub>PathP</sub> [<sub>DP</sub> Marcus] [<sub>Path</sub> Path [<sub>PlaceP</sub> [~~DP~~ Marcus] [<sub>Place</sub> Place  
    √EX/√OUT]]]]]

Specifically, the same predicative relation is claimed to hold between the unaccusative subject *Marcus* and the locative pieces *ex-* and *out*. However, the morphophonological packaging of the material is different in (104)a and (104)b: while the sequence *ex-* ends up prefixed to the verb in Latin, its English counterpart *out* remains an independent word in English. These facts support a view where words are the result of a variety of packaging mechanisms at PF operating on the representation yielded by the syntax. Since the application of these mechanisms responds to phonological properties of the nodes, cross-linguistic variation must be reduced to how those nodes are phonologically

specified. In the remainder of Section 3.3 I discuss how the operations at PF bring about the final phonological representation of the linguistic expression.

### 3.3.2 Vocabulary insertion. Non-uniform insertion

One of the tenets of DM is that the phonological information is not present during syntactic computation: this information is *late* inserted after Spell-Out, the moment where the representation is shipped off to the interfaces. That this is desirable for functional material is proved by the fact that the phonological shape of functional heads is highly sensitive to syntactic properties (see the seminal work of Bonet 1991 for Catalan pronominal clitics) and that the formal variation is sometimes too dramatic to be handled with readjustment rules operating on early inserted material (as is the case with suppletive allomorphy). Here I will also adopt the hypothesis that at least some heads receive their phonological matrix at PF and that this process is highly sensitive to the syntactic context where they are inserted. For instance, the Path head in English receives the phonological specification *to* when Compl-Place is a DP, as in the sequence *into the room*. This could be roughly formalised through the next Vocabulary Item:

(105) *to*  $\Leftrightarrow$  Path / [Place [DP]]

When this syntactic condition is not met, Path remains without a matrix. This is what happens in the predicate *The sky cleared*, which, as assumed here, involves a PathP (see Section 3.1.3). However, Path here is not realised as *to*, since Compl-Place is a root ( $\sqrt{\text{CLEAR}}$ ) and not a DP. Similarly, the *v* head is realised as *go/wen(-t)* when it takes a PathP as complement and Compl-Place is a DP, as in *She went into the room*. But if Compl-Place is a root, *v* does not undergo Vocabulary Insertion. Instead, it will receive a phonological matrix from some other lower node, by *conflation* (see Sections 3.3.3 and 3.3.6), since all nodes must end up receiving a phonological specification.<sup>79</sup>

It has been debated whether roots are also subject to Late Insertion. Embick (2000) provides evidence from Latin that roots should be early inserted, that is, that the choice of root should be made during the syntactic computation. In particular, Embick (2000) shows that the choice of root for Latin verbs determines aspects of their morphosyntax in the perfect tenses: while the majority of verbs present synthetic forms for the Perfect (see (106)a), so-called deponent verbs, that is, verbs which are morphologically passive notwithstanding their active interpretation, present analytic forms for that tense, composed of a past participle (agreeing in  $\phi$ -features with the subject) and a form of the verb *sum* ‘be’ (see (106)b):

#### (106) Latin

- a. *amo* ‘I love’ / *amavi* ‘I have loved, I loved’
- b. *hortor* ‘I order’ / *hortatus sum* ‘I (masc.) have ordered, I ordered’

Embick (2000) further demonstrates that deponency is orthogonal to argument structure and lexical semantics. Thus, for instance, *hortor*, in spite of its exclusively passive morphology, appears in both transitive (see (107)a) and passive sentences (see (107)b):

<sup>79</sup> This is not to say that there cannot be nodes with a null phonological matrix: PF can interpret null matrixes, as PRO or pro, for instance. Crucially, then, we must distinguish between an empty phonological matrix and the absence of a matrix.



(107) *Latin; Caes. Civ. 3, 109, 3 and Prisc. Gramm. II-II, 8 (apud Embick 2000:194)*

- a. Regem=que hortatus est, ut [...] legatos.  
king.ACC.SG=and order.PRF.3SG.M that ambassador.ACC.PL  
ad Achillam mitteret.  
to Achilla.ACC send.IPFV.SBJV.3SG  
'And he ordered the king to send ambassadors to Achilla.'
- b. Ab amicis hortare-tur.  
by friend.ABL.PL urge-IPFV.SBJV-PASS.3SG  
'He was urged by friends.'

Embick concludes that deponency is an idiosyncratic property, and that, therefore, it must be "arbitrarily associated" with certain roots. Since the synthetic/analytic distinction within the Perfect tense can be argued to respond to a distinction in syntactic configuration related to movement of the Asp(ect) head to T, that idiosyncratic property has to be present in the computation, and the root is necessarily early inserted.<sup>80</sup>

I believe that there are still other reasons to assume that roots are early inserted, that is, that the choice of root is made before the derivation is shipped off to the interfaces. Importantly, it is the only way to preserve an inverted Y model of grammar. Indeed, if roots are inserted into blank l-morpheme nodes after syntax, at PF, how could the semantic interpretation access it, since it constitutes an independent branch? In order for the non-compositional meaning of roots to be integrated within the structural semantics emerging from the syntactic configuration the choice of particular roots must have been made before. This position also derives the fact that, as mentioned above, formal variation of roots never reaches the degree of formal variation shown by functional material.<sup>81</sup> This suggests that Vocabulary Insertion, involving the competition of forms which are not necessarily similar (cf., for instance, *-s* vs. *-i* vs. *-a* for plural: *elephant-s*, *stimul-i*, *curricul-a*), is probably not the mechanism responsible for the insertion of roots.<sup>82</sup>

### 3.3.3 Conflation

Conflation was proposed by Hale & Keyser (1993) as a mechanism to eliminate empty matrixes at PF. In practice, then, conflation is a way to account for the mentioned lack of homomorphism between the syntactic representation and the phonological representation. In particular, it accounts for the fact that one and the same unanalysable phonological unit may correspond to different nodes of the syntactic configuration. For instance, and within the framework adopted here, in a sentence like *The strong winds cleared the sky*, the unanalysable unit *clear-* corresponds to the following syntactic nodes: Compl-Place, Place, Path and v. This is shown in (108) where conflation is represented through a single dash between the "landing site" and the conflatee and where all the copies except the one actually pronounced (the highest) have been struck through:

<sup>80</sup> Embick (2000) suggests that a theory where *at least* the roots of deponent verbs are early inserted is better suited in accounting for the syntax of the Latin Perfect; however, he surmises that maybe other roots need not be early inserted. He points out that a scenario with Early Insertion for roots and Late Insertion for functional material is already envisioned by Halle (1990).

<sup>81</sup> Marantz (1995) proposes that true suppletion occurs only for f-morphemes. This derives the fact that light verbs such as *go*, with tense-determined suppletion (I go/wen-t), cannot be roots.

<sup>82</sup> See also Borer 2005a: footnote 6 for the conclusion, arrived at from different considerations, that the phonological specification of roots must be present in syntax.

(108) [<sub>VP</sub> [<sub>DP</sub> The strong winds] [<sub>v'</sub> v-√CLEAR [<sub>PathP</sub> [<sub>DP</sub> the sky] [<sub>Path'</sub> Path-√CLEAR [<sub>DP</sub> the sky] [<sub>PlaceP</sub> Place-√CLEAR √CLEAR]]]]]

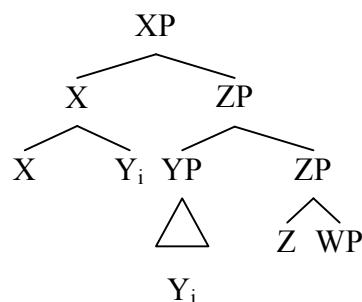
Hale and Keyser have discussed in different works whether conflation should be an instance of incorporation à la Baker, that is, of head movement. If it were, it should comply with the *Head Movement Constraint* (HMC), proposed by Travis (1984):

(109) *Head Movement Constraint; Travis 1984:131*

An  $X^0$  may only move into the  $Y^0$  which properly governs it.

As it stands, the HMC allows for a head  $Y^0$  of a phrase YP located in the specifier position of another phrase ZP to move up and adjoin to the head  $X^0$  sister to ZP. The allowance for head movement stems from the fact that in such a configuration  $X^0$  would properly govern  $Y^0$ . (110) illustrates:

(110) *Head movement from a specifier respects the HMC*



This is a welcome effect in the case of classical incorporation, provided that incorporation from specifier happens to be attested (Hale & Keyser 2002:52-57).<sup>83</sup> However, as far as we know, there are no examples of conflation taking as a source the specifier position. In particular, there are no verbs whose root could be claimed to be originated in a specifier. Such predicates would look like the following:

(111) *Hale & Keyser 2002:57*

- a. Japanangka spears straight ≠ “Japanangka straightens spears”.
- b. The north wind skies clear ≠ “The north wind clears the sky”.

Whatever the interpretations of the above predicates turn out to be, they cannot be the ones on the right, since they involve verbs where a specifier —of an adjectival projection in Hale & Keyser’s (2002:57) case and of an adpositional projection, PathP, in our case— has been conflated into them. For instance in (111)a, *spear*, understood as the subject of the straightening event, has been conflated into v. Therefore, while the HMC is powerful enough to restrain incorporation, it is not powerful enough to restrain conflation. This is what compels Hale & Keyser (2002:59) to propose that the heads entering into a conflation relation must hold a *strict complementation relation*:

<sup>83</sup> Hale & Keyser (1992:111f.), basing on Mithun 1984 and Baker 1988, contend that conflation could be incorporation precisely because incorporation *does not* involve movement from specifier position. In Hale & Keyser 2002, however, they present evidence from Hopi that incorporation from specifier position is possible, specifically, incorporation of the inner subject of a causativised verb into the matrix causative verb.

(112) *Hale & Keyser 2002:59*

A head X is the strict complement of a head Y iff Y is in a mutual c-command (i.e., sister) relation with the maximal categorial projection of X.

The principle in (112) straightforwardly rules out conflation from a specifier position, given that the head of a specifier of any projection is not in a strict complementation relation with the head sister to that projection (see (110)). Finally, also in Hale & Keyser (2002:60f.) they abandon (112) and propose a different analysis based on the idea that conflation is “concomitant to Merge”, that is, that it is intrinsically related to the basic operation of the computational system. In particular, they propose that each node H of the configuration is endowed, as part of its label, with a *p-signature*, a token for the phonological matrix to be retrieved later (Hale & Keyser (2002:78) embrace Late Insertion). If H projects, the label of the new syntactic object HP inherits H’s p-signature, if it is not defective. If it is defective, H gains the p-signature of its sister and the label of HP will feature that p-signature also. However, it is not clear whether the claim that conflation is concomitant to Merge may rule out the scenario in (110), that is, conflation from the specifier: observe that merging a specifier onto the derivation is also carried out through Merge.<sup>84</sup> Hence, with no other proviso in mind, it is not impossible to imagine a situation where an XP bearing a non-defective p-signature is merged as a specifier onto a YP with a defective p-signature. That would produce a YP with the p-signature of XP in the label. This theory of conflation as concomitant to Merge is assumed by Harley (2004), who, on the other hand, proposes to apply it to head movement in general, in order to derive the effect that head movement should be phonological.<sup>85</sup> However, she does not address the problem related to specifiers which I am pointing out here.

In this work I will adopt the theory of conflation as concomitant to Merge put forth by Hale & Keyser (2002:60f.) and Harley (2004).<sup>86</sup> I assume, therefore, that where conflation *is to apply* is already decided at syntax, before PF. However, it is at PF where conflation *applies*, deriving the surface shape of linguistic expressions. Specifically, I take this operation to be a kind of *repairing* strategy: it furnishes phonological matrixes to those nodes which have not met the contextual conditions to receive one through Vocabulary Insertion. In order to understand how conflation works, and to derive the fact that conflation never applies from a specifier, I have to make certain assumptions about the nature of roots, since conflation is the process whereby the phonological matrix of a root is transmitted to another node. In particular I will be assuming the following:

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<sup>84</sup> However, it has been argued that specifiers are merged, as adjuncts, through pair-Merge, and not set-Merge (Chomsky 2001). Thus, a quite plausible alternative account of the lack of conflation from specifiers could be developed involving the fact that they merge in a fashion different from that of complements: conflation would operate only from set-merged objects. Another plausible avenue of research, actually developed by Mateu & Espinal (2010) is the idea that roots, lacking all functional structure, cannot be proper subjects and are, therefore, banned from specifier position.

<sup>85</sup> Cf. Chomsky 1995; see Acedo-Matellán & Fortuny-Andreu 2006:155f. for relevant discussion.

<sup>86</sup> However, I do not want to commit myself thereby to a translation of all instances of head movement to conflation, as proposed by Harley (2004).

- (113) Roots always have a non-defective (null or not) phonological matrix (only functional heads may have a defective phonological matrix).<sup>87</sup>
- (114) Non-conflated roots are not PF-interpretable (roots must conflate into some (functional) node).

With (113) and (114), and assuming Hale & Keyser's (2002:60f.) definition of conflation as concomitant to Merge, there is no need to appeal to the strict complementation relation in (112) to preclude conflation from a specifier. In fact, conflation from a specifier does not have to be precluded: it simply cannot happen, as I try to explain now. Consider the next representations:

- (115)
- a. YP [<sub>XP</sub> X √ROOT]
  - b. YP [<sub>XP</sub> X ZP]

My point is that the phonological matrix of XP, to which YP is merged as specifier, cannot be defective. In both (115)a and (115)b, it depends on the phonological matrix of X and, if this is defective, on the phonological matrix of X plus that of Comp-X. In the case of (115)a, the phonological matrix of XP coincides either with that of X or with that of X plus that of the root (= Compl-X). Since the phonological matrixes of roots are never defective, by (113), we conclude that in (115)a the phonological matrix of XP cannot be defective (whether or not that of X is defective). But the same conclusion is reached for (115)b: ZP cannot have a defective phonological matrix, since its derivation has to involve a root at first merge. Hence, for both (115)a and (115)b, YP cannot contribute its phonological matrix to the phrase, since XP can never have a defective phonological matrix, and it is XP which transmits its phonological matrix to the upper node. Thus, a specifier never has a chance of transmitting its own phonological matrix. On the other hand, (114) guarantees that a root cannot be merged as a specifier: if it does it cannot conflate, and shall not be PF-licensed, with the derivation crashing. See Section 3.3.6 for illustration of how conflation is integrated with the other morphophonological operations.

I point out, last, that the results of conflation, thus envisioned, are not far away from those of *phrasal spell-out*, as defined within the nanosyntactic framework (Starke 2009). In phrasal spell-out a single stored morpheme (in my terms, the phonological matrix of a root) ends up spanning several (feature-sized) nodes. However, in contrast with nanosyntax, I don't take lexical items (at least roots) to be stored chunks of structure to be inserted into a stretch of nodes at Spell-Out; rather, there is a semantic motivation for locating the root contributing the relevant phonological matrix at a given node (for instance, a root being interpreted as a Ground is located at Compl-Place), and a syntactic motivation (conflation as concomitant to Merge) for positing that it applies in a regular fashion from head to head. Moreover, to the extent that those morphemic chunks of structure are completely idiosyncratic for every language and that there is no language-related restrictions on their make-up, well-established generalisations on certain "lexical" patterns are lost: for instance, the one stating that in Romance (see

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<sup>87</sup> Roots may sometimes be marked as +affixal, and, therefore, must end up prefixed onto some other node —see Chapter 4, Section 4.2 for a proposal that some roots in Germanic languages are +affixal, like English *out* in so called *out*-prefixation (cf. *John outran the bus*). However, affixhood is not to be confused with phonological defectivity.

(116)), but not in English (see (117)), a single root must always “span” v, Path and Place (except in cases where v corresponds to a Vocabulary Item, as in *go*-predicates)

(116) *Spanish*

- a. Los fuertes vientos aclararon el cielo.  
the strong winds cleared the sky  
[√ACLAR spans v, Path and Place]
- b. \*Los fuertes vientos soplaron el cielo claro.  
the strong winds blew the sky clear  
[√SOPL would span v, √CLEAR would span Path and Place]

(117)

- a. The strong winds cleared the sky.  
[√CLEAR spans v, Path and Place]
- b. The strong winds blew the sky clear.  
[√BLEW spans v, √CLEAR spans Path and Place]

See Section 3.3.6 and Chapter 3, Section 1.5.2 for the particular morphophonological reasons why predicates like (116)b are not possible in Romance, independently of the roots inserted.

### 3.3.4 Affixation

Conflation cannot be mistaken with affixation: while conflation yields the effect of an agglutinative morph, that is, an indivisible phonological unit corresponding to more than one meaning units, affixation brings together different (agglutinative or not) morphemes. The distinction between conflation and affixation is illustrated by the different phonological treatment of the Path in the following constructions:

(118) *Catalan and Latin*

- a. En Joan eixí.  
the Joan go\_out.PRF.3SG  
‘Joan went out.’  
[<sub>VP</sub> v-√EIX [<sub>PathP</sub> [<sub>DP</sub> En Joan] [<sub>Path</sub>’ Path-√EIX [<sub>PlaceP</sub> [<sub>DP</sub> ~~En Joan~~] [<sub>Place</sub>’ Place-√EIX √EIX]]]]]
- b. Joan ex-iit.  
Joan out-go.PRF.3SG  
‘Joan went out.’  
[<sub>VP</sub> Path-√EX-v (= i) [<sub>PathP</sub> [<sub>DP</sub> Joan] [<sub>Path</sub>’ Path-√EX [<sub>PlaceP</sub> [<sub>DP</sub> ~~Joan~~] [<sub>Place</sub>’ Place-√EX √EX]]]]]

In (118)a the phonological matrix of the root merged as Compl-Place, √EIX, is transmitted by conflation successively into Place, Path and, finally into v.<sup>88</sup> The result is that there is a single phonological representation for these three functional heads. In (118)b, by contrast, conflation operates up to Path. It cannot operate further since v is directly realised, by Vocabulary Insertion, as /i/. However, in some languages like Latin the Path head gets affixed onto the v head. Hence, it ends up forming one and the same (phonological) word with it. Crucially, however, there are two distinct phonological units, *ex* and *i*, the former corresponding to the heads Place and Path, the latter

<sup>88</sup> In Sections 3.3.5 and 3.3.6 we will see that v and Path end up being one and the same head in Romance, independently of their final phonological realisation.

corresponding to a raw *v* with “go” semantics. This distinction between conflation and affixation shall be crucial in the course of the dissertation to understand the difference between Catalan-like languages, where Path and *v* are always represented by one and the same phonological matrix, and Latin-like languages, where Path and *v* may be represented through different phonological matrixes but where they form one and the same (phonological) word.

In Section 3.3.6 I will propose that the affixation process illustrated in (118)b is in fact an instance of the operation Lowering, proposed by Embick & Noyer (1999, 2001) — see Section 2.3.4—, so the PF-derivation of predicates like (118)b will end up looking quite different.

### 3.3.5 Operations affecting nodes before Vocabulary Insertion: Lowering and Fusion

I will appeal to the two post-syntactic operations referred to in Section 2.3.4: Lowering and Fusion. As was mentioned there, these operations apply to nodes before Vocabulary Insertion (see Section 3.3.6). Lowering takes a head and lowers it to the head of its complement:

$$(119) \text{Lowering of } X^0 \text{ to } Y^0; \text{ Embick \& Noyer 2001:561}$$

$$[XP \ X^0 \ \dots \ [YP \ \dots \ Y^0 \ \dots]] \Rightarrow [XP \ \dots \ [YP \ \dots \ [Y^0 \ Y^0+X^0] \ \dots]]$$

Crucially, Lowering creates *a complex head* out of two heads. Fusion, on the other hand, takes two *single sister heads* and creates a novel *single head* out of them:

$$(120) \text{Fusion}$$

$$[X \ X+Y] \Rightarrow Z_{X+Y}$$

Fusion can be fed either by syntactic head movement (if it turns out to exist) or (PF) Lowering. Crucially, the head resulting from a Fusion process retains the features of the fused heads (Halle & Marantz 1993:116).

Lowering and Fusion can be illustrated, within the domain of argument structure, with Romance predicates containing a Path head. In particular, I take *v* and Path in Romance to fuse together into a single head after *v* has been lowered to Path. The resulting simple head is then submitted to Vocabulary Insertion and conflation. Thus, the derivation of a predicate like Catalan *En Joan eixí* ‘Joan went out’ is not exactly the one described in (118)a above. Rather, it looks like the one in (121):

#### (121) Catalan; PF-derivation of *En Joan eixí*

##### a. Structure delivered by syntax

$$[_{VP} \ v \ [_{PathP} \ [_{DP} \ \text{En Joan}] \ [_{Path'} \ Path \ [_{PlaceP} \ [_{DP} \ \text{En Joan}] \ [_{Place'} \ Place \ \sqrt{EIX}]]]]]$$

##### b. *v*-to-Path Lowering

$$[_{VP} \ [_{PathP} \ [_{DP} \ \text{En Joan}] \ [_{Path'} \ [Path \ v]] \ [_{PlaceP} \ [_{DP} \ \text{En Joan}] \ [_{Place'} \ Place \ \sqrt{EIX}]]]]]$$

##### c. Path-*v* Fusion

$$[_{VP} \ [_{PathP} \ [_{DP} \ \text{En Joan}] \ [_{Path'} \ Path+v] \ [_{PlaceP} \ [_{DP} \ \text{En Joan}] \ [_{Place'} \ Place \ \sqrt{EIX}]]]]]$$

##### d. Vocabulary Insertion

$$[_{VP} \ [_{PathP} \ [_{DP} \ \text{En Joan}] \ [_{Path'} \ i \ [_{PlaceP} \ [_{DP} \ \text{En Joan}] \ [_{Place'} \ \_\_ \ eix]]]]]$$

##### e. Conflation

$$[_{VP} \ [_{PathP} \ [_{DP} \ \text{En Joan}] \ [_{Path'} \ eixi \ [_{PlaceP} \ [_{DP} \ \text{En Joan}] \ [_{Place'} \ eix \ eix]]]]]$$

f. Erasure of unpronounced links

[<sub>vP</sub> [<sub>PathP</sub> [~~DP~~ ~~En Joan~~] [<sub>Path</sub> *eixi*] [<sub>PlaceP</sub> [~~DP~~ ~~En Joan~~] [<sub>Place</sub> ~~*eix*~~ ~~*eix*~~]]]]]

At an early stage of PF, before Vocabulary Insertion, *v* lowers to Path (see (121)b), forming a complex head and then Fusion takes place, creating a single head out of that complex head (see (121)c). Vocabulary Insertion fills the node with a defective phonological matrix, [<sub>i</sub>] (see (121)d), corresponding to the thematic vowel of the input *v* node (Path does not have a phonological matrix of its own in Catalan).<sup>89</sup> Conflation applies to fill up all defective phonological matrixes, from Compl-Place up to the new node Path+*v* (see (121)e). Finally, after Conflation has applied, the links which are not to be pronounced (the lowest ones) are erased (see (121)f).

### 3.3.6 A cartography of the PF-branch: the timing of morphophonological operations

Embick & Noyer (1999, 2001) propose that the operations of the PF-branch of the derivation respect a sequence based mainly on whether they apply before or after Vocabulary Insertion. The rationale behind this hypothesis is that there are operations not sensitive to phonological material and which must therefore apply before Vocabulary Insertion and there are operations sensitive to phonological material and must apply therefore after Vocabulary Insertion. In this dissertation I am only interested in operations applying before Vocabulary Insertion. In particular, I assume the (partial) “cartography” shown in (122), partly illustrated in the last Section through (121):<sup>90</sup>

(122) *A (partial) cartography for PF*

- a. Lowering
- b. Fusion
- c. Vocabulary Insertion
- d. Conflation.
- e. Erasure of unpronounced links

The operations before Vocabulary Insertion are in fact sensitive to configuration, rather than to phonological properties. Thus, Lowering brings a head down to the head of its complement, forming a complex head therewith. Fusion takes two simple sister heads and produces a new head with the featural specification of the input heads. As mentioned in the last section, Fusion may apply to nodes which have already been brought together into a complex node in the syntax, and that is why it is included in brackets at the top, beside Lowering. The Fusion in (122)b is then the one applying subsequently to Lowering. Vocabulary Insertion, instead, inserts phonological matrixes, defective or not, into the functional nodes. As was discussed in Section 3.3.2, it is highly sensitive to the material configurational within the phase (here, the *vP*). Conflation applies subsequently in order to fill up all the defective phonological matrixes remaining after Vocabulary Insertion. It applies, as described in Section 3.3.3, from heads up to the phrasal level. If the head has itself a defective phonological matrix, it is filled up by that of the complement.<sup>91</sup> After all the structure has received (segmental) phonological specification, the unpronounced links of the chains created by

<sup>89</sup> Observe that I am neglecting the affixal relation that T and *v* hold in most tenses in Romance.

<sup>90</sup> The sequence in (122) by no means exhausts the set of operations proposed within DM to account for morphology-syntax mismatches: it encompasses the operations which I need to derive the data in the dissertation.

<sup>91</sup> As far as I know, conflation is not considered by DM theoreticians besides Heidi Harley (see Harley 2004, 2005, for instance)

conflation or by syntactic movement are deleted.<sup>92</sup> The operations before Vocabulary Insertion are established to apply in this order, but not all of them operate necessarily in every language. Since my aim is to derive cross-linguistic variation within the domain of argument structure from a strictly morphophonological point of view, I propose that Lowering and Fusion apply in some languages and not in others. This results, in turn, from language-specific morphophonological properties of functional heads.

As mentioned, I have already partly illustrated the sequence proposed in (122) when I described the PF-derivation of change-of-state predicates in Romance in (121): I take *v* in Romance to be phonologically specified to lower to and fuse with Path, forming one and the same node with it. This circumstance, I contend, makes it impossible for a separate head, a root, to adjoin to *v* in Romance. As we saw in Section 3.1.4, example (71), the system permits *v* to enter into an adjunction relation with a root which is thereby interpreted as Manner, as shown in (123):

(123) Sue danced into the room:

[<sub>VP</sub> [<sub>v</sub> *v* √DANCE] [<sub>PathP</sub> [~~DP-Sue~~] [<sub>Path'</sub> Path (= *to*) [<sub>PlaceP</sub> [~~DP-Sue~~] [<sub>Place'</sub> [<sub>Place</sub> Place √IN] [<sub>DP</sub> the room]]]]]]

Since Fusion, as defined in the last section, operates on two simple heads to derive a fused simple head, predicates such as the one in (123) are impossible in Romance, since in these languages *v* is fused with Path:

(124) *Catalan*

\*Ella ballà a l'habitació. (In the directional sense.)  
she danced at the=room

\*[<sub>VP</sub> [<sub>PathP</sub> [~~DP-Ella~~] [<sub>Path'</sub> [<sub>Path</sub> Path [<sub>v</sub> *v* √BALL]]] [<sub>PlaceP</sub> [~~DP-Ella~~] [<sub>Place'</sub> [<sub>Place</sub> Place (= *a*)] [<sub>DP</sub> l'habitació]]]]]]

Finally, I would like to show how the operation Lowering derives the affixation process referred to in Section 3.3.4 for Latin predicates such as (118)b, which brings together the Path head and the *v* head in languages like Latin. I provide the full derivation in (125):

(125) *Latin; PF derivation of Joan exiit, 'Joan went out'*

a. Structure delivered by syntax

[<sub>VP</sub> *v* [<sub>PathP</sub> [~~DP-Joan~~] [<sub>Path'</sub> Path [<sub>PlaceP</sub> [~~DP-Joan~~] [<sub>Place'</sub> Place √EX]]]]]]

b. *v*-to-Path Lowering

[<sub>VP</sub> [<sub>PathP</sub> [~~DP-Joan~~] [<sub>Path'</sub> [<sub>Path</sub> Path-*v*] [<sub>PlaceP</sub> [~~DP-Joan~~] [<sub>Place'</sub> Place √EX]]]]]]

<sup>92</sup> Alternatively, one might think that the operations at PF do not leave copies and, hence, do not create chains. Erasure, then, would only apply to real chains, that is, the ones created before Spell-Out. However, conflation has been proposed by Hale & Keyser (2002:71f.) to be responsible for predicates involving cognate objects, where the object and the verb share the same root, as in *She slept the sleep of the just* (Hale & Keyser 2002:71). Here the links at the head (*v*) and at the tail (Compl-*v*) are pronounced. See Haugen 2009 for a conflation-less DM implementation of predicates involving cognate and hyponymic objects (*Dance a polka*). See Mateu & Rigau 2010 for an application of Haugen's (2009) proposal to Romance verb-particle constructions. See Mateu 2010 for the same proposal applied to so-called *weak resultatives* and apparent cases of directed motion constructions involving a verb of manner of motion in Romance. The reader is also referred to Chapter 4, Sections 1.1.2 and 1.2 for more related discussion.



c. Vocabulary Insertion

[<sub>VP</sub> [<sub>PathP</sub> ~~DP-Joan~~] [<sub>Path'</sub> [<sub>Path</sub> Path *i*] [<sub>PlaceP</sub> ~~DP-Joan~~] [<sub>Place'</sub> \_\_ *ex*]]]]

d. Conflation

[<sub>VP</sub> [<sub>PathP</sub> ~~DP-Joan~~] [<sub>Path'</sub> [<sub>Path</sub> *ex i*] [<sub>PlaceP</sub> ~~DP-Joan~~] [<sub>Place'</sub> *ex ex*]]]]

e. Erasure of unpronounced links

[<sub>VP</sub> [<sub>PathP</sub> ~~DP-Joan~~] [<sub>Path'</sub> [<sub>Path</sub> *ex i*] [<sub>PlaceP</sub> ~~DP-Joan~~] [<sub>Place'</sub> ~~*ex ex*~~]]]]

I assume that in languages like Latin *v* and *Path* are idiosyncratically specified to form a word. This is achieved through a Lowering operation, illustrated in (125)b: *v* descends to the head of its complement, *Path*, forming a complex head with it (represented here with a dash). Vocabulary Insertion takes place and *v* receives a non-defective phonological matrix of its own (see (125)c). Recall from Section 3.3.3 that the conflation sites are already decided before PF, since conflation is concomitant to Merge. Therefore, *Path* is already specified, when entering PF, with a phonological matrix, namely that of the root  $\sqrt{\text{EX}}$ . This is in fact the phonological matrix which corresponds to *Path* by the algorithm described in Section 3.3.3. *Path* receives this phonological matrix after Vocabulary Insertion (see (125)d). After Conflation, the unpronounced links are erased (see (125)e).

On the other hand, if *v* does not receive a phonological matrix at Vocabulary Insertion a different picture, namely, without prefixation, emerges. I illustrate with the PF-derivation of the unprefixated change-of-state Latin predicate in (126):

(126) *Latin*; Bell. Afr. 25, 2

Rex Bocchus [...] oppidum [...] capit.  
king.NOM Bocchus.NOM town.ACC take.3SG  
'King Bocchus conquered the town.'

(127) *PF-derivation of (126)*

a. Structure delivered by syntax

[<sub>VP</sub> ~~Bocchus~~ [<sub>v'</sub> *v* [<sub>PathP</sub> ~~DP-oppidum~~] [<sub>Path'</sub> Path [<sub>PlaceP</sub> ~~DP-oppidum~~] [<sub>Place'</sub> Place  $\sqrt{\text{CAP}}$ ]]]]]]

b. *v*-to-*Path* Lowering

[<sub>VP</sub> ~~Bocchus~~ [<sub>v'</sub> [<sub>PathP</sub> ~~DP-oppidum~~] [<sub>Path'</sub> [<sub>Path</sub> Path-*v*] [<sub>PlaceP</sub> ~~DP-oppidum~~] [<sub>Place'</sub> Place  $\sqrt{\text{CAP}}$ ]]]]]]

c. Vocabulary Insertion

[<sub>VP</sub> ~~Bocchus~~ [<sub>v'</sub> [<sub>PathP</sub> ~~DP-oppidum~~] [<sub>Path'</sub> [<sub>Path</sub> \_\_] [<sub>PlaceP</sub> ~~DP-oppidum~~] [<sub>Place'</sub> \_\_ *cap*]]]]]]

d. Conflation

[<sub>VP</sub> ~~Bocchus~~ [<sub>v'</sub> [<sub>PathP</sub> ~~DP-oppidum~~] [<sub>Path'</sub> [<sub>Path</sub> *cap cap*] [<sub>PlaceP</sub> ~~DP-oppidum~~] [<sub>Place'</sub> *cap cap*]]]]]]

e. Erasure of unpronounced links

[<sub>VP</sub> ~~Bocchus~~ [<sub>v'</sub> [<sub>PathP</sub> ~~DP-oppidum~~] [<sub>Path'</sub> [<sub>Path</sub> *cap cap*] [<sub>PlaceP</sub> ~~DP-oppidum~~] [<sub>Place'</sub> ~~*cap cap*~~]]]]]]

At Vocabulary Insertion *v* does not receive a phonological matrix, so at the phase of Conflation it receives, by default, the one which corresponds to it by conflation, namely that of  $\sqrt{\text{CAP}}$ . *Path* also receives this phonological matrix; however, at the phase of Erasure of unpronounced links, only one copy of the matrix remains, yielding the unprefixated verb *capit*.

In Chapters 3 and 4 we will have more opportunities to see how the morphophonological interpretation of syntactic structures gives rise to observable systematic cross-linguistic differences within the realm of argument structure.

### 3.4 Summary

In this section I have described a version of a syntactic neo-constructionist theory of argument/event structure. Drawing on Mateu 2002 and Acedo-Matellán & Mateu 2010, and doing without Hale and Keyser's l-/s-syntax difference, I have shown how argument/event structure is syntactically built. I have appealed to the difference between functional heads (relational elements) and roots (non-relational elements), emphasising the fact that only the former are syntactically active and, hence, only they can project structure. In particular, an eventive head, *v*, and an adpositional head, *p*, have been proposed, *p* being interpreted, in turn, as either Place (when only one *p* is merged) or Path (when a second *p* is merged). Both roots and DPs have been proposed to be able to be merged as arguments within the structure. On the semantic side, I have defended the view that a distinction must be made between structural semantics, that is, the semantic interpretation of the structure created by the syntax, and encyclopaedic semantics, encoded solely by roots. I have described the structural semantics of argument structure configurations, both of arguments and of functional heads, emphasising the idea that argument interpretation is utterly based on configuration and that roots too must be interpreted depending on their position, against approaches advocating grammatically relevant ontologies of roots. Inspired by Borer's (2005b) theory of event structure, I have described how aspectual properties emerge from the syntactic configuration. Finally, I have adopted Marantz's (2001f.) proposal that the phase, as the unit for phonological and semantic interpretation provides the domain within which the retrieval of special meanings for roots can be triggered. On the morphophonological side, I have basically assumed the postulates of DM: that the syntax-morphophonology interface is isomorphic by default but not necessarily, that at least some phonological properties (those of functional heads) are laterally inserted in an abstract syntactic structure and that the PF-branch of the derivation can be segmented into an ordered sequence of operations. I have included conflation à la Hale & Keyser (2002:60f.) and Harley (2004) as an operation accounting for part of the mentioned syntax-morphology mismatch, in particular for the fact that one and the same root appears to encompass different morphosyntactic nodes. One of the main tenets to be defended in the dissertation is the fact that cross-linguistic variation is to be explained as the result of different options followed during the PF-derivation of the structure. As an illustration of this idea, I have linked the non-existence of complex predicates in Romance, such as *Sue danced into the room*, to the fact that a Fusion operation converts the *v* head and the Path head into a single head in these languages, preventing *v* to appear in an adjunction structure with a root interpreted as Manner. In the following chapters I will apply the mechanisms discussed to cross-linguistic differences in the expression of complex predicates of change of state/location.

## 4 Overall summary

In this chapter I have made explicit my assumptions on the nature of the lexicon-syntax and morphology-syntax interface. I have begun by introducing a fundamental distinction within the theories of the lexicon-syntax interface: the endo-skeletal theories and the exo-skeletal theories. The former propose that the syntactic and semantic properties of linguistic expressions are but a projection of lexical items, while for the

latter they emerge, largely, from the structure itself, lexical items being reduced to conveyors of grammatically-opaque, encyclopaedic content. Within exo-skeletal approaches the distinction has been made between constructionist approaches, where the syntactic structure and the non-encyclopaedic semantics depend on primitive lexical elements called constructions and neo-constructionist approaches, where the structure is the result of the mechanisms of the computational system. I have then described three neo-constructionist models: Mateu's (2002) theory of the relational syntax and semantics of argument structure, Borer's (2005b) syntactic theory of event structure and the DM version of the Minimalist Program for the architecture of grammar. Afterwards I have presented a neo-constructionist model based on Mateu's (2002) theory and influenced by the other two mentioned models. In this model argument/event structure configurations are created in the syntax, hence, through the application of free Merge. Structure is created on two functional heads, an eventive head, *v*, and an adpositional head, *p*. Roots and DPs are merged into argumental positions, a circumstance derived from an abandonment of the *l/s*-syntax distinction of the Halekeyserian model. Roots and DPs receive an argumental interpretation according to the position they occupy in the structure. Crucially, roots cannot project structure, as in Mateu's (2002) and Borer's (2005a, 2005b) models, and unlike some implementations of the DM model. As in any other Minimalist account, the structures generated by the syntax are interpreted at the interfaces. As far as semantic interpretation is concerned, I have emphasised the distinction between structural semantics, emerging from the structure, and encyclopaedic semantics, encapsulated in the roots. I have also paid attention to the aspectual interpretation of configurations, establishing that a (*p*-type) Path projection is responsible for a telic interpretation of the event if a quantity DP is merged at its specifier. As far as special meanings are concerned, I have assumed the proposal by Marantz (1995f.) that special meanings are restricted to roots and not to structures, but that their retrieval is possible only within a domain defined structurally. Finally, I have paid great attention to the PF-interpretation of the structure, since, I argue, it is this interpretation that cross-linguistic differences are restricted to. I have assumed that, unlike the syntax-semantics interface, the syntax-morphophonology interface can be non-isomorphic. I have adopted a Late (Vocabulary) Insertion of phonological representations of functional items, but I have argued for an Early Insertion of roots, as proposed by Embick (2000). Alongside the DM mechanism of Vocabulary Insertion, Conflation has been argued to account for the phonological interpretation of the structure, as a repair mechanism. I have finally discussed operations proposed within the DM model which account for the mentioned lack of isomorphism between the syntactic and the morphological representation. If these operations, properly ordered along the PF-branch, are triggered by features of the functional items, an explanation of patterns of cross-linguistic variation in argument structure expression can be attempted, as I shall show in Chapters 3 and 4.



## Chapter 3

### Latin as a satellite-framed language

In this chapter I use the theoretical tools introduced in Chapter 2 to analyse a wide range of argument structure phenomena in Latin. A quick glance at the *Dictionnaire Latin Français* by Gaffiot (1934) shows that many composite verbal lexical entries in Latin receive a periphrastic definition in French. Importantly, the correspondence between the morphological components of the Latin verb and the syntactic components in the Romance periphrasis appears to be systematic. The following entries involving the prefix *ex-* illustrate the fact:

(1) *Latin; Gaffiot 1934*

- a. *ex-cutio*  
out-shake.1SG  
“Faire sortir ou tomber en secouant” (‘make go out or fall shaking’)
- b. *ex-cudo*  
out-beat.1SG  
“faire sortir en frappant” (‘make go out beating’)
- c. *e-repo*  
out-crawl.1SG  
“sortir en rampant, en se traînant” (‘go out crawling’)

In the above examples, the prefix *ex-* (with the form *e-* in *erepo*) ‘out (of)’, seems to correspond, in the French translation, to a whole verb, namely (*faire*) *sortir* ‘(make) go out’, while the semantic content of the simple verb in each case is translated as a manner adverbial (*en secouant* ‘shaking’; *en frappant* ‘beating’; *en rampant, en se traînant* ‘crawling’). For motion events in general, while Latin expresses the trajectory and final location within one morpheme and the “kind” of motion —*shaking, beating* and *crawling*, respectively, in (1)a through (1)c— within a different morpheme (namely, the verb: *quatio, cudo, repo*), French lexicalises the trajectory and final location in the form of an independent and monomorphemic verb —as *sortir* ‘go out’, *entrer* ‘go in’, etc.— and the kind of motion is conveyed by an optional adjunct. This difference in the expression of the components of a (motion) event shown by Latin and French actually corresponds to a typological difference claimed by Talmy (2000) to divide many of the world’s languages into two blocks: *satellite-framed* languages (Latin-like languages) and *verb-framed* languages (French-like languages). In Section 1 I introduce Talmy’s insightful observations on the cross-linguistic expression of events of change and I model his theory in the terms of the one exposed in Chapter 2, Section 3. Cross-linguistic differences shall be argued to be purely morphophonological and, as such, to derive from operations triggered at PF by the language-specific morphophonological specification of functional items. In Section 2 I describe the possible morphosyntactic manifestations of PathP in Latin. The bulk of the chapter is devoted to show the validity of Talmy’s (2000:104) observation that Latin is a satellite-framed language. I explore and analyse, to that aim, a set of constructions involving change or transition (in my terms, a PathP), in Section 3. Section 4 summarises.

## 1 Talmy's (2000) theory of change events and its adaptation to the present framework

### 1.1 Talmy's theory of (motion) events

Talmy (2000:213f.), in a revision and expansion of his earlier, highly influential work (Talmy 1985, 1991) on the relation between meaning and surface form in the expression of events, proposes that any motion event has a semantic structure integrating a set of distinct components. I will illustrate this view with the following sentences:

- (2) The cat walks into the hat.
- (3) There stood a cat in the hat.

In either one of these sentences there is something that moves or is stationary: the cat. This is the *Figure* component. The object which is taken as a reference for the movement or stationariness of the Figure is the *Ground*, here the hat, in both sentences. Both Figure and Ground are, thus, relational concepts, since there cannot be one without the other. They are spatially related to each other by the *Path* component, which in (2) is expressed by (*in*)*to* and in (3) is expressed by *in*. Last, the Motion component—which can in turn be movement proper, MOVE, or stationariness, BEAT—is encoded, in the above sentences, in *walks* and *stood*, respectively. Importantly, Talmy considers that the core part of the motion event (the one which distinguishes different events) lies in either the Path alone or the Path together with the Ground. This is what he calls the *Core Schema*.

Talmy (1991, 2000) further decomposes the Path component into a *Vector* subcomponent, a *Conformation* subcomponent and a *Deictic* subcomponent.

The Vector expresses the sense in which the relation between Figure and Ground is established. The types of Vector are given the names of certain abstract prepositions: such as AT, which specifies a contact relation between the Figure and the Ground, TO, which specifies that the sense is towards the Ground, FROM, which specifies that the Ground is the starting point, VIA, which signifies that the Ground is something located in the Path, but which is neither the starting point nor the end point, etc. In (2) the Vector is TO, and is codified in the *-to* morph of *into*, while in (3) the Vector is AT, and lies in the preposition *in*.

The Conformation creates a geometrical shaping of the Ground, which comes then to be conceptualised as a volume, an enclosure, a plane, etc. The conformation in both (2) and (3) is the one corresponding to an enclosure, and could be paraphrased as INSIDE. Note that, in both cases, it is expressed in the preposition *in*, which in (3) encodes, in addition, the Vector AT, and in (2) is morphologically attached to the TO Vector encoder *-to*. A volume conformation, which we could dub SURFACE, applied to the same motion event could yield *The cat walks onto the hat* and *There stood a cat on the hat*, respectively.

The Deictic component conveys whether the sense of the Path is towards the speaker or away from the speaker. The verbs *to come* and *to go* exemplify, respectively, a +SPEAKER (towards the speaker) and a -SPEAKER Deictics.<sup>93</sup>

A last important element must be mentioned which, although not being itself a component of the motion event, is very often associated with it. It is what Talmy calls the *Co-event*, that is, an event that is related in some way to the Motion event, which is considered, in turn, the *Framing event*. That relation can be of different types: causation, manner, etc. In the case of (2) and (3), the Co-event expresses manner, more specifically, the way in which the movement or the stationariness takes place, a walking event in (2) and a standing event in (3). Note that in both sentences this Co-event is expressed via the verb (the root of the verb), together with the Motion component, MOVE and BEAT, respectively.

Having put forward the main elements involved in the expression of motion, it is now time to introduce the major cross-linguistic difference referred to in the introduction to this chapter. Talmy (1991, 2000) proposes that languages can be ascribed to groups in which there is a systematic encodement, in a single morphologically unanalysable unit, of the same components of a motion event. Specifically, he focuses on the Core Schema, and describes two possibilities as to its surface (syntactic) expression: the Core Schema can be expressed within the verb, *conflated* —that is, fused into the same monomorphemic overt piece— with the motion component, or it can be expressed through an independent element of the predicate which he calls *satellite*, “[...] 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 2000:101-102).<sup>94</sup> Languages which primarily opt for the first way of encoding the Core Schema are called verb-framed languages, while languages which choose the second way are called satellite-framed languages.<sup>95</sup> What is of relevance within the present discussion is that there is a kind of complementary distribution between the expression of the Core Schema and the expression of the Co-event, such that in v-framed languages the Co-event is not conflated in the verb, and it usually appears in an adjunct phrase, while in s-framed languages the Co-event can be readily expressed within the verb, as is the case with the manner Co-event in (2) and (3) above. Although we have already seen how an s-framed language distributes the Core Schema and Co-event components, in (2) and (3), let us now introduce a minimal pair involving Catalan (a v-framed language) and English (as pointed out already, an s-framed language) expressing a motion event with a *manner* (of motion) Co-event:

(4) *Catalan and English*

- |    |     |        |                   |  |   |
|----|-----|--------|-------------------|--|---|
| a. | La  | pilota | va                | [entrar] <sub>verb: Motion+Core Schema</sub> | [rodolant.] <sub>adjunct: Co-event (manner)</sub> |
|    | the | ball   | PST.3SG go_in.INF |  | rolling   |

<sup>93</sup> The technical names INSIDE, SURFACE, +SPEAKER and -SPEAKER are creations of my own (Talmy 2000:291 refers to +SPEAKER as *hither* and to -SPEAKER as *hence*).

<sup>94</sup> Talmy's (1972; see also Talmy 2000:25) intended sense of *conflation* as the sharing of the same morpheme (phonologically understood) by different semantic components was adopted by Hale & Keyser (1992:107, among others) to characterise a grammatical operation through which the phonological matrix of a syntactic node is transmitted to a phonologically null node. See Chapter 2, Sections 1.2.1 and 3.3.3.

<sup>95</sup> There is yet another major typological group of languages according to Talmy, namely, languages in which it is the Figure component what get lexicalised into the verb. We will not have much to say about these languages here (although see Section 3.2.2.3 for an apparently Figure-conflation in Latin). For more details, see Talmy 2000:57-60, 91-197.

- b. The ball [rolled]<sub>verb: Motion+Co-event (manner)</sub> [in.]<sub>satellite: Core Schema</sub>

As glossed in the examples, the Catalan sentence expresses the trajectory of the ball (the Core Schema, being here equivalent to a trajectory ending up in some enclosure) within the verb, while the manner in which it moves along that trajectory is encoded in an independent and optional gerundive phrase. In English, those same components of the motion event are expressed in a different way: the Core Schema is separated from the verb and is expressed as a satellite, while the manner Co-event is fused together with the Motion within the verb. This different morphosyntactic structuring of the motion event is correlated, as Talmy (2000:21f.) observes, with certain facts about each type of language's lexicon. For instance, Catalan (and, in general, v-framed languages) has a great variety of roots expressing directed motion at their disposal, each corresponding to a particular Core Schema component, while English lacks those specialised verbs (Cat. *entrar*, 'go in'; *sortir*, 'go out'; *treure*, 'take out, off'; *ficar*, 'put in'; etc.).

### 1.2 Beyond events of motion

As pointed out by Talmy (2000:237) himself, the s-/v-framed distinction does not apply exclusively to motion events. In particular, it can be extended to events expressing change, in general. From this perspective, the Figure is the entity undergoing change, the Core Schema is the actual change of state, with the Ground being the final, resultant state, the Motion component is to be identified with the event itself and the Co-event is the way in which the change of state takes place. The next examples from German and Spanish illustrate, respectively, how s-framed and v-framed languages express events of change.

#### (5) German and Spanish; Talmy 2000:247

- a. Der Hund hat [den Schuh]<sub>Figure</sub> [kaputt]<sub>Core schema</sub> -[gebissen.]<sub>Event+Co-event</sub>  
 the dog has the shoe in pieces bite.PTCP.PST  
 'The dog bit the shoe to pieces.'
- b. El perro [destrozó]<sub>Event+Core schema</sub> [el zapato]<sub>Figure</sub> [a mordiscos.]<sub>Co-event</sub>  
 the dog destroy.PRF.3SG the shoe to bites

### 1.3 An asymmetric difference

As can be shown through a comparison of s-framed English and v-framed Catalan, the s-/v-framed distinction happens not to be symmetric, that is, it does not yield two groups of opposing languages. The asymmetry appears to consist in a wider availability of the v-framed strategy, which is allowed in typically s-framed languages like English (cf. also Mateu 2010). S-framedness, on the other hand, is precluded in v-framed languages like Romance. Thus, English does have Path verbs, which, not surprisingly, are mostly Latinate: *to enter*, *to exit*, *to remove*, etc. It can also express events of change of state within a verb, as in *The wind cleared the sky*, *The sun melted the snow*, etc. The opposite, however, is not found in v-framed languages: they cannot make use of the s-framed strategy. Hence, typically s-framed constructions involving the expression of a Co-event within the verb are ungrammatical in these languages:

#### (6) Catalan

- \*En Joan martellejà el metall pla.  
 the Joan hammered the metal flat  
 'Joan hammered the metal flat.'



In section 1.5.2 I provide a morphophonological analysis of this asymmetry.

#### 1.4 *Non-dynamic events and the s-/v-framed distinction*

Up to now I have restricted my attention to events of change, which seem to be the locus of the s-/v-framed cross-linguistic variation. In fact, there is evidence that for stative events v-framed languages like Romance admit the circumstance that a single morph correspond to a BEAT Motion component together with a Co-event. I am referring to predicates like the following:

(7) *Catalan; Mateu 2002:188*

En aquesta coral n'hi canten molts, de nens.  
 in this choir PARTVE=LOC sing.3.PL many.PL of child.PL  
 'There are many children who sing in this choir.'

According to Rigau (1997), in predicates such as (7), the verb *canten* bears an existential stative meaning close to that found in *there*-existential sentences. Hence, a good paraphrase for (7) is the English translation provided underneath. On the other hand, and according to Mateu (2002:189f.), there is evidence that the construction is of unaccusative nature, as hallmarked by the possibility of *en*-extraction (see (7) itself), and for the licensing of postverbal bare plural subjects, as shown below:

(8) *Catalan*

En aquesta coral hi canten nens.  
 in this choir LOC sing.3PL children  
 'Children sing in this choir.'

It is also telling, in this respect, that in Italian these constructions resist HAVE-selection when put in the Perfect (see (9)):

(9) *Italian; Centineo 1996:230-231, apud Mateu 2002:120*

??Ce ne ha nuotato molta, di gente, in quella piscina.  
 LOC PARTVE has swum many of people in that swimming-pool

Importantly, Mateu (2002:121) highlights Centineo's (1996:231, note 6) observation that some native informants attempted to use *essere*, the BE auxiliary, in examples like (9). I will assume with Mateu (2002) that this type of constructions is unaccusative. I will analyse them as such, and I will explain why they are fine in v-framed languages in Section 1.5.2.

#### 1.5 *A syntactic interpretation of Talmy's theory*

##### 1.5.1 *Syntactic structuring of change events*

When trying to cast Talmy's ideas into a theory such as the one proposed in Chapter 2, one of the first challenges is that of selecting as functional elements only those components proposed by Talmy which seem to be grammatically relevant, and to assign to other ones the status of roots—that is, elements whose content is invisible and irrelevant to grammar. In so doing, the range of the ontology of the components of events is greatly reduced, deriving many of the nuances from configurational properties. The correspondence between the components involved in both theorisations are laid out in the next table:

(10) *A comparison between Talmy's proposal and the present one*

COMPONENTS IN TALMY'S PROPOSAL		AN INTERPRETATION WITHIN THE PRESENT MODEL
Motion	MOVE	v taking as complement a PathP
	BEAT	v taking as complement a PlaceP
Figure		Spec-Place
Ground		Compl-Place
Path		p taking as complement a pP
Subcomponents of Path	Vector	---
	Conformation	√ adjoined to Place
	Deictic	Compl-Place
---		Place: p taking as complement a √ or a DP
Co-event		√ adjoined to v

Talmy's MOVE/BEAT distinction of Talmy is derived from configuration: while *v* introduces the event (motion or otherwise), it is understood as dynamic or stative, respectively, if *v* takes a PathP or a Place as complement. In turn, the Path/Place distinction is, as suggested in Chapter 2, Sections 3.1.2 and 3.2.2, also derived from configuration, Path and Place being different interpretations of one and the same adpositional head: Path is the interpretation of the *p* head when selecting a pP (which is understood as PlaceP).<sup>96</sup> Note that Place does not have a correspondent in Talmy's theory. The Figure and Ground are, respectively, the specifier and the complement of the same head, Place, accounting for their predicational relation. In turn, I take the Deictic component to be a certain kind of Ground. For instance, a verb such as *arrive* is analysable as a predicate of change of state/location where the Ground, that is, Compl-Place, is itself a Deictic, whose reference coincides with that of an element already mentioned or with the speaker, by default.<sup>97</sup> As to the Conformation and Co-event

<sup>96</sup> The configurational relation between Path and Place, with Path above Place, appears empirically motivated, as Svenonius (2007) and the references he cites suggest. In relation to this, the stative element AT and its position in the Path/Place hierarchy offer a paradox worth commenting on. Talmy (2000:53) characterises it as a Vector and Svenonius (2004a), analogously, suggests it is Path, and not Place. As Svenonius (2004a, 2007) shows, many languages figure an opposition in the Path value for the various values of Place, and one of the members of the opposition happens to be AT. This is the case of Zina Kotoko, with a three-fold opposition among AT (*a*), TO (*ná*) and FROM (*má*):

(i) Holmberg 2002, *apud* Svenonius 2007:66

	BE AT	TO	HAPPEN AT/FROM
'in'	a jí	(ná) jí	(má) jí
'on'	a gmá	(ná) gmá	(má) gmá

The fact obtains in other languages, always suggesting that AT occupies the Path slot. This seems evidence enough to consider AT a Path, which would necessarily force us to analyse stative locative sentences such as *The cat is in the hat* as including a null AT at Path position. This is, in fact, Svenonius's (2007) suggestion. However, Hale & Keyser (1997a) have argued for the differential status of locative expressions as opposed to directional expressions, on the grounds of evidence such as the fact that only the former are eligible as small clauses taken as complement to circumstantial *with*:

(i) *Adapted from Hale & Keyser 1997a*

- With Annan {in/\*to} Baghdad, we can relax.
- With Kirsten {at/\*from} Lincoln Center, ballet remains supreme.

For my present purposes, and crucially in order to provide a coherent account of the s-/v-framed distinction, I will assume as right Hale & Keyser's (1997) position, albeit acknowledging the need for the paradox to be examined in a degree of detail not available here.

<sup>97</sup> See Bouchard 1995 for a similar analysis of French movement verbs such as *venir* 'come' or *aller* 'go'.

components, they are treated as roots adjoining to Place and v, respectively. We saw in Chapter 2, Sections 3.1.4 and 3.2.2, that roots can appear as adjuncts to the functional heads, specifying the kind of event or of locational predication (in case the predication is in fact locational). All these components are represented in the analysis of the following sentence (I am neglecting movement from Spec-Place to Spec-Path and the morphophonological operations which which apply at PF —see Section 1.5.2):

- (11) Sue danced into the room.

[<sub>vP</sub> [<sub>v</sub> <sub>vMotion</sub>  $\sqrt{\text{DANCE}}_{\text{Co-event}}$ ] [<sub>PathP</sub> <sub>PathPath</sub> (= to) [<sub>PlaceP</sub> Sue<sub>Figure</sub> [[<sub>Place</sub> Place  $\sqrt{\text{IN}}_{\text{Conformation}}$ ] [<sub>DP</sub> the room]<sub>Ground</sub>] <sub>Core Schema</sub> ]]]

As we know, roots too can be merged as Compl-Place. This is the case of change-of-state predicates, like (12) (note that the verb is correspondingly interpreted as change and not as motion), or motion predicates involving a single verb, like (13):

- (12) The sky cleared.

[<sub>vP</sub> [<sub>v</sub> <sub>vChange</sub> ] [<sub>PathP</sub> <sub>PathPath</sub> [<sub>PlaceP</sub> [The sky]<sub>Figure</sub> [<sub>Place'</sub> Place  $\sqrt{\text{CLEAR}}_{\text{Ground}}$ ] <sub>Core Schema</sub> ]]]

- (13) *Catalan*

En Joan eixí.

the Joan went\_out

[<sub>vP</sub> [<sub>v</sub> <sub>vMotion</sub> ] [<sub>PathP</sub> <sub>PathPath</sub> [<sub>PlaceP</sub> [En Joan]<sub>Figure</sub> [<sub>Place'</sub> [Place  $\sqrt{\text{EIX}}_{\text{Ground}}$ ] <sub>Core Schema</sub> ]]]

As for the Vector component, I shall assume that, at least when PathP appears embedded within vP, it is always of value TO.<sup>98</sup> In that sense the head Path is significantly different from Talmy's Path: it instantiates a transition into a final location or state. In other words, Core Schemas are always goals, and not sources. In a predicate such as *She danced out of the room*, hence, *out of the room* corresponds to a goal of motion, describing where the dancing event shall end up. There is evidence that motivates this position. For instance, change-of-state predicates always describe a final, resultant state, and not an initial or medial state. There is no verb —that I know of— lexicalising the meaning “stop being”. This is partly illustrated by the following paradigm from Gehrke 2008, where *turn* must appear with a goal PP and cannot appear with a source PP alone:

- (14) *Gehrke 2008:229*

a. The frog turned from green to blue.

b. The frog turned to blue.

c. \*The frog turned from green.

### 1.5.2 A morphophonological account of the s-/v-framed difference

As stated at several points in Chapter 2, one of the endeavours of this dissertation is to explain cross-linguistic variation as the result of different options triggered at PF by idiosyncratic properties of functional heads. The s-/v-framed distinction shall be tackled also from this post-syntactic perspective. This means that the syntactic construction of events of change, which are the locus of the distinction, and their interpretation at LF

<sup>98</sup> A PathP can appear as an adjunct to vP. In that case, however, it cannot induce telicity, since it cannot effectuate a probe-goal relation with a quantity DP. See Chapter 2, Section 3.2.4.2, and Chapter 4, Section 3.4.

are common to all languages, and that it is how those structures are interpreted morphophonologically, at PF, what can vary from language to language. I introduce the discussion in this chapter, although it will be of greater importance in Chapter 4.

In a nutshell, the s-/v-framed distinction has to do with how morphs, in the structuralist sense of the term, relate to morphemes, as Talmy's definition of conflation suggests: in s-framed constructions the same morph corresponds to (or *conflates*) the Motion and the Co-event components (here, *v* and a root adjoined to it, respectively); in v-framed constructions the same morph corresponds to the Motion and the Core Schema (here *v* and PathP). Since we know that s-framed languages admit the v-framed strategy, but v-framed languages do not admit the s-framed strategy (see Section 1.3), there has to be a more restrictive mechanism in v-framed languages than in s-framed ones, accounting for this asymmetry. Consequently, I shall propose that in v-framed languages, like Romance, the *v* head and the Path fuse together into a single head at PF, before Vocabulary Insertion and Conflation, that is, before the structure is actually phonologically interpreted. Since Fusion operates on sister heads, that is, on heads which form a complex head, I propose that a Lowering operation bringing the *v* head down to Path applies first:

(15) *v-to-Path Lowering and Fusion in v-framed languages*

$$[_{VP} V [_{PathP} Path]] \Rightarrow [Path Path v] \Rightarrow [Path+v Path+v]$$

The new Path+v node, which contains the specifications of both Path and *v* is phonologically interpreted at Vocabulary Insertion and Conflation. I illustrate with the derivation of *En Joan eixí* 'Joan went out' (example from Chapter 2, Section 3.3.5):

(16) *Catalan; PF-derivation of En Joan eixí*

a. Structure delivered by syntax

$$[_{VP} V [_{PathP} [_{DP} En Joan] [_{Path'} Path [_{PlaceP} [_{DP} En Joan] [_{Place'} Place \sqrt{EIX}]]]]]$$

b. v-to-Path Lowering

$$[_{VP} [_{PathP} [_{DP} En Joan] [_{Path'} [Path Path v] [_{PlaceP} [_{DP} En Joan] [_{Place'} Place \sqrt{EIX}]]]]]$$

c. Path-v Fusion

$$[_{VP} [_{PathP} [_{DP} En Joan] [_{Path'} Path+v [_{PlaceP} [_{DP} En Joan] [_{Place'} Place \sqrt{EIX}]]]]]$$

d. Vocabulary Insertion

$$[_{VP} [_{PathP} [_{DP} En Joan] [_{Path'} i [_{PlaceP} [_{DP} En Joan] [_{Place'} eix]]]]]$$

e. Conflation

$$[_{VP} [_{PathP} [_{DP} En Joan] [_{Path'} eixi [_{PlaceP} [_{DP} En Joan] [_{Place'} eix eix]]]]]$$

f. Erasure of unpronounced links

$$[_{VP} [_{PathP} [DP En Joan] [_{Path'} eixi [_{PlaceP} [DP En Joan] [_{Place'} eix eix]]]]]$$

(16)a is the structure that arrives at PF (I am neglecting of course movement of *En Joan* to the functional head which assigns case to it (T)). *En Joan* is understood as the Figure of the motion event, and the root  $\sqrt{EIX}$  is understood as a Terminal Ground (since there is a transition codified by Path). *En Joan* is, moreover, interpreted as a Measurer of the transition, which is not over until Joan has gone out. When the structure arrives at PF it is submitted to a series of operations which, in the end, have the desired effect of assigning the same morph (phonological matrix) to *v*, Path and Place.

A slightly different derivation is involved in motion predicates involving a PP like *En Joan anà a la botiga* 'Joan went to the shop':

(17) *Catalan*

En Joan anà a la botiga.<sup>99</sup>

the Joan went at the shop

‘Joan went to the shop.’

a. Structure delivered by syntax

[<sub>VP</sub> V [<sub>PathP</sub> ~~[DP En Joan]~~ [<sub>Path'</sub> Path [<sub>PlaceP</sub> ~~[DP En Joan]~~ [<sub>Place'</sub> Place [<sub>DP</sub> la botiga]]]]]]

b. v-to-Path Lowering

[<sub>VP</sub> [<sub>PathP</sub> ~~[DP En Joan]~~ [<sub>Path'</sub> [<sub>Path</sub> Path v] [<sub>PlaceP</sub> ~~[DP En Joan]~~ [<sub>Place'</sub> Place [<sub>DP</sub> la botiga]]]]]]

c. Path-v Fusion

[<sub>VP</sub> [<sub>PathP</sub> ~~[DP En Joan]~~ [<sub>Path'</sub> Path+v [<sub>PlaceP</sub> ~~[DP En Joan]~~ [<sub>Place'</sub> Place [<sub>DP</sub> la botiga]]]]]]

d. Vocabulary Insertion

[<sub>VP</sub> [<sub>PathP</sub> ~~[DP En Joan]~~ [<sub>Path'</sub> an\_ [<sub>PlaceP</sub> ~~[DP En Joan]~~ [<sub>Place'</sub> a [<sub>DP</sub> la botiga]]]]]]

e. Conflation

[<sub>VP</sub> [<sub>PathP</sub> ~~[DP En Joan]~~ [<sub>Path'</sub> an\_ [<sub>PlaceP</sub> ~~[DP En Joan]~~ [<sub>Place'</sub> a [<sub>DP</sub> la botiga]]]]]]

f. Erasure of unpronounced links

[<sub>VP</sub> [<sub>PathP</sub> [<sub>DP</sub> En Joan] [<sub>Path'</sub> an\_ [<sub>PlaceP</sub> ~~[DP En Joan]~~ [<sub>Place'</sub> a [<sub>DP</sub> la botiga]]]]]]

In the PF-derivation above, Vocabulary Insertion inserts a phonological matrix to the Path+v head, which is realised as the verb *anar* ‘go’ in this syntactic environment (an unaccusative predicate with a DP as compl-Place). In turn, I take the preposition *a* ‘at’ to be the default realisation of Place in such a configuration: *a* is something like a pure Place, without the Conformation component that, as we know, is encoded as a root adjoined to Place. That *a* encodes Place is seen in the following stative (by hypothesis, Path-less) example:

(18) *Catalan*

En Joan és a la botiga.

the Joan is at the shop

‘Joan is at the shop.’

Conflation cannot operate in cases like (17), since there remains no defective phonological matrix after Vocabulary Insertion.

Of course the Lowering and subsequent Fusion operations have been posed not only to explain these cases, but also to account for the lack of s-framed constructions in v-framed languages like Romance. Recall that within the present account (as well as in other accounts like Embick 2004, McIntyre 2004, Zubizarreta & Oh 2007 or Mateu 2008b), typical s-framed constructions are analysed as involving the adjunction of a root to v, being interpreted as a Manner Co-event. In v-framed languages, this adjunction structure is not compatible with the Fusion operation obligatory for v and Path. In fact, Fusion operates only on simple sister heads, so it cannot apply on a complex head which already includes a complex head. I illustrate below with the derivation of

<sup>99</sup> It is worth commenting that there is discussion whether *a* in Spanish is also locative, as proposed here for Catalan *a*. While Fábregas (2007) treats it as such, Demonte (in press) provides arguments that Spanish *a* is directional. See also Real Puigdollers 2010 for discussion (and for the position that Spanish *a* is locative).

ungrammatical \*Ella ballà a l'habitació 'She danced into the room' (example from Chapter 2, Section 3.3.6):

(19) *Catalan*

\*Ella ballà a l'habitació. (In the directional sense.)  
she danced at the=room

a. Structure delivered by syntax

[<sub>VP</sub> [<sub>v</sub> v √BALL] [<sub>PathP</sub> [~~DP-Ella~~] [<sub>Path'</sub> Path [<sub>PlaceP</sub> [~~DP-Ella~~] [<sub>Place'</sub> Place [<sub>DP</sub> l'habitació]]]]]]

b. v-to-Path Lowering

[<sub>VP</sub> [<sub>PathP</sub> [~~DP-Ella~~] [<sub>Path'</sub> [<sub>Path</sub> Path [<sub>v</sub> v √BALL]]] [<sub>PlaceP</sub> [~~DP-Ella~~] [<sub>Place'</sub> Place [<sub>DP</sub> l'habitació]]]]]]

c. Impossible Path-v Fusion: PF crash

S-framed languages do not feature the mentioned Fusion operation, so Path and v may be phonologically realised separately. Thus, a simple motion sentence like *John went to the store* is derived as follows:

(20) Derivation of *John went to the room*

a. Structure delivered by syntax

[<sub>VP</sub> v [<sub>PathP</sub> [~~DP-John~~] [<sub>Path'</sub> Path [<sub>PlaceP</sub> [~~DP-John~~] [<sub>Place'</sub> Place [<sub>DP</sub> the room]]]]]]

b. Vocabulary Insertion

[<sub>VP</sub> *wen-* [<sub>PathP</sub> [~~DP-John~~] [<sub>Path'</sub> *to* [<sub>PlaceP</sub> [~~DP-John~~] [<sub>Place'</sub> ∅ [<sub>DP</sub> the room]]]]]]

c. Conflation

[<sub>VP</sub> *wen-* [<sub>PathP</sub> [~~DP-John~~] [<sub>Path'</sub> *to* [<sub>PlaceP</sub> [~~DP-John~~] [<sub>Place'</sub> ∅ [<sub>DP</sub> the room]]]]]]

d. Erasure of unpronounced links

[<sub>VP</sub> *wen-* [<sub>PathP</sub> [~~DP-John~~] [<sub>Path'</sub> *to* [<sub>PlaceP</sub> [~~DP-John~~] [<sub>Place'</sub> ∅ [<sub>DP</sub> the room]]]]]]

In English motion predicates there is a distinct Vocabulary Item for Path: *to*, whose insertion is contextually sensitive to there being a DP (and not a root) as Compl-Place. In turn, I take the default realisation of Place in these cases (that is, the cases of motion predicates where Path is realised as *to*) as a null matrix. Recall from Chapter 2, Section 3.3.2, that null matrixes are not to be equalled to default matrixes, which must be repaired by conflation. In (20) conflation does not apply, since there are no default phonological matrixes left after Vocabulary Insertion. Finally, *wen-* (the *-t* is the realisation of a past T head, not present in the representation above) is the direct realisation of an unaccusative v in motion predicates (featuring a distinct *to* Path). Morphological evidence of *go/wen-* being direct realisations of v is the fact that they show contextually defined suppletion (*go* for the present, *wen* for the past) (see Chapter 2, Section 3.3.2). Importantly, v and Path do not fuse together in English (and any s-framed language). That is why a root, interpreted as Manner (Co-event), may appear adjoined to v when the structure enters the PF branch:

(21) *PF-derivation of John tiptoed to the room*

a. Structure delivered by syntax

[<sub>VP</sub> [<sub>v</sub> v √TIPTOE] [<sub>PathP</sub> [~~DP-John~~] [<sub>Path'</sub> Path [<sub>PlaceP</sub> [~~DP-John~~] [<sub>Place'</sub> Place [<sub>DP</sub> the room]]]]]]

b. Vocabulary Insertion

[<sub>VP</sub> [<sub>v</sub> *tiptoe*] [<sub>PathP</sub> [~~DP-John~~] [<sub>Path'</sub> *to* [<sub>PlaceP</sub> [~~DP-John~~] [<sub>Place'</sub> ∅ [<sub>DP</sub> the room]]]]]]

c. Conflation

[<sub>VP</sub> [<sub>V</sub> *tiptoe tiptoe*] [<sub>PathP</sub> [~~DP John~~] [<sub>Path'</sub> *to*] [<sub>PlaceP</sub> [~~DP John~~] [<sub>Place'</sub> ∅ [<sub>DP</sub> the room]]]]]

d. Erasure of unpronounced links

[<sub>VP</sub> [<sub>V</sub> *tiptoe tiptoe*] [<sub>PathP</sub> [~~DP John~~] [<sub>Path'</sub> *to*] [<sub>PlaceP</sub> [~~DP John~~] [<sub>Place'</sub> ∅ [<sub>DP</sub> the room]]]]]

In (21) conflation has applied to provide a phonological matrix to *v*, which, after Vocabulary Insertion, is left with no phonological matrix. This is how the phenomenon is derived that the same morph —*tiptoe*, in this case— encompasses two different morphemes: Motion (*v*) and Co-event ( $\sqrt{\text{TIPTOE}}$ ). On the other hand, nothing precludes, in a language with no Path-*v* Fusion, that the *v* and Path actually end up packaged together in the same morph. This happens when Path is not realised distinctly (as *to*, in English), so that conflation may bring into it some phonological matrix and, subsequently, to *v* above:

(22) *PF-derivation of* The sky cleared

a. Structure delivered by syntax

[<sub>VP</sub> *V* [<sub>PathP</sub> [~~DP The sky~~] [<sub>Path'</sub> Path] [<sub>PlaceP</sub> [~~DP The sky~~] [<sub>Place'</sub> Place  $\sqrt{\text{CLEAR}}$ ]]]]]

b. Vocabulary Insertion

[<sub>VP</sub> *V* [<sub>PathP</sub> [~~DP The sky~~] [<sub>Path'</sub> \_\_\_\_] [<sub>PlaceP</sub> [~~DP The sky~~] [<sub>Place'</sub> \_\_\_\_ *clear*]]]]]

c. Conflation

[<sub>VP</sub> *clear* [<sub>PathP</sub> [~~DP The sky~~] [<sub>Path'</sub> *clear*] [<sub>PlaceP</sub> [~~DP The sky~~] [<sub>Place'</sub> *clear clear*]]]]]

d. Erasure of unpronounced links

[<sub>VP</sub> *clear* [<sub>PathP</sub> [~~DP The sky~~] [<sub>Path'</sub> ~~*clear*~~] [<sub>PlaceP</sub> [~~DP The sky~~] [<sub>Place'</sub> ~~*clear clear*~~]]]]]

(22) presents the derivation of a *v*-framed construction in an *s*-framed language. It is a *v*-framed construction, in Talmy's terms, since the Core Schema is expressed within the verb, and not independently of it. There is nothing in the morphophonological specification of *v* or Path in English impeding the derivation of these cases.

Finally, recall from Section 1.4 that the ban on a common phonological realisation of *v* and the Core Schema in *v*-framed languages is not effective when the construction is stative, non-dynamic. In the present terms, this result follows automatically from the fact that the constructions at stake do not feature a Path head. I illustrate below with the analysis of (8), repeated here as (23) (note that *En aquesta coral* is but a left-dislocated PP coreferent with the resumptive locative pronoun *hi*), which follows the spirit of the one proposed by Mateu (2002:122):

(23) *Catalan*

En aquesta coral hi canten nens.  
in this choir LOC sing.3PL children  
'Children sing in this choir.'

(24) *PF-derivation of* (23)

a. Structure delivered by syntax

[<sub>VP</sub> [<sub>V</sub>  $\sqrt{\text{CANT}}$ ] [<sub>PlaceP</sub> [<sub>DP</sub> nens] [<sub>Place'</sub> Place DEICTIC]]]

b. Vocabulary Insertion

[<sub>VP</sub> [<sub>V</sub> \_\_\_\_ *cant*] [<sub>PlaceP</sub> [<sub>DP</sub> nens] [<sub>Place'</sub> \_\_\_\_ *hi*]]]

c. Conflation

[<sub>VP</sub> [<sub>V</sub> *cant cant*] [<sub>PlaceP</sub> [<sub>DP</sub> nens] [<sub>Place'</sub> *hi hi*]]]

d. Erasure of unpronounced links

[<sub>VP</sub> [<sub>v</sub> *cant* ~~*cant*~~] [<sub>PlaceP</sub> [<sub>DP</sub> *nens*] [<sub>Place'</sub> *hi* ~~*hi*~~]]

In (24) the root is adjoined to *v* and is interpreted, consequently, as a Co-event. *v* is in this case, interpreted as a stative non-externally originated event, since no DP is merged as Spec-*v* and Path is not projected. The DP *nens* is a Figure and enters into a predicative relation with an abstract deictic element merged as Compl-Place. Since there is no Path head, there is no requirement for *v* to get fused with any head, and the adjunction structure [<sub>v</sub> *v* <sup>√</sup>CANT] may phonologically survive. At Vocabulary Insertion a vocabulary item is provided for the deictic component, present in any pronoun: *hi* is the vocabulary item appropriate for this deictic component when sitting at Compl-Place. Finally, conflation fills up the defective matrixes of Place and *v*, giving rise to the overt sequence.<sup>100</sup>

## 1.6 Summary

I have described Talmy's (2000) theory of the typological distinction between s- and v-framed languages. While in the former the morph encompasses the Motion component (here *v*) and the Co-event component (here a root adjoined to *v*), in the latter the same morph encompasses the Motion component and the Core schema (PathP or Path). I have interpreted the theory through the syntactic-semantic and morphophonological tools presented in Chapter 2, Section 3. Assuming that, from the syntactic and semantic point of view, the expression of events of change is common to all languages, I have opted for a morphophonological analysis of the s- and v-framed distinction. In particular, and paying attention to the fact that v-framed languages are more restrictive in the expression of the components of predicates of change, I have proposed that in these languages *v* and Path are fused at PF, before Vocabulary Insertion, yielding one and the same node for phonological realisation (either by direct Vocabulary Insertion into Path+*v*, as in the cases of *go*-sentences or by conflation, as in change-of-state predicates). This circumstance is at odds with the situation where *v* appears with a root adjoined to it, being interpreted as a Manner Co-event, since Fusion cannot operate if one of the two nodes is complex (this is why *John tiptoed to the room* is out in v-framed languages). By contrast, in s-framed languages like English, this Fusion requirement is not present, so derivations with a root adjoined to *v* do not crash at PF. Finally, I have shown that an analysis in terms of Path-*v* Fusion explains why in stative, Path-less constructions *v* may appear with a root adjoined to it, giving rise to complex existential constructions like Catalan *Hi canten nens* 'There are children singing': *v* is not required to fuse with any node, so it may enter into an adjunction (and subsequent conflation) relation with a root interpreted as Manner.

## 2 The surface shape of PathP in Latin

The difference between s- and v-framed languages is primarily concerned with the expression of PathP. Importantly, what I mean by PathP in this section is a PathP which is sister to *v*. This is what corresponds to Talmy's (2000) Core Schema, since it is within the *vP* where PathP may structure the event (introducing a transition or change). In particular, it has been shown that in s-framed languages the PathP may be expressed

<sup>100</sup> Alternatively, the deictic could trigger fusion of Place with it, providing one and the same node for the insertion of *hi*. Jaume Mateu (p. c.) points out that a possible shortcoming of this account is that it does not explain why the *hi* pronoun seems to be crucial in allowing the construction. Thus, for instance, *Els nens canten en aquesta coral* 'The children sing in this choir' does not seem amenable to an unaccusative analysis, and cannot receive an existential interpretation. See Rigau 1997 for more details and discussion.



independently from the verb. In this section I outline the different morphosyntactic expressions of PathP in Latin, when it is realised independently from the verb —that is, in s-framed constructions. To sum up, the PathP can be expressed through 1) a verbal prefix, 2) a PP, 3) a combination of both prefix and PP, 4) a combination of a prefix and a DP and, 5) finally, and marginally, a (case-marked) DP. I will finish by mentioning the possibility of APs as possible encoders of the PathP, which is well attested in other s-framed languages like Germanic.

## 2.1 *PathP as a verbal prefix*

A verbal prefix very frequently expresses a PathP in Latin:

### (25) *Latin; Liv. 1, 41, 5*

Inspectum	vulnus
examine.PTCP.PFV.NOM.N.SG	wound(N)NOM.SG
<u>abs</u> -terso	cruore.
away-wipe.PTCP.PFV.ABL.M.SG	blood(M)ABL.SG

‘That the wound had been examined after wiping the blood off.’

### (26) *Latin; Lucr. 6, 141*

Flatus [...]	arbusta	<u>e</u> -volvens.
gust(M)NOM	shrub.ACC.PL	out-roll.PTCP.PRS.NOM.SG

‘A gust of wind rolling shrubs out.’

In these examples the prefixes *abs*- ‘off, away’ and *e*- ‘out’ indicate a final, resulting location of an externally-caused motion event. Witness that in both examples the verb expresses a Manner Co-event, but not the Core Schema, which is codified by the prefix. In sum, the s-framed pattern is instantiated in both examples:

### (27) *Latin; an analysis of (25)*

[<sub>VP</sub> [<sub>v</sub> V  $\sqrt{\text{TERG}}$ ] [<sub>PathP</sub> [<sub>DP</sub> *cruor*(e)] [<sub>Path'</sub> Path [<sub>PlaceP</sub> [<sub>DP</sub> ~~*cruor*~~(e)] [<sub>Place'</sub> Place  $\sqrt{\text{ABS}}$ ]]]]]

### (28) *Latin; an analysis of (26)*

[<sub>VP</sub> [<sub>DP</sub> *Flatus*] [<sub>v'</sub> [<sub>v</sub> V  $\sqrt{\text{VOLV}}$ ] [<sub>PathP</sub> [<sub>DP</sub> *arbusta*] [<sub>Path'</sub> Path [<sub>PlaceP</sub> [<sub>DP</sub> ~~*arbusta*~~] [<sub>Place'</sub> Place  $\sqrt{\text{EX}}$ ]]]]]]]

The prefix originates as a root at Compl-Place. In this position it is interpreted as a Terminal Ground, since PlaceP is embedded within a PathP. In the case of (27), for instance, the blood, *cruore*, ends up being off (the wound). On the other hand, the root  $\sqrt{\text{TERG}}$ , adjoined to *v*, is interpreted as Manner: it is through wiping that the blood ends up off the wound. Observe that in both cases I posit movement from Spec-Place to Spec-Path, where the internal argument is interpreted as a Measurer: the wiping and rolling events are over when the blood and the shrubs are off and out, respectively. In cases like (25), the prefix can be interpreted not as a Ground, but as a specification of a spatial relation between the Figure (*cruore*) and an implicit Ground which is coreferent with a nominal in the discourse. In this case, that Ground is understood as the wound, *vulnus*. If this is the right analysis, the root  $\sqrt{\text{ABS}}$  should rather be an adjunct to Place, and Compl-Place should be a null pronoun coindexed with the coreferent DP:

### (29) *Latin; an analysis of (25)*

*vulnus*<sub>i</sub> ... [<sub>VP</sub> [<sub>v</sub> V  $\sqrt{\text{TERG}}$ ] [<sub>PathP</sub> [<sub>DP</sub> *cruor*] [<sub>Path'</sub> Path [<sub>PlaceP</sub> [<sub>DP</sub> ~~*cruor*~~] [<sub>Place'</sub> [Place  $\sqrt{\text{ABS}}$ ] *pro*<sub>i</sub>]]]]]]]

I remain agnostic about which one is the right analysis.<sup>101</sup>

Note that in the representations of (27) and (28) I have neglected the morphophonological operations which yield their final PF shape. I note, nevertheless, that the Path head has no distinct phonological matrix in these constructions, and that it acquires one through conflation of the phonological matrix of the root merged as Compl-Place.

I would like to claim that verbal prefixes are never directional *per se*: the directionality is the effect of their being merged as Compl-Place within a PathP. Evidence that this is the right analysis is the fact that prefixes which may head directional, change predicates can also appear in stative BE-predicates, combined with *sum* ‘be’. This is shown in the examples below, where prefixes *de-* ‘away; down’ and *ab(s)-* ‘away’ are found in a stative, Pathless predicate in (30)b and (31)b and in a transition predicate (featuring a PathP) in (30)a and (31)a.<sup>102</sup>

(30) *Latin; Caes. Civ. 1, 28, 3 and Ter. Phorm. 298*

- a. Ad naves de-currunt.  
at ship.ACC.PL down-run.3PL  
‘They run down towards the ships.’
- b. Argentum de-erat.  
silver.NOM away-was.IPFV  
‘Money was lacking.’

(31) *Latin; Liv. 1, 41, 5 and Plaut. Cas. 882*

- a. Inspectum vulnus  
examine.PTCP.PFV.NOM.N.SG wound(N)NOM.SG  
abs-terso cruore.  
away-wipe.PTCP.PFV.ABL.M.SG blood(M)ABL.SG  
‘That the wound had been examined after wiping the blood off.’
- b. Senex ab-est.  
old\_man.NOM away-is  
‘The old man is missing.’

## 2.2 PathP as a PP

The PathP can also be a PP, as shown below:

(32) *Latin; Suet. Otho 8, 2*

- Ac repente omnes in Palatium cucurrerunt.  
and suddenly all.NOM.PL in Palace.ACC run.PRF.3PL  
‘Then on a sudden everybody hastened into the Palace.’

In (32), the PP *in Palatium* represents the PathP, with the root  $\sqrt{\text{IN}}$ , in this case, being merged as an adjunct to Place, and *Palatium* being merged as Compl-Place:

<sup>101</sup> See Marcq 1971:84 for the observation that a null anaphoric object of a preposition is related to the prefixation of that preposition onto the verb. I do not explore this possibility here.

<sup>102</sup> See Arsenijević 2006 or Gehrke 2008 for the view that Slavic verbal prefixes are not directional, but resultative, as I am defending here for Latin verbal prefixes. See Horrocks & Stavrou 2007 for the claim that prefixes are directional in Ancient Greek.

- (33) [<sub>VP</sub> [<sub>V</sub> V  $\sqrt{\text{CURR}}$ ] [<sub>PathP</sub> [<sub>DP</sub> omnes] [<sub>Path'</sub> Path [<sub>PlaceP</sub> [~~<sub>DP</sub> omnes~~] [<sub>Place'</sub> [<sub>Place</sub> Place  $\sqrt{\text{IN}}$ ] [<sub>DP</sub> Palatium]]]]]]

The difference between a change predicate headed by a prefixed verb (like (25) above) and one headed by a non-prefixed verb accompanied by a PP is, therefore, amenable to the difference between the particle + verb combination and PP + verb combination in the following English examples, respectively:

- (34) John ran in.  
(35) John ran into the room.

In Section 2.7 and in Chapter 4, Sections 2.1 and 3.5 I will propose a revision of this analysis (the one in (33)) and of the status of PPs as PathP (within the vP). See also the next section.

### 2.3 PathP as a combination of verbal prefix and PP

Sometimes combinations of a prefixed verb and a PP obtain. The prefix may coincide with the preposition—a phenomenon referred to often as *duplication* (Lehmann 1983, Acedo-Matellán 2006b, among others) or it may be different from the preposition, as respectively shown below:

- (36) *Latin; Caes. Gall. 1, 50, 1*  
Ex castris [...] copias suas e-duxit.  
 out camp.ABL troop.ACC.PL his.ACC.PL out-lead.PRF.3SG  
 ‘He lead his troops out of the camp.’  
 (37) *Latin; Cic. Caecin. 13, 36*  
 Ne in aedis ac-cederes.  
 lest in house.ACC at-march.SBJV.IPFV.2SG  
 ‘Lest you should come into the house.’

The problem for the analysis these predicates pose is evident: if both the prefix and the PP may be the realisation of PathP, how can they coappear? In cases like (36), displaying homonymy between the prefix and the preposition, one can argue that the phonological matrix of the prefix is realised in two different sites: in Place and in Path, which is eventually prefixed onto the verb. This is, roughly, the analysis proposed by Acedo-Matellán (2003, 2006). However, cases like (37) are not amenable to that analysis. In Chapter 4, Section 3.5 I shall argue that it is the prefix (its root, precisely) what realises PathP, the PP being an adjunct to PlaceP further specifying the more abstract location expressed by the root of the prefix. An analysis along these lines for (37) would look like the following:

- (38) *An analysis of (37)*  
 [<sub>VP</sub> [<sub>V</sub> V  $\sqrt{\text{CED}}$ ] [<sub>PathP</sub> [<sub>DP</sub> (tu)] [<sub>Path'</sub> Path [<sub>PlaceP</sub> [<sub>PlaceP</sub> [<sub>Place</sub> Place  $\sqrt{\text{IN}}$ ] [<sub>DP</sub> aedis]] [<sub>PlaceP</sub> [~~<sub>DP</sub> (tu)~~] [<sub>Place'</sub> Place  $\sqrt{\text{AD}}$ ]]]]]]

### 2.4 PathP as a combination of verbal prefix and DP

The verbal prefix may alternatively appear with a DP specifying the final location in a change-of-location event. That DP may appear in the same case as that governed by the homonymous preposition: the accusative (as in (39)) or the ablative (as in (40)). In some cases it may appear in the dative case (as in (41)):

- (39) *Latin; Tac. Ann. 1, 51*  
Novissimos in-currere.  
 rear.ACC in-run.PRF.3PL  
 ‘They charged against the rear.’
- (40) *Latin; Caes. Gall. 4, 13, 6*  
 Omnes copias castris e-duxit.  
 all.ACC.PL troop.ACC.PL camp.ABL out-lead.PRF.3SG  
 ‘He lead the troops out of the camp.’
- (41) *Latin; Plin. Nat. 10, 115*  
 Caprarumque uberibus ad-volant.  
 goat.GEN.PL=and udder.DAT.PL at-fly.3PL  
 ‘And they fly onto the udders of the goats.’

At least for the cases of accusative and ablative DPs, I will assume that the prefix (or rather, the root it involves) and the case-marked DP find themselves in a local relation at some stage, which is responsible for the case assignment to the DP. Specifically, within the present account the root of the prefix originates as an adjunct to Place, and the DP is Compl-Place. The root of the prefix conflates into Path, which, as mentioned above, has no phonological matrix of its own:

- (42) *An analysis of (39)*  

$$[_{VP} [_V V \sqrt{\text{CURR}}] [_{\text{PathP}} [_{DP} \text{pro}] [_{\text{Path}'} \text{Path} [_{\text{PlaceP}} [\text{DP} \text{pro}] [_{\text{Place}'} [_{\text{Place}} \text{Place} \sqrt{\text{IN}}] [_{DP} \text{novissimos}]]]]]]]$$

The distribution of case in these constructions and its relation to prepositions and prefixes shall be addressed in Section 2.7.1.

At first sight, these predicates could be seen as a counterpart of the ones in Section 2.2, with a non-prefixed verb and a PP as PathP. The difference could be stated in phonological terms: in unprefixed predicates with a directional PP the root of the prefix has remained in Place, while in prefixed predicates with a directional DP it appears as a prefix. In Chapter 4, Section 2.1 I will show that there are reasons to believe that both types of predicates are fundamentally different. In particular, I will argue that the unprefixed type with a directional PP is not even an s-framed construction, but a v-framed one, with the PP acting as a low adjunct.

## 2.5 PathP as a DP

In some cases of motion events the PathP can correspond to a DP marked either in the accusative or in the ablative. Examples of so-called *directive accusative* are found in both (43) (*Syracusas*) and (44) (*Hennam*), and an example of source ablative is found in (44) (*Assoro*):<sup>103</sup>

<sup>103</sup> I shall not deal with ablative DPs with a locative reading (see (i)) or those expressing a “via” path (see (ii)):

- (i) *Latin; Hor. Sat. 2, 7, 8*  
 Doctor Athenis vivere.  
 teacher.NOM Athens.ABL.PL live.INF  
 ‘To live as a teacher in Athens.’

- (43) *Latin; Cic. Verr. Actio secunda, 3, 68*  
 Veniunt Syracusas.  
 come.3PL Syracuse.ACC  
 ‘They come to Syracuse.’
- (44) *Latin; Cic. Verr. Actio secunda, 4, 96*  
Assoro itur Hennem.  
 Assorum.ABL go.PASS.3SG Henna.ACC  
 ‘One goes from Assorum to Henna’

Prepositionless directional DPs with unprefixd verbs cannot be used freely to express the PathP, however. On the contrary, they show restrictions of an encyclopaedic nature. Thus, the DP must refer to a town or a small island (and not a country) or must contain one of a small set of nouns: accusative *domum* ‘home’ (directional, as in *Sue went home*), *rus* ‘to the country’, and ablative *domo* ‘from home’, *rure* ‘from the country’ and *humo* ‘from the ground’ (Ernout & Thomas 1953:108f., Hofmann & Szantyr 1972:49-50, 102). Furthermore, Hofmann & Szantyr (1972:102) report that the prepositionless ablative is licensed also by names of towns or islands, crucially, when there is no specification whether movement takes place from the inside or from the surroundings of the relevant location. In case that specification is needed, prepositions *ex* ‘out’ and *ab* ‘away’ are respectively used. A striking proof of the encyclopadic nature of the restrictions operating on the availability of directional accusatives is the fact that, as observed by Echarte Cossío (1991:319), the names of Greek cities are less prone to appear as prepositionless accusatives.<sup>104</sup>

Finally, in Section 3.3 I will argue that there is a type of construction where the PathP is also expressed by a DP: it is those constructions expressing a created object through a complex event, like English *Sue baked a cake*, where *a cake* expresses the resulting object of a baking process. I will propose that *a cake* actually originates as a DP sitting at Compl-Place, expressing a Terminal Ground (a result).

## 2.6 PathP as an AP

We have seen that s-framed languages like English or German admit an AP as expression of the Core Schema, as shown by the following s-framed construction:

- (45) *German; Talmy 2000:247*  
 Der Hund hat [den Schuh]<sub>Figure</sub> [kaputt]<sub>Core schema</sub> -[gebissen]<sub>Event+Co-event</sub>  
 the dog has the shoe in\_pieces bite.PST.PART  
 ‘The dog bit the shoe to pieces.’

In the present account, the resultative AP is, hence, the manifestation of the vP internal PathP. This is a natural consequence of assuming Mateu’s (2002) reduction of the

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(ii) *Latin; Cic. Cat. 2, 6*  
Aurelia via profectus est.  
 Aurelian.ABL way.ABL depart.PTCP.PFV.NOM.M.SG is  
 ‘He departed along the Aurelian way.’

<sup>104</sup> Recall that I am focusing on directional DPs with *unprefixed* verbs. With prefixed verbs the frequency of directional DPs grows considerably, as Hofmann & Szantyr (1972:49-50) point out. This is what I expect, under present assumptions, since it is the prefix together with the DP what are structuring the PathP.

argument structure of adjectives to that of adpositions (and recall that in Hale & Keyser's theory the A and P lexical heads display different projecting properties and head different argument structures; see Chapter 2, Sections 1.2.1 and 2.1.3):

(46) *An analysis of (45)*

[<sub>vP</sub> [<sub>DP</sub> Der Hund] [<sub>v'</sub> [<sub>v</sub> v √BEISS] [<sub>PathP</sub> [<sub>DP</sub> den Schuh] [<sub>Path'</sub> Path [<sub>PlaceP</sub> [<sub>DP</sub> ~~den Schuh~~] [<sub>Place'</sub> Place √KAPUTT]]]]]]

In Latin, as anyone acquainted with the language could claim, this option does not seem to be available, at least for s-framed constructions, where the verb is independently bundled with a Manner root. Thus, for instance, an example such as the following one, with *vacuum* being interpreted as the Core Schema and with a *v* bundled together with the root √BIB 'drink', is not found in this language:

(47) *Latin; Acedo-Matellán, in press:2*

\*Poculum            vacuum            bibere.  
goblet.ACC.SG    empty.ACC.SG    drink.INF  
'To drink the goblet empty.'

In Chapter 4 I will provide empirical evidence that the made-up example above reflects a general fact of Latin —and of other similar languages like the Slavic languages and Ancient Greek. I will also attempt an explanation of the lack of s-framed constructions based on APs in these languages in terms of the morphophonological properties of *v* and Path and of the adjective (Chapter 4, Section 3.2). Finally, I will show that APs can be part of the PathP in predicates involving a non-complex event, that is, with no root Manner-adjoined to *v*:

(48) *Latin; Plaut. Capt. 197*

Eam            [servitutem]            lenem    [...]            reddere.  
that.ACC.F.SG    serfdom(F)ACC.SG    mild.ACC.F.SG    render.INF  
'To make that serfdom mild.'

In (48) the AP *lenem* codifies the Core Schema, in that the Figure DP *servitutem* is entailed to end up in the state described by *lenem*. In particular, I will claim in Chapter 4, Section 3.3, that the adjective corresponds to PlaceP and that the Path is instantiated as the Vocabulary Item *re-* together with a light verb (*do* 'give' in the example).

## 2.7 Case and directional PPs and DPs

### 2.7.1 Case and preposition/prefix. The accusative/ablative contrast

In Latin there is overt case marking on the DP. When a DP is embedded within a PathP as Ground, the DP displays a case mark depending on the sense of the directionality: it is accusative when the directionality is TO, that is, when the motion is towards the Ground, and it is ablative when the directionality is FROM, that is, when the motion departs from the Ground. This is illustrated with the following examples, already shown above:

- (49) *Latin; Tac. Ann. 1, 51*  
Novissimos in-currere.  
 rear.ACC in-run.PRF.3PL  
 ‘They charged against the rear.’
- (50) *Latin; Caes. Gall. 4, 13, 6*  
 Omnes copias castris e-duxit.  
 all.ACC troop.ACC.PL camp.ABL out-lead.PST.3SG  
 ‘He lead the troops out of the camp.’

Traditionally, selection of case has been attributed to the preposition or prefix coappearing with the case-marked DP. In particular, there is a series of prepositions/prefixes which exclusively select either the accusative (see (51)a) or the ablative (see (51)b):

- (51) *Latin accusative- and ablative-taking prepositions; Ernout & Thomas 1953:114-115*
- a. *ad* ‘at, beside’, *praeter* ‘beyond’, *ob* ‘in front of, against’, *ante* ‘in front of’, *post* ‘behind, after’, *per* ‘through’, *inter* ‘between’, *circum* ‘around’, *contra* ‘against’.
  - b. *a/ab/abs* ‘off, away’, *coram* ‘in the presence of’, *cum* ‘with’, *de* ‘away; downward’, *e/ex* ‘out (of)’, *prae* ‘before, in front of’, *pro* ‘before, in front of, forth’, *sine* ‘without’.

However, this is not the whole picture of the relation between prepositions/prefixes and case. On the one hand, there are in fact prepositions which may select either accusative or ablative. The most frequent ones are *in* ‘in’, *sub* ‘under, below’ and *super* ‘over, on’ (Ernout & Thomas 1953:114). Crucially, though, the choice of accusative vs. ablative by these prepositions does not translate into a TO vs. FROM semantic difference. In other words, *in* + ablative can never mean ‘out of’. Rather, while the accusative does in fact correspond to a TO Vector, the ablative indicates static location. The contrast is shown in the following examples involving *in* and *sub*:

- (52) *Latin; Tac. Ann. 1, 51 and Liv. 10, 24, 4*
- a. Novissimos in-currere.  
 rear.ACC in-run.PRF.3PL  
 ‘They charged against the rear.’
  - b. Fuit certe contentio in senatu.  
 be.PRF.3SG certainly struggle.NOM in senate.ABL  
 ‘There was in fact a struggle in the senate.’
- (53) *Latin; Plaut. Curc. 296 and Plaut. Epid. 215*
- a. Omnis sub-dam sub solum.  
 all.ACC.PL under-give.FUT.1SG under sole.ACC  
 ‘I will put them all under the sole of my foot.’
  - b. Sub vestimentis [...] habebant retia.  
 under clothes.ABL have.IPFV.3PL net.ACC.PL  
 ‘They were wearing nets under their clothes.’

A plausible hypothesis is that this accusative/ablative distinction is structural: the accusative is assigned to vP-internal PPs and the ablative is assigned to vP-adjuncts.

This is what Gehrke (2008) proposes to account for the accusative/dative contrast in German, which at first sight parallels the Latin case:

(54) *German; Gehrke 2008:96*

- a. Diana schwamm in den See.  
Diana swam in the.ACC lake  
'Diana swam into the lake.'
- b. Diana schwamm im See.  
Diana swam in.the.DAT lake  
'Diana swam in the lake.'

Gehrke (2008:96) reports that accusative PPs like *in den See* of (54)a describe bounded paths, "with the location denoted by the *in/on*-phrase being the ending-point or the final location of some movement along a path.". The accusative/dative distinction is theoretically implemented by her in the following terms: she claims that accusative marking on the PP is the morphological reflex of a structural relation of predicative nature between the PP, which in and of itself is not directional, and the DP interpreted as Figure.<sup>105</sup> Summing up, the PP is claimed to originate in an argumental position, contrasting with dative-marked PPs in predicates like (54)b, which are claimed to be merged as VP-adjuncts.

When carrying this account over to Latin, although I agree that accusative PPs might be merged vP-internally, contrasting with vP-external ablative PPs, I do not think that they sit in argumental positions. Specifically, and within my framework, they do not necessarily correspond to a PathP sister to v. Evidence for this is the fact that accusative *in*-PPs do not necessarily encode bounded paths, as exemplified by the following example:

(55) *Latin; Stat. Theb. 8, 541*

- Clipeum=que in pectora calcat.  
shield.ACC=and in chest.ACC press.3SG  
'He presses his shield against his chest.'

The accusative PP *in pectora*, much as it is understood directionally, licenses no entailment that the shield end up inside the soldier's chest. Thus, *in pectora* does not encode a bounded Path (it cannot be translated as 'into his chest'), in Gehrke's terminology, neither do we expect it to induce telicity, as a consequence. On the other hand, Pinkster (1972), building on an observation by Müller (1895), reports that accusative-marked directional expressions are iterable. For instance, in (56) both *domum* and *ad se* signal the final location of the motion event encoded by *venio*; and in (57) there are in fact three directional accusative-marked expressions —*Teanum*, *in hiberna* and *ad exercitum*.<sup>106</sup>

<sup>105</sup> Specifically, Gehrke (2008:83, 102) proposes the existence of a functional projection PredP (see Bowers 1993) between the verb and the PP. This projection allows the creation of secondary resultative predications, and is responsible for the merging of the Figure DP as its specifier.

<sup>106</sup> On this iterativity of directional (and non-directional) spatial PPs see also Fugier 1983.



- (56) *Latin; Cic. Att. 12, 11, apud Pinkster 1972:94*

Postumiam domum ad se venisse.  
 postumia.ACC home.ACC at self.ACC come.INF.PFV  
 ‘That Postumia had come to him in his house.’

- (57) *Latin; Liv. 23, 24, 5, apud Pinkster 1972:94*

Dictator Teanum in hiberna ad exercitum  
 dictator.NOM Teanum.ACC in winter\_quarter.ACC.PL at army.ACC  
 red-it.  
 back-go.3SG

‘The dictator returned to the army in the winter quarters at [lit.: to] Teanum.’

Even if one of this directional expressions were merged directly as Compl-v, there is no room in the structure for the rest of them. In Chapter 4, Section 3.5 I will propose that directional accusative-marked PPs are vP-internal adjuncts. Therefore, I hereby reject that the accusative case inside the PP automatically indicates that it occupies Compl-v. On the other hand, I also disagree theories like Pinkster’s (1972:145f.) or Luraghi’s (1989), where cases are, across the board, “idiosyncratically determined by each specific preposition” (Luraghi 1989:253). In particular, I think that the accusative/ablative contrast dealt with above cannot be “immediately recoverable from the context”, as claimed by Luraghi (1989:262). Thus, motion verbs do not necessarily induce accusative in *in*-PPs, since they are perfectly compatible with a static location expressed as an ablative-marked *in*-PP:

- (58) *Latin; Plaut. Curc. 457*

In foro infumo boni homines  
 in forum.ABL lowest.ABL good.NOM.PL man.NOM.PL  
 atque dites ambulant.  
 and rich.NOM.PL walk.3PL

‘The men of good standing and the rich walk in the lowest part of the forum.’

## 2.7.2 Directional datives

I address, finally, the use of the dative as an apparently directional case, particularly in the presence of a prefixed verb. I present the relevant data and discuss the two main hypotheses which have been presented in the Latin linguistics tradition. On the one hand, the dative has been argued to be a benefactive/malefactive case even in the cases where it seems to be amenable to a directional interpretation. On the other hand, the dative has been argued to be governed in some sense by the prefix. I show that the reasons for the latter hypothesis outweigh those for the former.

It has often been observed that the dative case, which, unlike the accusative and the ablative, is not selected by any preposition, can nevertheless present a directional meaning:

- (59) *Latin; Verg. Aen. 5, 450*

It clamor caelo.  
 go.3SG clamor.NOM Heaven.DAT  
 ‘A clamor rises to Heaven.’

The so-called directional dative is particularly frequent with prefixed verbs (Lehmann 1983, Pinkster 1988, Echarte Cossío 1994, Serbat 1996), as illustrated here:

(60) *Latin; Plaut. Most. 804*

Tibi            ad-duxi            hominem.  
 you.DAT    at-lead.PRF    person.ACC  
 ‘I have brought the man to you.’

In (60) the dative *tibi* may be interpreted as the final location of the spatial schema involving the prefix *ad*-. Since, as said, there is not a single preposition taking dative, if the dative in (60) is really somehow governed by the prefix, this phenomenon would be a problem for the hypothesis that the prefix originates as a preposition and assigns case (accusative or ablative) as such to the DP at Compl-Place. Ernout & Thomas (1953:69-71) and Rubio Fernández & González Rolán (1985:135-136), among other authors, argue that these “p-governed” datives (that is, datives apparently selected by the prefix) are in fact run-of-the-mill *benefactive* datives, expressing goal or interest. Ernout & Thomas (1953) support their claim by pointing out that most of these allegedly p-governed datives involve a +human referent, alternating with semantically equivalent PPs with -human referent. Thus, (60) above contrasts with the next example, where inanimate *urbem* ‘city’ is interpreted as final location in the presence of the preposition *ad*:

(61) *Latin; Cic. Phil. 5, 22*

Ad urbem [...] exercitum maximum    ad-duceret.  
 at city            army.ACC    biggest.ACC    at-lead.IPFV.SBJV.3SG  
 ‘That he lead the biggest army near the city.’

However, as Ernout & Thomas (1953:69) later point out, there are examples where the correlations +human/dative and -human/PP do not hold. Thus, in (62) a +human goal is expressed as an *ad*-PP and in (63) a -human goal is expressed as a dative DP accompanying the prefix *in*-:

(62) *Latin; Plaut. Epid. 294*

Illum [...] ad-ducam            huc            ad te.  
 him.ACC    at-lead.FUT.1SG    to\_here            at you.ACC  
 ‘I will bring him to you here.’

(63) *Latin; Caes. Gall. 7, 22, 4*

Aggeri            ignem            in-ferebant.  
 rampart.DAT    fire.ACC    in-carry.IPFV.3PL  
 ‘They were carrying fire to the rampart.’

In particular, as regards (63) it is difficult to maintain the view that the dative expresses “interest”, as interpreted by Rubio Fernández & González Rolán (1985:135) for the following poetical example:

(64) *Latin; Verg. Aen. 1, 174*

Silici            scintillam            ex-cudit.  
 stone.DAT    sparkle.ACC    out-beat.3SG  
 ‘He beat a sparkle out of the stone.’

According to these authors, the dative in (64), rather than being governed in any sense by *ex*-, or meaning “separation”, signals how the beating out action of *excudere* affects

the stone, *silici*, which is then interpreted as “malefactive”. Thus, the stone is personified, and the predicate means something like “to rob the sparkle from the stone, beating it out of it”.<sup>107</sup> However, as noted, this interpretation can hardly be carried over to (63), particularly when taking into account the fact that it is excerpted from a prose text.

Perhaps the most important problem for benefactive/malefactive theories of the directional dative is the fact that, as observed by Lehmann (1983:156f.), only some prefixes freely “take” directional datives: *ante-* ‘in front of’, *prae-* ‘before, in front of’, *post-* ‘behind, after’, *in-* ‘in’, *sub-* ‘under’, *inter-* ‘between’, *ob-* ‘in front of, against’; on the other hand, it seems that *ad-* ‘at, beside’, *com-* ‘with’ and *super-* ‘on, over’ may take dative if the unprefixated verb is transitive. In order to account for these prefix-related restrictions on the licensing of the directional dative, Lehmann hypothesises the existence of an avoidance principle: “avoid double accusatives”. Thus, if a transitive verb is prefixed with an accusative-taking preposition, the complement of that preposition/prefix would be an accusative, like the object of the unprefixated verb, and a double-accusative configuration would emerge, contravening the double-accusative filter. It is in these cases where the dative emerges, provided that the ablative is unavailable with these prepositions, and the genitive is not a preposition-governed case. With intransitive unprefixated verbs the problem does not arise, since there is only one argument besides the nominative external argument: the one introduced by the prefix, which may appear as either accusative or ablative. Thus, dative marking of p-governed arguments is thought of by Lehmann (1983) as a preventive strategy to shun the double-accusative filter, and the fact that the dative, and not other case, is used has to do with the fact that the genitive is not an adverbial case, while the accusative and the ablative are not available, since the former is part of the problem to avoid (double accusative) and the latter does not yield the right semantics. This explanation predicts that the strategy will apply only with accusative-taking prefixes; however, it fails to predict why the ablative-taking prefix *com-* is also found with datives when attached to a transitive base, as Lehmann himself observes. Moreover, Lehmann states that his explanation gains support from the fact that the prepositions/prefixes which take ablative most bluntly reject the dative, but Ernout & Thomas (1953:70-71) provide many examples of very frequent prefixed verbs where the ablative is in seemingly free distribution with respect to the dative. Thus, in the next examples the ablative-taking prefixes coappear with datives:

(65) *Latin; Plaut. Aul. 634*

Nil	equidem	<u>tibi</u>	abs-tuli.
nothing.ACC	indeed	you.DAT	off-bear.PRF.1SG

‘I haven’t taken anything from you.’

(66) *Latin; Plaut. Merc. 176*

Tuquidem	ex	ore	orationem	<u>mi</u>	e-ripis.
you=indeed	out	mouth.ABL	speech.ACC	me.DAT	out-seize.3SG

‘You certainly don’t let me speak.’

However, it can be said in favour of Lehmann’s (1983) position that the dative does not supplant any ablative DP or PP, but simply co-exists with it as a benefactive dative, as shown by (66).

<sup>107</sup> See also Echarte Cossío 1994 and Pinkster 1988:243 for the view that the dative is not governed by the prefix.

In sum, there seems to be evidence that the dative co-appearing with a prefixed verb and being interpreted as a final location might not correspond to a simple benefactive. Acknowledging that this hypothesis is on the right track, in this work I remain agnostic about the actual implementation of dative-assignment to p-governed DPs.

## 2.8 Summary

The PathP, encoding the Core Schema in Latin, can surface in a variety of ways. It can correspond to a prefix, accompanied or not by a PP or by an appropriately case-marked DP, it can correspond to a PP and, finally, it can correspond to a DP, although this option shows restrictions of undoubtedly encyclopaedic nature. As shall be clear in Chapter 4, Section 1.2, The PathP in Latin cannot correspond to an AP, unlike in other s-framed languages. As regards the distribution of case on the DP interpreted as Ground, we have seen that there are lexical restrictions between the case assigned and the preposition. On the other hand, there is a group of prepositions which admits both the accusative and the ablative case, depending, respectively, on the directional or static sense of the PP. Assuming Gehrke's (2008) structural approach to the directional/static contrast in accusative/dative-marked PPs in German, I have proposed that accusative-marked PPs are vP-internal and ablative-marked PPs are vP-external. However, I have cast doubt that Latin vP-internal accusative PPs be arguments, as put forth by Gehrke for the German counterparts. I have made my claim capitalising on the fact that these directional accusative PPs do not necessarily entail a bounded path interpretation, and, hence, cannot, within my approach—or Gehrke's (2008), for that matter—be taken as sisters of v. Finally, I have tackled the so-called directional dative, notably when accompanying prefixed motion verbs. I have presented the two main theories on the licensing of dative in prefixed motion predicates, the theory which argues for a benefactive/malefactive analysis of these datives and the theory which claims that there is an actual connexion between the presence of the prefix and the use of the dative as a directional case. I have shown that the evidence for the latter theory seems more compelling.

## 3 S-framed constructions in Latin

In this section I will present evidence that Latin behaves as an s-framed language, by exploring a range of constructions which are amenable to an analysis in terms of a change predicate. The discussion is not be limited to constructions that have an overt motional semantics, Complex Directed Motion Constructions, but shall encompass also Unselected Object Constructions, Complex Effected Object constructions, constructions participating in the Locative Alternation and so-called *pseudoreversatives* (McIntyre 2002), that is, constructions where the result expressed by the verb is cancelled by virtue of the element expressing the Core Schema.

### 3.1 Complex Directed Motion Constructions

Complex Directed Motion Constructions (CDMCs) are constructions which express a directed motion event with a Manner Co-event encoded in the verb. The next English examples illustrate:

- (67) *Zubizarreta & Oh 2007:128*
- a. John danced to the kitchen.
  - b. The bottle floated under the bridge.
  - c. They danced out of the room.

- d. The horse galloped into the barn

Observe that, while (67)a, (67)c and (67)d involve directional predicates, (67)b, containing a Place preposition, is ambiguous between a directional and a non-directional sense, respectively made evident through the addition of an *in*- and a *for*-adverbial:

- (68) The bottle floated under the bridge {in a few minutes/for hours.}

Being overtly motion constructions, CDMCs most evidently show the pattern of an s-framed language: the Core Schema is not expressed by the verb, but by some other piece of the structure, and the verb, instead, expresses a Manner Co-event. As expected, if we want to literally render the expressions of (67) in a Romance language, we obtain, at most, expressions which, unlike in English, are unambiguously non-directional:

- (69) *Catalan renditions of (67) (they have to be understood as directional)*

- a. \*En John ballà a la cuina.  
the John danced at the kitchen
- b. \*L'ampollasurà sota el pont {durant hores/ \*en uns minuts}.  
the=bottle floated under the bridge during hours in some minutes
- c. \*Ballaren fora de l'habitació.  
danced.3PL out of the=room
- d. \*El cavall galopà a dins del graner.  
the horse galloped at in of=the barn

### 3.1.1 CDMCs and situation aspect

It has been claimed that one of the hallmarks of CDMCs is the fact that these constructions, unlike other constructions involving non-directed motion, correspond to telic predicates, that is, to achievements or realisations (Tenny 1987, van Hout 1996, Borer 1998, among others). This contrast is exemplified in (70) through the well known *for/in* adverbial test:

- (70)

- a. Sue danced for/\*in an hour.
- b. Sue danced into the room in/\*for five minutes.

In *prima facie* contradiction, we do find constructions indicating both directed motion and manner of motion —thus qualifying as CDMCs *as defined above*— which are nonetheless atelic:

- (71) Sue danced towards the room for/\*in some minutes.

There is a difference between (70)b and (71), however: while in the former the PP expresses a *bounded* trajectory, entailing that Sue is at some stage in the room, in the latter the trajectory is *unbounded*, and no such entailment is licensed. The difference in the (un)boundedness properties of the Path are automatically mapped onto the aspectual properties of the whole predicate: telic in (70)b and atelic in (71). More importantly, that difference seems to be directly relevant to the s-/v-distinction, as first pointed out in Aske 1989 and incorporated in Talmy 1991: while s-framed languages allow CDMCs with a bounded Path, hence, telic, v-framed languages only allow atelic CDMCs,

featuring an unbounded Path, as the Spanish one exemplified in (72) (where I have added the durative PP *durante cinco minutos* ‘for five minutes’).<sup>108</sup>

(72) *Spanish; Aske 1989:5 (adapted)*

Corrieron hacia adentro de la cueva (durante cinco minutos).  
 run.PRF.3PL towards inward of the cave during five minutes  
 ‘They ran towards the inside of the cave for five minutes’

A perspective which has proved fruitful in accounting for the different properties of bounded and unbounded Paths is the one that assumes that unbounded Paths are adjuncts, while bounded ones are argumental (Acedo-Matellán & Mateu 2008). Such an assumption straightforwardly explains two facts: on the one hand, that only bounded Paths, as vP-internal material, may change the situation aspect of the motion event, as was illustrated in (70), and, on the other hand, that cross-linguistic variation in argument structure expression involves only bounded Paths, as just pointed out. In this work, I will assume Aske’s (1989) revision of Talmy’s typology as correct, and I will take the difference between bounded and unbounded Paths to be configurational in nature. Since my aim in this section is to show the relevance of CDMCs in characterising Latin as s-framed, I will restrict that name to telic constructions involving a bounded Path.<sup>109</sup>

### 3.1.2 CDMCs and non-directed motion constructions in Latin

In Latin CDMCs can in principle be found as predicates headed by an unprefixed verb and a directional expression (cf. (74)), by a prefixed verb and a directional expression (cf. (75) and (76)) or predicates with a prefixed verb in combination with no independent directional phrase (cf. (73) and (77)):

<sup>108</sup> Beavers *et al.* (2010:347) claim that languages acknowledged as v-framed, as Spanish or Japanese, do allow CDMCs with bounded paths. They adduce that these languages can make use of elements meaning ‘until’ or ‘up to’, like Spanish *hasta*, to convey a bounded path and successfully combine with a manner-of-motion verb:

(i) *Spanish; Beavers et al. 2010:347*

<sup>#</sup>La botella flotó hasta la cueva pero no llegó (a la cueva).  
 the bottle floated up\_to the cave but not arrived at the cave)

Here I limit myself to pointing out that there is evidence that Spanish *hasta* cannot be equalled to a Path preposition, and that, hence, *hasta*-phrases are not vP-internal, and do not license an unaccusative interpretation of the construction headed by a manner-of-motion verb. Thus, manner-of-motion verbs in Spanish do not allow bare plural DPs in postverbal position —a frequently used unaccusativity test— even if hosting an *hasta*-phrase (see (iia)); this contrasts with directed motion verbs, like *llegar* ‘arrive’ (see (iib)), which are natural in the same environment:

(ii) *Spanish*

a. <sup>??</sup>Flotaron botellas (hasta la cueva).  
 floated.PL bottles up\_to the cave  
 b. Llegaron botellas (hasta la cueva).  
 arrived.PL bottles up\_to the cave

*hasta*-phrases seem to be adjuncts delimiting the event at the vP level, and not within. A further proof of this claim is provided by Italian, where *fino*-phrases (same meaning) do not license the BE-auxiliary in the perfect tenses. Hence *fino* does not unaccusativise the predicate:

(iii) *Italian; Real Puigdollers 2010*

Gianni ha/\*è camminato fino a casa.  
 Gianni has/is walked until home  
 ‘Gianni walked up home.’

Unfortunately, I cannot revise Beavers *et al.*’s (2010) arguments based on Japanese *made* ‘until’ here. Finally, see Chapter 4, Section 5.5.2 for the suggestion that the preposition *el* in Hebrew is really an *until*-marker, and, hence, that *el*-PP constructions claimed by Son (2007) to be CDMCs are not really CDMCs.

<sup>109</sup> See Folli & Harley 2006 for the view that (transitive) CDMCs do not necessarily involve telicity.

- (73) *Latin; Cic. Verr. 2, 5, 16, 2*  
 Subito ipse ac-currit.  
 suddenly self.NOM at-run.3SG  
 ‘Suddenly he himself arrives in haste.’
- (74) *Latin; Cic. Att. 6, 2, 1*  
 Se statim ad te navigaturum esse.  
 REFL.3SG.ACC at\_once at you.ACC sail.INF.FUT.M.ACC be.INF  
 ‘That he was on the point of setting sail to join you.’
- (75) *Latin; Cic. Verr. 2, 2, 19*  
 Simulatque e navi e-gressus est dedit.  
 as\_soon\_as out ship.ABL out-walk.PRF.3SG give.PRF.3SG  
 ‘As soon as he walked out of the ship, he handed it over.’
- (76) *Latin; Suet. Diius Augustus 94, 4*  
 Draconem repente ir-repsisse ad eam  
 snake(M).ACC.SG suddenly in-glide.INF.PFV at her.ACC  
 paulo=que post e-gressum.  
 a\_little=and after out-walk.PTCP.PFV.ACC.M.SG  
 ‘That, on a sudden, a snake glided in towards her and glided away soon after.’
- (77) *Latin; Val. Max. 6, 9, 7*  
 [Vires atque opes humanae] ad-fluunt subito,  
 strenght.NOM.PL and wealth.NOM.PL human.NOM.PL at-flow.3PL suddenly  
 repente di-labuntur.  
 suddenly apart-slip.3PL  
 ‘The vigours and the wealths of humans come suddenly in a flow, and suddenly slip asunder.’

All of the above examples involve a predicate the telicity of which is made evident by the licensing of a punctual expression: *subito* ‘on a sudden’, *simul* ‘at once’, *simulatque*, ‘as soon as’ and *repente* ‘on a sudden’. These adverbials are not possible in predicates expressing a simple activity, which, on the other hand, license durative adverbials such as *per*-phrases with a time measure expression, corresponding to English *for*-adverbials, as shown in the next examples through *per aliquot dies*, ‘for some days’ and *diu* ‘for long’:

- (78) *Latin; Plin. Nat. 17, 209*  
Per aliquot dies vagari.  
 for some day.ACC.PL wander.INF  
 ‘That it wanders for some days.’
- (79) *Latin; Ov. Am. 1, 7, 49*  
Diu lacrimae fluxere per ora.  
 For\_long tear.PL flow.PRF.3PL through face.ACC  
 ‘Tears flowed down her face for long.’

I assume that the difference between examples such as those in (73) through (77) and examples such as those in (78) and (79) is configurationally represented. In particular, I claim that CDMCs are unaccusative predicates. I illustrate with an analysis of (73):

- (80) *An analysis of (73)*  
 [<sub>VP</sub> [<sub>V</sub>  $\sqrt{\text{CURR}}$ ] [<sub>PathP</sub> [<sub>DP</sub> ipse] [<sub>Path'</sub> Path [<sub>PlaceP</sub> [<sub>DP</sub> ipse] [<sub>Place'</sub> Place  $\sqrt{\text{AD}}$ ]]]]]

The subject of the construction is originated as a Figure in Spec-Place. Here it enters into a predicative relation with the root  $\sqrt{\text{AD}}$ , which here refers to a place coreferent with one already entered in the discourse (as is also understood in the English rendition ‘He arrives in haste’). The entailment that the Figure effectively ends up in the location encoded by PlaceP is yielded by the fact that the predicate incorporates a PathP projection, which introduces a transition in the event. In turn, the quantity DP *ipse* rises to Spec-Path and is interpreted as a Measurer of that transition, which is not over until *ipse* is at the location referred to by  $\sqrt{\text{AD}}$ . Telicity is licensed thereby, as evidenced by the adverbial *subito*. Since *v* does not project a specifier, *ipse* is not assigned accusative case, and rises to T, where it is assigned nominative case. Finally, the root of the verb is here an adjunct to the eventive head *v*, and is interpreted, as such, as a Manner Co-event. The English translation provided faithfully reflects this fact, since the celerity of the motion event is expressed there as an adjunct (*in haste*). In turn, the predicates in (78) and (79), which express activities, rather than accomplishments, are claimed to have the following unergative structure:

- (81) *An analysis of (79)*  
 [<sub>VP</sub> pro [<sub>V</sub> v  $\sqrt{\text{NAVIG}}$ ]]

Here the subject (a null *pro*, in this case) is not a Figure, but an Originator, since it originates at Spec-v. The root of the verb is not adjunct to *v*, but a complement, and is interpreted as an Incremental Theme.

### 3.1.3 The unaccusative nature of CDMCs

Do we have evidence that CDMCs, as proposed above, are unaccusative predicates? I think that at least two tests can be invoked to prove the unaccusative character of CDMCs: the disallowance of cognate objects and measure phrases (Section 3.1.3.1) and the failure to yield agent nouns (Section 3.1.3.2). Finally, I shall also show, in Section 3.1.3.3, that one of the most frequently used diagnostics in investigations of unaccusativity in Romance languages, the licensing of past participles in an adjectival use, does not seem sensitive, in Latin, to the unergative/unaccusative, but, rather, to the morphosyntactic distinction between deponents and non-deponents.

The results presented in this section emerge from an investigation of a wide range of manner-of-motion verbs. I have searched for both unprefix and prefixed verbs, as shown in (82) and (83), respectively. Specifically, (83) contains a list of the combinations of each one of the verbs in (82) with the prefixes *a(b)-* ‘off, away’, *ad-* ‘at’, *ex-* ‘out’ and *in-* ‘in’, whenever the resulting compositum is entered in Gaffiot 1934 and retrievable from the Antiquitas corpus of the BTL2:

- (82) *Unprefixed manner-of-motion verbs*  
*ambulo* ‘walk’, *curro* ‘run’, *equito* ‘ride’, *erro* ‘wander, stray, roam’, *festino* ‘make haste, hurry’, *fluo* ‘flow’, *fugio* ‘flee’, *labor* ‘slide, slip’, *navigo* ‘sail’, *nato* ‘swim, float’, *no* ‘swim, float’, *propero* ‘hasten, make haste’, *repo* ‘creep, crawl’, *salio* ‘jump’, *salto* ‘dance’, *vado -as* ‘wade through ford’, *vago* ‘wander’, *volo* ‘fly’



- (83) *Manner-of-motion verbs prefixed with a(b)-/au- ‘off, away’, ad- ‘at’, ex- ‘out’ and in- ‘in’*

*adambulo, exambulo, inambulo, accurro, excurro, incurro, abequito, adequito, inequito, aberro, aderro, exerro, inerro, adfluo, effluo, influo, aufugio, effugio, adlabor, illabor (in + labor), elabor, adnavigo, enavigo, innavigo, abnato, adnato, enato, innato, adno, eno, inno, appropero, impropero, adrepo, erepo, inrepo, absilio (ab + salio), assilio (ad + salio), exsilio (ex + salio), insilio (in + salio), evago, avolo, advolo, evolo, involo*

I shall not attempt an analysis of the results obtained. In particular, I shall not provide an account of the relation between unaccusativity and unergativity and the relevant tests. My only (modest) aim is to show that two unaccusativity/unergativity diagnostics which have been applied in other languages —the cognate object and measure phrase diagnostics and the agent noun diagnostics— also work for Latin, and that, on the contrary, the Latin data are a bit of a puzzle for such a well-established test as the adjectival participle test. I note, on the other hand, that although I shall make use of such expressions as “apply a test to a verb” or “a verb yields an agent noun”, it shall be clear that I am using those expressions descriptively, and that I am not committing to a lexicalist view of diagnostic tests.

### 3.1.3.1 Disallowance of cognate objects and measure phrases

In this section I show how CDMCs do not allow a certain class of “objects” which have been independently shown to be allowed only with unergative predicates: cognate objects and measure phrases.

Cognate objects, which are called *internal objects* in the Latin linguistics tradition (Hofmann & Szantyr 1972:30, Pinkster 1995:13), are objects which share the same root as the verb with which they appear. For instance, in the next predicate the accusative object *vitam* ‘life’ shares the same root as the verb *vivo* ‘live’:

- (84) *Latin; Ter. Ad. 859*

<u>Vitam</u>	duram	[...]	vixi.
life.ACC	hard.ACC		live.PRF.1SG
‘I have lived a hard life.’			

Several authors (Larson 1988, Massam 1990, Levin & Rappaport Hovav 1995) have proposed that cognate objects are only allowed with unergative verbs. Unaccusative verbs do not license them, as shown in the following examples:<sup>110</sup>

- (85) *Levin & Rappaport Hovav 1995:40, 148*

- a. \*The glass broke a crooked break.
- b. \*The apples fell a smooth fall.
- c. \*She arrived a glamorous arrival.

*Measure phrases* (the so-called *accusative of extension*; cf., for example, Ernout & Thomas 1953:30) are quantified NPs which behave, partly, as standard objects. Importantly, as pointed out by Real Puigdollers (2006), measure phrases also resist

<sup>110</sup> See Kuno & Takami 2004:107f. for the position that this restriction to unergatives is false.

appearing in unaccusative predicates (see (86)a), but are perfectly normal in unergative ones (see (86)b):

(86) *Catalan; Real Puigdollers 2006:69*

- a. \*El Pere arriba tres metres del seu poble.  
       the Pere arrives three meters from=the his village
- b. El Josep camina quatre quilòmetres tots els dies.  
       the Josep walks four kilometers all.PL the.PL days

If this generalisation is on the right track, we do not expect CDMCs in Latin to appear with cognate objects or measure phrases. This seems to be true at least for the CDMCs based on the prefixed manner-of-motion verbs in (83). On the one hand, the search for constructions including a cognate object were based on combinations of each prefixed verb with its corresponding nominal, in the accusative. The list of nominals listed in Gaffiot 1934 and present in the Antiquitas corpus is displayed in (87):

(87) *Nominalisations based on the verbs in (83)*

*inambulatio, excursus, excursio, incursio, incursus, aberratio, effugium, adlapsus, insultura* (on *insilio*: *in* + *salio*), *evagatio, advolatus, involatus*

This search did not produce any positive result. The other search involved combinations of the same prefixed verbs with the measure nouns displayed in the following list (in the relevant case, also shown in the list):

(88) *Measure nouns*

*pes* (acc.pl. *pedes*, gen.pl. *pedum*) ‘foot’, *passus* (acc.pl. *passus*, gen.pl. *passuum*) ‘pace’, *stadium* (acc.pl. *stadia*, gen.pl. *stadium/stadiorum*) ‘stadium’, *milia* (acc.pl. *milia*) ‘a mile (a thousand feet)’

This search shed two alleged cases of CDMCs combined with a measure phrase:

(89) *Latin; combinations of prefixed manner-of-motion verbs with measure phrases*

a. *Liv. 37, 31, 9*

Inde lingua in altum mille passuum  
 thence tongue(F)NOM.SG in sea.ACC thousand pace.GEN.PL  
ex-currens medium fere sinum [...] distinguit.  
 out-run.PTCP.PRS.NOM.F.SG middle.ACC almost bay.ACC divide.3SG  
 ‘Thence a tongue of land stretching out about a mile into the sea, divides the bay nearly in the middle.’

b. *Plin. Nat. 4, 37, 1*

Mons [...] a planitie ex-currit in maria  
 mountain.NOM off plain.ABL out-run.3SG in sea.ACC.PL  
LXXV passuum.  
 75 pace.GEN.PL

‘The mountain extends from the plain into the sea, a distance of seventy-five paces.’

Both examples involve the verb *excurro*. Crucially, however, they both involve a static description: that of the extension of a tongue of land in (89)a and of a mountain in (89)b. No movement is involved in either case, not an activity interpretation, for that

matter. I suspect that this circumstance may account for the availability of the measure phrase. However, pending a better solution, I leave it at that. I will return to prefixed verbs interpreted statically—involving so-called *fictive motion*—in Chapter 4, Section 3.4.

On the other hand, some of the simple manner-of-motion verbs in (82) are found to combine either with cognate objects or with measure phrases. This is in conformity with the unergative status I have ascribed to them in (81). I illustrate with the next three verbs:

(90) *Latin; cognate objects and measure phrases with some of the verbs in (82)*

a. *Cic. Pro P. Q. 78, 5*

Possit [...]	<u>septingenta</u>	<u>milia</u>	<u>passuum</u>	<u>ambulare</u>
can.SBJV.3SG	seventy	thousand	pace.GEN.PL	walk.INF

‘He could walk seventy thousand paces.’

b. *Liv. 35, 11, 7*

<u>Cursus</u>	rigida	ceruice [...]	<u>currentium</u>
run.ACC.PL	stiff.ABL	neck.ABL	run.PTCP.PRS.GEN.PL

‘Of the ones who were running the race with a stiff neck.’

c. *Plin. Nat. 6, 60, 1*

Proditur	Alexandrum	nullo	die
tell.PASS.3SG	Alexander.ACC	no.ABL	day.ABL
minus	<u>stadia</u>	<u>DC</u>	<u>navigasse</u>
less.ACC	stadium.ACC	600	sail.INF.PFV

‘It is said that Alexander would never sail less than 600 stadiums each day.’

### 3.1.3.2 Failure to yield agent nouns

Levin & Rappaport Hovav (1988) propose that unergative verbs, unlike unaccusative verbs, may yield agent nouns based on the suffix *-er*. Thus, while such formations are *runner*, *walker* or *swimmer*, based on unergative verbs, are fine, it is the opposite with *\*arriver*, *\*appearer* or *\*disappearer*.

If we submit the simple and prefixed manner-of-motion verbs of (82) and (83) to this test, we find, respectively, the next agent nouns, where listed by Gaffiot (1934) and present in the Antiquitas corpus:

(91) *Agentive nominalisations based on unprefixed manner-of-motion verbs in (82)*

*ambulator/ambulatrix* ‘walker’ (m./f.), *cursor* ‘runner’, *eques* ‘rider’, *errator* ‘wanderer’, *fugitor* ‘fugitive’, *navigator* ‘sailor’, *natator* ‘swimmer’, *saltor* ‘dancer’, *saltator/saltatrix* ‘dancer’ (m./f.)

(92) *Agentive nominalisations based on prefixed manner-of-motion verbs in (83)*

*excursor* ‘scout, spy’<sup>111</sup>

As we see, while there are eight agent nouns based on unprefixed manner-of-motion verbs, there is only one agent noun, *excursor*, related to a prefixed verb, *excurro*. However, *excursor* does not mean ‘one who runs out’, but ‘scout’ or ‘spy’. From the present perspective it is difficult to explain how the structural semantics inherent to the

<sup>111</sup> Gaffiot (1934) lists an *ereptor*, which has 8 occurrences in the Antiquitas corpus; however, it is formed not on *e-* ‘out’ + *repo* ‘crawl’, but on *e-* ‘out’ + *rapio* ‘seize’. Thus, it means ‘plunderer’.

structure where  $\sqrt{\text{EX}}$  and  $\sqrt{\text{CURR}}$  are inserted can be overridden. I leave it at that, capitalising on the fact that only this alleged counterexample goes against the fact that prefixed verbs cannot yield agent nouns.

### 3.1.3.3 Licensing of adjectival participles

One of the most widely used tests to check the unaccusative status of a predicate is the one involving *Absolute Participial Constructions* (APCs). This test successfully picks out at least some of the unaccusative verbs in Romance:

(93) *French; Legendre 1989:122-123*

- a. Parti avant l'aube, Pierre est arrivé le jour même  
 departed before the=dawn Pierre is arrived the day same  
 à destination.  
 to destination  
 'Departed before dawn, Pierre arrived the same day at his destination'
- b. \*Réagi, le président a été félicité par la presse.  
 reacted the president has been congratulated by the press  
 'Having reacted, the president was congratulated by the press.' (Intended.)

The verb *partir*, in (93)a, licenses the absolute use of its past participle, while unergative *réagir*, in (93)b, does not. It has also been observed that some alleged unaccusatives, crucially the ones with an atelic aspect, reject APCs. This is illustrated by Spanish *faltar* 'be missing':<sup>112</sup>

(94) *Spanish; Mendikoetxea 1999:1611*

- \*Faltado el café en la posguerra,  
 lacked the coffee in the postwar  
 hubo que recurrir a sucedáneos.  
 there\_was that resort.INF to substitutes  
 'Coffee lacking during the postwar times, one had to resort to substitutes.'  
 (Intended)

Moreover, there is no need to use absolute constructions to check unaccusativity: the mere attributive use of the participle (that is, its use outside the formation of perfective verbal tenses) is licensed only by unaccusative verbs, as shown in the next Italian examples:

(95) *Italian; Burzio 1986:194*

- a. Un ragazzo arrivato poco fa conosce Maria.  
 a boy arrived a\_little ago knows Maria  
 'A boy who has recently arrived knows Maria.'
- b. \*Un ragazzo telefonato a Maria non può venire alla festa.  
 a boy phoned to Maria not can.3SG come.INF to=the party  
 'A boy who has telephoned Maria cannot make it to the party.' (intended)

The licensing of past participles by telic unaccusatives and the fact that also transitive verbs license them, as shown in (96) and (97), is suggestive of the fact that the availability of past participles is, in general, dependent on the existence of an internal

<sup>112</sup> Jaume Mateu (p. c.) informs me that Italian *rimanere* 'stay' allows the participial construction.

argument, and on the assumption that unaccusative subjects are in fact internal arguments—in the present terms, arguments originating at Spec-Place:

(96) *Catalan*

Devorats els pastissos, vam continuar amb els gelats.  
 devoured.PL the cakes PRF.1PL continue with the ice-cream.PL  
 ‘The cakes having been devoured, we began with the ice-cream.’

(97) *Spanish*

Trazado el mapa de la carretera, las obras comenzaron  
 drawn the map of the road the works began.PL  
 a principios de mes.  
 to beginning.PL of month  
 ‘The map of the road having been drawn up, works began at the beginning of the month.’

Past participles are remarkably frequent in Latin texts, both in APCs and elsewhere.<sup>113</sup> Verbs licensing participles outside purely verbal environments—that is, in the paradigm of the perfect tenses for the passive of for deponent verbs (see Chapter 2, Section 3.3.2)—fall into two classes: the class of non-deponent transitives (as *mitto* ‘send’ in (98)) and deponent transitives (as *imitor* ‘imitate, mimic’ in (99)a) or intransitives (*morior* ‘die’ in (99)b):

(98) *Latin; Ov. Met. 1, 113*

Saturno tenebrosa in Tartara  
 Saturn.ABL.M.SG gloomy.ACC.N.PL in Tartar(N)ACC.PL  
misso sub Iove mundus erat.  
 send.PTCP.PFV.ABL.M.SG under Jupiter.ABL world.NOM was.IPFV.3SG  
 ‘After Saturn’s having been thrown into the gloomy Tartar, the world was under Jupiter’s rule.’

(99) *Latin; Verg. G. 4, 66 and Cic. Lae. 1, 1*

- a. Vox auditur fractos  
 voice.NOM.F.S hear.PASS.3SG break.PTCP.PFV.ACC.M.PL  
 sonitus imitata tubarum.  
 sound(M)ACC.PL imitate.PTCP.PFV.NOM.F.SG trumpet.GEN.PL  
 ‘A voice is heard imitating the broken sounds of the trumpets.’
- b. Quo mortuo, me ad pontificem  
 this.ABL.M.SG die.PTCP.PFV.ABL.M.SG me.ACC at pontifex.ACC  
 Scaevolam contuli.  
 Scaevola.ACC address.PRF.1SG  
 ‘After this one died, I addressed Scaevola the pontifex.’

Provided the wide availability of constructions involving past participles in Latin, and the above attested fact that in Romance APCs and adjectival past participles are licensed only by transitive and telic unaccusative verbs, it would automatically follow that telic unaccusative verbs in Latin also licensed past participles. However, as far as I have been able to check for the verbs in (82) and (83), only the deponent *labor* ‘slip, slide, fall’ and its prefixed variants allow participles used as adjectives (in APCs or otherwise). I

<sup>113</sup> See, on APCs in Latin, Bolkestein 1980, 1989, Coleman 1989, Lavency 1986. Unfortunately, these studies do not investigate the relation between the licensing of APCs or adjectival uses of participles and the semantic and syntactic properties of the corresponding verbs.

present here examples of adjectival participles of simple *labor* and of *adlabor*, *elabor* and *illabor*, respectively:

(100) *Latin; Ov. Met. 4, 91*

Tergo          velamina          lapsa          re-liquit.  
back.ABL   veil(N)ACC.PL   slip.PTCP.PFV.ACC.N.PL   back-leave.3SG  
'And as she flees, she leaves behind the veil which had slipped off her back.'

(101) *Latin; Liv. 25, 16, 1*

Ad   exta [...]          angues          duo [...]   ad-lapsi  
at   entrail.ACC.PL   snake(M)NOM.PL   two   at-slip.PTCP.PFV.NOM.M.PL  
adedere          iocur.  
at-eat.PRF.3PL   liver.ACC  
'Two snakes, which had slipped onto the entrails, began to nibble at the liver.'

(102) *Latin; Caes. Gall. 5, 37, 7*

Pauci          ex   proelio          e-lapsi [...]            
few.NOM.M.PL   out   combat.ABL   out-slip.PTCP.PFV.NOM.M.PL  
ad   Titum   Labienum [...]   perveniunt.  
at   Titus.ACC   Labienus.ACC   through-come.3PL  
'A few which had escaped the fight came to Titus Labienus.'

(103) *Latin; Hor. Carm. 2, 17, 22*

Truncus          in-lapsus          cerebro.  
trunk(M)NOM.SG   in-slide.PTCP.PFV.NOM.M.SG   skull.DAT  
'A trunk falling upon my skull.'

I note, last, that a possible counterexample to the deponent-restriction on past participle availability in intransitive verbs is provided, funnily enough, by a non-motional base: √RUMP 'break'. This root yields CDMCs when accompanied with a directional expression, and it contributes, as happens in English predicates involving *break* + particle, a manner component paraphraseable as 'in an abrupt, harsh or violent way'. The next examples illustrate:

(104) *Latin; Cic. Verr. 2, 4, 106*

[Ignes]          qui          ex   Aetnae          vertice          e-rumpunt.  
fire(M)NOM.PL   which.NOM.M.PL   out   Aetna.GEN   summit.ABL   out-break.3PL  
'Fires which spurt out of the summit of the Aetna.'

(105) *Latin; Liv. 3, 49, 6*

In forum          ex   altera          parte          in-rumpit.  
in forum.ACC   out   the\_other.ABL   side.ABL   in-break.3SG  
'He broke into the forum from the other side.'

Contrarily to the tendency attested above, *rumpo*-predicates appear also in participial form:

(106) *Latin; Lucr. 2, 213*

Ab-rupti          nubibus          ignes          concursant.  
away-break.PTCP.PFV.NOM.M.PL   cloud.ABL.PL   fire.NOM.PL   together-run.3PL  
'Fires erupted from the clouds, run in all directions.'

(107) *Latin; Lucr. 1, 720*

Faucibus e-ruptos [...] vomat ignis.  
throat.ABL out-break.PTCP.PFV.ACC.M.PL vomit.SBJV.3SG fire(M)ACC.PL  
'So that it vomits fires, belched from its throat.' [mount Aetna's]

(108) *Latin; Sen. Nat. 5, 13, 3*

Venti e-rupti nubibus.  
wind.NOM.M.PL out-break.PTCP.PFV.NOM.M.PL cloud.ABL.PL  
'Winds erupted from the clouds.'

A look at the entry of *erumpo* in Gaffiot 1934 yields an interesting revelation. He proposes a bipartite entry, with a transitive and an intransitive subentries. The former is worded as "push out, make go out violently", while the latter contains as the first two senses "dash out, throw itself out" and "explode, erupt". The fact is that he uses the sentence in (107) to illustrate the transitive subentry, while its sense is clearly nearer to those in the intransitive subentry: in fact, no past participle appears in any example of the intransitive subentry. The lexicographer may have been induced, we suspect, by the attested avoidance of past participles of non-deponent intransitive verbs in Latin.

Setting *rumpo*-based prefixed verbs aside, the absence of past participles in prefixed verbs and their appearance with intransitive deponents remains a mystery.<sup>114</sup>

### 3.2 Unselected Object Constructions

Unselected Object Constructions (UOCs) are constructions involving internal arguments (direct objects or unaccusative subjects) not semantically selected by the verb and which are not omissible in the construction. Crucially, a predicative element in the UOC, whether a particle, an AP or a PP, a particle is the licenser of the unselected argument, as the next cases show:

(109) *Unselected direct objects; McIntyre 2004:525*

- a. Sue shouted \*(John) deaf./ Sue shouted John \*(deaf).
- b. Sue wrestled \*(John) to the floor./ Sue wrestled John \*(to the floor).
- c. Sue worked \*(her debt) off./ Sue worked her debt \*(off).

(110) *Dutch: unselected unaccusative subjects; Hoekstra 1988:133*

- a. Dat mijn jas \*(nat) regent.  
that my coat wet rains  
'That my coat rains wet.'
- b. Dat het papiertje \*(in de sloot) waait.  
that the paper in the ditch blows  
'That the paper blows into the ditch.'

<sup>114</sup> See also Gianollo 2000:141f. for the same observation on the restriction of past participles. Note that the restriction in the case of intransitive non-deponents cannot be due to a morphological gap, i.e., the non-existence of a past participial form for this class of verbs: *venio* 'come', for instance, counts with a past participle in the neuter singular, *ventum*, readily used in impersonal passive constructions (see Deckmann 1920):

(i) *Latin; Ov. Fast. 3, 651*

Ventum erat ad ripas.  
come.PTCP.PFV.NOM.N.SG be.IPFV.3SG at river\_bank.ACC.PL  
'There was coming to the river banks.'

However, a search in the Antiquitas corpus does not provide any instance of the participle of *venio* being used otherwise.

- c. Dat de plant \*(onder)sneewt.  
that the plant under snows  
'That the plant snows under.'

UOCs, in particular those involving objects, have been analysed by Mateu (2001a) as s-framed constructions, after attesting the fact that they are not allowed in v-framed languages. I illustrate with the anomalous Catalan renditions of the above predicates:

(111) *Catalan renditions of (109)*

- a. \*La Sue cridà en John sord.  
b. \*La Sue lluità en John a terra.  
c. \*La Sue treballà el seu deute fora.

(112) *Catalan renditions of (110)*

- a. \*El meu abric (es) plou humit.  
b. \*El paperet (es) bufa al forat.  
c. \*La planta (es) neva a sota.

In a nutshell, Mateu (2001b) adopts a Hoekstrian (Hoekstra 1988) analysis in terms of a Small Clause. UOCs, then involve an abstract causative V and a Small Clause complement whose subject is the unselected object of the UOC and whose predicate is the piece of the UOC licensing the unselected object: a particle, a PP or an AP. The Small Clause is headed by a prepositional head. Since in s-framed languages (like English and Dutch above) this prepositional head is realised independently from the eventive V head, V may host an independent unergative structure codifying the accompanying Co-event (a wrestling event, for instance, in (109)b). On the contrary, v-framed languages, like Catalan, do not license the constructions, since the prepositional head is conflated into V and conflation of an independent element is incompatible with this circumstance. I will assume a similar analysis:

(113) *An analysis of (109)b*

[<sub>VP</sub> Sue [<sub>v</sub> [<sub>v</sub> v  $\sqrt{\text{WRESTLE}}$ ] [<sub>PathP</sub> John [<sub>Path</sub> Path [<sub>PlaceP</sub> ~~John~~ [<sub>Place</sub> Place [<sub>DP</sub> the floor]]]]]]]]

Motivation for this analysis is mainly based on the semantic interpretation of the predicative piece which license the unselected object. In (113), for instance, the inference is licensed that as the result of some event originated by Sue, which is identified with a wrestling event (see the adjunction relation of  $\sqrt{\text{WRESTLE}}$  with v), John ends up at the floor. On the morphosyntactic side, we have assumed already that Path is realised as *to* in English when there is a DP as Compl-Place, and that Place is realised as  $\emptyset$  when there is no Conformation specification of the spatial relation which it establishes. Observe, finally, that John, interpreted as Figure in the predicative relation structured around Place, is, in turn, interpreted as a Measurer of the event in Spec-Path position. Note that, within the current framework, we cannot, strictly claim that the object is unselected (\*Sue wrestled John), since the object is, by hypothesis, never selected (roots do not have selection properties). However, we can, and, in fact, must, point out the actual difference between whatever reading may be assigned to the anomalous sequence *Sue wrestled John*, on the one hand, and the reading of *Sue wrestled John to the floor*. We will have the occasion to focus on this difference when we examine UOCs in Latin.



In this section I will be referring to two types of UOCs in Latin (which have also been described for other s-framed languages): Figure UOCs (Section 3.2.1) and Ground UOCs (Section 3.2.2). In the former type the internal argument corresponds to the Figure, that is, to the DP merged as Spec-Place. In the latter type the internal argument corresponds to (and is interpreted as) the Ground, that is, to the DP merged as Spec-Place. What unifies both types is that either Figure or Ground, this DP is internally merged as Spec-Path, where it is interpreted as a Measurer. Different constructions will be shown to be UOCs in confronting them with constructions involving the same verb but in the absence of a special context. The set of semantic and syntactic differences between both types of constructions will be established and shown to be naturally derived from the status of UOCs as change predicates involving a PathP. Additionally, UOCs are presented as an optimal case study to show that a neo-constructionist view of argument structure is preferable to a projectionist one, since the former naturally predicts that the licensing conditions in predicates—in the current case, the licensing of objects—depend on the syntactically assembled pieces they are made of, and not on a single projecting nucleus (the verb).

### 3.2.1 Figure UOCs

Figure UOCs feature an internal argument interpreted as Figure. Figure UOCs are very commonly represented in Latin in the form of predicates headed by a prefixed verb and accompanied, sometimes, by a directional DP or PP. I will be illustrating Figure UOCs through the prefix *ex-*, *ab-* and *in-*, and I will show the semantic and syntactic differences between the unprefixed and prefixed predicates. Then I will focus on a series of particular properties of these Figure UOCs: the licensing of null objects, case and situation-aspect properties, scopal relations between the prefix and the verb and the preservation of deponency as a property of the root. I shall argue that these properties are best explained from a syntactic neo-constructionist perspective to argument structure and word formation.

#### 3.2.1.1 The syntax and semantics of prefixed vs. unprefixed verbs

In this section I will illustrate Figure UOCs in Latin through predicates headed by *ex-*, *ab-* and *in-*prefixed verbs, showing the semantic and syntactic differences with respect to the unprefixed counterparts.

The prefix *ex-* (with the variant *e-*) has the core meaning of *out*. This is shown by the next UOCs, where I have underlined the elements pertaining to PathP (except the Figure):

(114) *Latin; Cato, Agr. 61, 1*

Qui	oletum	saepissime	et	altissime	miscebit,
who.NOM	olive-tree.ACC	often.SUPERL	and	deeply.SUPERL	mix.FUT.3SG
is	tenuissimas	radices		<u>ex</u> -arabit.	
he.NOM	slender.SUPERL.ACC.PL	root.ACC.PL		out-plough.FUT.3SG	

‘He who works his olives very often and very deep shall plough up the very slender roots.’

(115) *Latin; Verg. Aen. 1, 426*

Immanisque	columnas	<u>rupibus</u>	<u>ex</u> -cidunt
huge.ACC.PL=and	column.ACC.PL	rock.ABL.PL	out-cut.3PL

‘And they hew huge columns out of rocks.’

(116) *Latin; Plaut. Capt. 810*

Tum pistores scrofi-pasci qui alunt  
 then miller.NOM.PL sow-breeding.NOM.PL who.NOM.PL feed.3PL  
 furfuribus sues, [...]: eorum si quousquam scrofam in  
 bran.ABL.PL sow.ACC.PL them.GEN if anyone.GEN sow.ACC in  
 publico conspexero, ex ipsis dominis meis  
 public.ABL spot.FUT.PFV.1SG out own.ABL.PL master.ABL.PL mine.ABL.PL  
 pugnīs ex-culcabo furfures.  
 fist.ABL.PL out-tread.FUT.1SG bran.ACC

‘And those sow-breeding millers who feed their swine with bran, [...]: if I see the sow of any of them out in the street I will stamp the bran out of their very masters with my fists.’

(117) *Latin; Plaut. Capt. 280*

HEGIO: Quid diuitiae? Sunt ne opimae?  
 what.ACC richness(F)NOM.PL are PART.INTER. abundant.NOM.F.PL  
 PHILOCRAATES: Vnde ex-coquat sebum senex.  
 whence out-boil.SBJV.3SG tallow.ACC old\_man.NOM

‘—HEGIO: What about his riches? Are they abundant? —PHILOCRAATES: So much that the old rascal could melt out the tallow.’

(118) *Latin; Varro, Rust. 1, 52, 2*

Apud alios ex-teritur grege iumentorum  
 by other.ACC.PL out-grind.PASS.3SG herd(M)ABL.SG cattle.GEN.PL  
 in-acto [...], quod ungulis e spica  
 in-drive.PTCP.PFV.M.ABL.SG so\_that hoof.ABL.PL out ear.ABL  
ex-teruntur grana.  
 out-grind.PASS.3PL grain.NOM.PL

‘Others cause it to be trod out with a herd of cattle driven thereupon, [...] so that the grains are trod out of the ear under their hoofs.’

(119) *Latin; Plin. Nat. 10, 197*

[Serpentes] [ova] solida hauriunt, [...] atque  
 snake(M)NOM.PL egg.ACC.PL whole.ACC.PL swallow.3PL and  
 putamina ex-tussiunt.  
 shell.ACC.PL out-cough.3PL

‘Snakes swallow the eggs whole and expel the shells through cough.’

The Core Schema expressed in the above sentences is sometimes made evident by overt directional PPs, as is the case in (116) with *ex ipsis dominis* or (118) with *e spica*; in both cases the prefix coincides with the preposition. In some other cases, however, the Core Schema is inferred contextually or through world knowledge. Thus, in (114) the Ground must be the earth or tilling ground and in (119) it is the snakes’ own body. All the cases involve the projection of a PathP, the adjunction of a Manner root to *v*, introducing the Co-event, and root  $\sqrt{\text{EX}}$  ‘out’, merged either as a complement or as an adjunct to Place. When the root is merged as Compl-Place, it is interpreted as a Ground (a Terminal Ground, in fact, since PlaceP is embedded under PathP, encoding a transition), and predicates such as the (114) emerge, where the specific reference of the Ground is calculated contextually:

(120) *Latin; an analysis of (114)*

[<sub>VP</sub> is [<sub>V</sub>’ [<sub>V</sub>  $\sqrt{\text{AR}}$ ] [<sub>PathP</sub> [<sub>DP</sub> tenuissimas radices] [<sub>Path</sub>’ Path [<sub>PlaceP</sub> [<sub>DP</sub> tenuissimas radices] [<sub>Place</sub>’ Place  $\sqrt{\text{EX}}$ ]]]]]]

If the root is merged as an adjunct to Place it is interpreted as a specification of the predicative relation between the Figure and the Ground, which is, in turn, realised as a DP, as in (115):

(121) *Latin; a partial analysis of (115)*

[<sub>VP</sub> *pro* [<sub>V'</sub> [<sub>V</sub> *v*  $\sqrt{\text{CID}}$ ] [<sub>PathP</sub> [<sub>DP</sub> *immanis columnas*] [<sub>Path'</sub> *Path* [<sub>PlaceP</sub> [<sub>DP</sub> ~~*immanis columnas*~~] [<sub>Place'</sub> [<sub>Place</sub> *Place*  $\sqrt{\text{EX}}$ ] [<sub>DP</sub> *rupibus*]]]]]]]]

The analysis proposed assumes that whatever semantic relation is established between the object and the verb, it is the result of, on the one hand, the interpretation of the structure where they appear (the structural semantics) and the roots merged within that structure (the encyclopaedic semantics): there is no (direct) thematic relation between the object and the verb. Thus, the object is always interpreted as a subject of a predication established by an abstract head, Place, either with a DP or with a root. In turn, it is also interpreted in the above structures as a Measurer of the event. Thus, in (115) the event is over when the huge columns are literally out of the rocks: there is a direct relation between the quantity expressed by *columnas* and the quantification of the event itself. In turn, the interpretation of the verb relies on the existence of an event introduced by *v* and a Manner Co-event expressed by the root adjoined to it. Note, then, that the conceptual dimension of the verb and of the object are completely severed from each other. In (115), for instance, there is no direct conceptual relation between the hewing activity and the columns, nor are they affected thereby. Although this might seem counterintuitive at first sight, it is supported by cases of UOCs where the simple verb, outside the UOC, does not usually take any object. In the above examples there is actually one such case: the one in (119), headed by *extussio* ‘expectorate (something) through cough’. Simple *tussio* ‘cough’ is not registered to allow for any objects (Gaffiot 1934). The meaning of *extussio* is furthermore not licensed with an independent *ex*-PP. The rest of the examples constitute cases of “weak” UOCs, in that their simplex counterparts can be readily transitive but do not license the same type of objects. These UOCs, however, are also able to cancel the inference which makes objects in prefixed-verb predicates seem to be affected by the action conveyed by the verb. Thus, in (118) the seeds, necessarily, are not damaged by a rubbing or grinding action (conveyed by *tero*), as are, naturally, the husks out of which they come. The same happens with *exaro* in (114): the roots are not ploughed ( $\sqrt{\text{AR}}$ ), but extracted ( $\sqrt{\text{EX}}$ ) upon ploughing ( $\sqrt{\text{AR}}$ ).

Under the present assumptions, the verbs are expected to show, on the surface, a great elasticity, since roots may, in principle, be merged in any context (where they are structurally admitted, that is: as complements or adjuncts of functional heads). This elasticity is of course restricted by non-grammatical reasons, that is, by clashes between the encyclopaedic content of a root and the interpretation of the position it occupies in the structure. In our languages these clashes can be easily detected and evidence can be obtained that, in appropriate contexts, the abnormality of some expression may dissolve, justifying its grammaticality —see, for instance, the discussion on the interpretation of verbs such as *push* in Chapter 2, Section 2.1.3. Since I am here dealing with a language with no native speakers, it is considerably difficult, if not impossible, to demonstrate that some sequence is not ungrammatical, but simply conceptually aberrant. However, I can still show at least a limited extension of the mentioned verb elasticity. For instance, the verbs appearing in (114) through (119), which, from a projectionist perspective, bear all a causative, telic meaning, may appear in other contexts, where they receive,

accordingly, other interpretations. For instance, they appear in intransitive, hypothetically unergative, constructions:

(122) *Latin; unergative uses of some of the simple verbs in (114) through (119)*

a. *Cic. Cato 56, 29*

<u>Aranti</u>	L. Quinctio	Cincinnato
plough.PTCP.PRS.DAT.M.SG	L. Quinctius.DAT	Cincinnatus.DAT
nuntiatum	est eum	dictatorem esse
announce.PTCP.PFV.NOM.N.SG	is he.ACC	dictator.ACC.M.SG be.INF
factum.		
PTCP.PFV.NOM.M.SG		

‘L. Quinctius Cincinnatus was ploughing when he was announced that he had been designated dictator.’

b. *Cato, Agr. 61, 2*

Ubi	radices	bene	operueris,	<u>calcare</u>	bene,
when	root.ACC.PL	well	bury.FUT.PFV.2SG	tread.INF	well
ne	aqua	noceat.			
lest	water.NOM	damage.SBJV.3SG			

‘When you have buried the roots well, tread well, lest water should damage them.’

c. *Plaut. Aul. 324*

In	nonum	diem	solet	ire	<u>coctum</u>
In	ninth.ACC	day.ACC	use.3SG	go.INF	cook.SUP.ACC

‘He usually cooks every nine days.’

d. *Hor. Sat. 2, 5, 106*

Si	quis	forte	coheredum	senior	male
if	someone.NOM	haply	co-heir.GEN.PL	old.COMPAR.NOM	badly
<u>tussiet</u>	[...].				
cough.SBJV.3SG					

‘If haply any of your co-heirs, being advanced in years, should have a dangerous cough [...].’

In all the above structures the verb conveys an activity; as such, it is the surface manifestation of a root which is the complement of a v head. The root is, thus, interpreted as an Incremental Theme. The analysis of (122)d illustrates:

(123) *A partial analysis of (122)d*

[<sub>VP</sub> [<sub>DP</sub> senior] [<sub>v</sub> v √TUSS]]

The structure in (123) cannot license any object, as does the one in (119): there is no place in the structure for any object. The only argument is the external argument, *senior*, the Originator, merged as Spec-v.

Of course these verbs may also appear in transitive constructions without a prefix (or any other directional expression):

(124) *Latin; transitive uses of some of the simple verbs in (114) through (119)*

a. *Varr. Ling. 7, 4, 74*

Omnes qui terram arabant.  
all.NOM.PL who.NOM.PL earth.ACC plough.IPFV.3PL  
'All those who ploughed the earth.'

b. *Cato, Agr. 5, 8*

Frondem populneam, ulmeam, querneam caedito  
foliage.ACC of\_poplar.ACC of\_elm.ACC oaken.ACC cut.IMP.FUT.2SG  
per tempus.  
through time.ACC  
'Cut the foliage of the poplar, elm, oak, each at a time.'

c. *Colum. 12, 26*

Cum uvam legeris et calcaveris [...]  
when grape.ACC collect.FUT.PFV.2SG and tread.FUT.PFV.2SG  
mustum in cor<ti>nam de-fundas.  
must.ACC in caldron.ACC downward-throw.SBJV.2SG  
'You should pour the must into the caldron after you have selected and trod the grapes.'

d. *Hor. Ars, 185*

Ne [...] humana palam coquat exta  
not human.ACC.N.PL openly cook.SBJV.3SG entrail(N)ACC.PL  
nefarius Atreus.  
nefarious.NOM Atreus.NOM  
'Let nefarious Atreus not cook human entrails openly.'

e. *Varro, Rust. 1, 13, 5*

Id secundum aream faciendum,  
it.ACC depending threshing\_floor.ACC do.PTCP.FUT.PASS.NOM.N.SG  
ubi triturus sis frumentum.  
where thresh.PTCP.FUT.NOM.M.SG be.SBJV.2SG wheat.ACC  
'This is to be done depending on the threshing floor where you are to thresh the wheat.'

In all the cases above the Ground is, in fact, the root of each verb. The fact that a PathP is projected or not in each case depends on the fact whether a transition or change is understood or not; that could be ascertained, in turn, if we could apply some telicity diagnostics to these sentences. Since I cannot do that, I content myself with hypothesising that, presumably, some of the above sentences are amenable to an analysis where no PathP is projected and some to an analysis where PathP is projected and a transition is interpreted. For instance, (124)b seems a good candidate for an analysis in terms of a PathP encoding a change and a final state: the state of the foliage being cut:

(125) *A partial (and plausible) analysis of (124)b*

[<sub>VP</sub> (tu) [<sub>V</sub> v [<sub>PathP</sub> [<sub>DP</sub> frondem] [<sub>Path</sub> Path [<sub>PlaceP</sub> [~~DP~~ frondem] [<sub>Place</sub> Place  
√CAED]]]]]]

On the other hand, (124)a seems a good candidate, at least in one of its possible interpretations, for an analysis where there is no PathP, and hence, the object cannot induce a telic reading of the event:

(126) *A partial (and possible) analysis of (124)a*  
 [vP qui [v' v [PlaceP [DP terram] [Place' Place √AR]]]]

(126) yields an interpretation where the earth, *terram*, tends to a state which is, however, entailed not to be attained. It would correspond to “To plough the earth for hours”.

Certain *ex*-verbs exist which head predicates where the Ground, rather than a physical entity, is someone's spiritual dimension or their possessions. They thus imply that something (the Figure object) is obtained from someone by some (usually treacherous) activity, specified by the root merged as an adjunct to the eventive *v* head. For instance, in the following examples things are obtained through flattery, enchantment and caresses, respectively:

(127) *Latin; Liv. 27, 31, 7*

Neque enim omnia emebat aut e-blandiebatur  
 nor in\_fact all.ACC.N.PL buy.IPFV.3SG or out-flatter.IPFV.3SG  
 ‘Nor did he acquire everything by money or flattery.’

(128) *Latin; Sen. Nat. 4b, 7, 2*

Ne quis alienos fructus  
 lest anybody.NOM of\_another.ACC.PL fruit.ACC.PL  
 ex-cantassit.  
 out-enchanted.PLUPRF.SBJV.3SG  
 ‘Lest anyone should obtain someone else's fruits through enchantment.’

(129) *Latin; Plaut. Vid. Frag. 18, 115*

Nunc seruos argentum a patre ex-palpabitur.  
 now slave.ACC.PL money.ACC off father.ABL out-caress.FUT.3SG  
 ‘Now the slave will obtain the money out of the father through caresses.’

The semantic relation between the verb and the accusative object is, again, completely different in (127) through (129), on the one hand, and in the unprefix cases of (130), on the other hand. For instance, it is quite evident that the accusative DP *argentum* ‘the money’ in (129) is not the object of the caresses, but the accusative *quem* (referring to *Delator*) is the object of the caresses in (130)b.

(130) *Latin; transitive uses of some of the simple verbs in (127) through (129)*

a. *Ov. Met. 14, 369*

Cantato densetur carmine caelum.  
 sing.PTCP.PFV.ABL.N.SG darken.PASS.3SG spell(N)ABL.SG sky.NOM  
 ‘As her spell is sung out, the sky darkens.’

b. *Iuv. 1, 24*

Delator [...] quem munere palpat Carus.  
 betrayer.NOM whom.ACC present.ABL caress.3SG Carus.NOM  
 ‘A betrayer, whom Carus flatters with his presents.’

These verbs may also appear in an unergative construction, as shown below:

(131) *Latin; unergative uses of some of the simple verbs in (127) through (129)*

a. *Plaut. Men. 193*

Meretrix tantisper blanditur,  
courtesan.NOM so\_long flatter.3SG  
dum illud quod rapiat uidet.  
as\_long\_as that.ACC which.ACC seize.SBJV.3SG see.3SG  
'A courtesan flatters about as long as she sees what she may seize.'

b. *Verg. Ecl. 8, 69*

Frigidus in pratis cantando  
cold.M.NOM.SG in meadow.ABL.PL sing.GERUND.ABL  
rumpitur anguis.  
break.PASS.3SG snake(M)NOM  
'The cold snake in the fields is rendered apart by the enchantment.'

c. *Apul. Met. 8, 7*

Verbis palpantibus stimulum  
word.ABL.N.PL caress.PTCP.PRS.ABL.N.PL torment.ACC  
doloris obtundere.  
sorrow.GEN calm\_down.INF  
'He tried to calm down the torment of her sorrow with caressing words.'

I leave a consideration of the *blandior/eblandior* difference for Section 3.2.1.5.

In the examples seen so far the Ground is a concrete entity. But it can also be understood more abstractly, as a general "here and now", facilitating a "disappearance" sense for the prefix:

(132) *Latin; Cic. Phil. 2, 30*

E-dormi crapulam, inquam.  
out-sleep.IMP.2SG intoxication.ACC say.1SG  
'Sleep off that intoxication, I said.'

(133) *Latin; Cato, Agr. 107, 2*

Usque coquito, dum dimidium ex-coquas.  
until cook.IMP.FUT.2SG until half.ACC out-cook.SBJV.2SG  
'Boil it until you boil half of it away.'

In (134) there is an example of simple *dormio*. Since it cannot take objects in the accusative, *edormio*-predicates constitute one of those cases of UOCs where the prefix is ostensibly facilitating the projection of an accusative object:<sup>115</sup>

<sup>115</sup> *Dormio* can of course appear with time-referring DPs in the accusative. In addition, according to its entry in Lewis & Short 1879, *dormio* may appear in passive sentences with a time-referring DP as subject:

(i) *Catull. 5, 6*

Nox est perpetua una dormienda.  
night(F)NOM.SG is perpetual.NOM.F.SG one.NOM.F.SG sleep.PTCP.FUT.PASS.NOM.F.SG  
'Only one perpetual night has to be slept.'

Whatever the right analysis for these passivized accusative objects is, they can clearly not be equalled with the type of accusative object licensed by *edormio*.

(134) *Latin; Ov. Rem. 727*

Thalamo dormimus in illo.  
 bridal-bed(M)ABL.SG sleep.1PL in that.ABL.M.SG  
 ‘We slept in that bridal-bed.’

The verb *excoquo*, on the other hand, already appeared in (117) (repeated below as (135)) as an example of UOC which, although hyperbolically used, involves a concrete entity as Ground (someone’s fortune):

(135) *Latin; Plaut. Capt. 280*

HEGIO: Quid diuitiae? Sunt ne opimae?  
 what.ACC richness(F)NOM.PL are PART.INTERR. abundant.F.NOM.PL  
 PHILOCRAATES: Vnde ex-coquat sebum senex.  
 whence out-boil.SBJV.3SG tallow.ACC old\_man.NOM  
 ‘—HEGIO: What about his riches? Are they abundant? —PHILOCRAATES: So much that the old rascal could melt out the tallow.’

The semantic difference between (133) and (135) consists, then, in the fact that in the former the object undergoes disappearance, while in the latter it happens to appear out of somewhere, this location being identified by the pronoun *unde*. In both cases the root  $\sqrt{\text{COQU}}$  seems to be merged as an adjunct modifier of the change-of-state predicate headed by the Path head: the boiling/melting event is in either case a Manner Co-event. The difference lies, I argue, in the nature of the element merged as Ground (Compl-Place): non-referential in (133) and referential in (135). Specifically, a plausible analysis involves merging the root of the prefix as Compl-Place in (133) and the relative pronoun *unde* in (135), as shown below:

(136) *An analysis of (133) and (135)*

- a. [<sub>VP</sub> (tu) [<sub>V</sub> [<sub>V</sub>  $\sqrt{\text{COQU}}$ ] [<sub>PathP</sub> [<sub>DP</sub> *dimidium*] [<sub>Path</sub> Path [<sub>PlaceP</sub> [~~DP~~ *dimidium*]] [<sub>Place</sub> Place  $\sqrt{\text{EX}}$ ]]]]]]
- b. [<sub>VP</sub> (tu) [<sub>V</sub> [<sub>V</sub>  $\sqrt{\text{COQU}}$ ] [<sub>PathP</sub> [<sub>DP</sub> *sebum*] [<sub>Path</sub> Path [<sub>PlaceP</sub> [~~DP~~ *sebum*]] [<sub>Place</sub> Place  $\sqrt{\text{EX}}$ ] *unde*]]]]]]

It is difficult to think of a lexicalist solution to the ambiguity displayed by *excoquo*, since it seems that a explicitly syntactic condition triggers it.

A specialisation of the disappearance sense is found in verbs where the Figure disappears through expenditure. The way that expenditure is carried out is, as expected, expressed by the root:

(137) *Latin; Hor. Sat. 2, 3, 122*

Filius [...] haec [...] ut e-bibat [...] custodis?  
 son.NOM this.ACC.PL that out-drink.SBJV.3SG guard.2SG  
 ‘You guard [these possessions] to the end that thy son guzzles them all up?’



(138) *Latin; Plaut. Trin. 402*

LESBONICUS: Quid factumst eo [minas quadraginta]?  
 what.NOM made=is it.ABL mine.ACC.PL forty

STASIMUS: Com-essum, ex-potum,  
 with-eat.PTCP.PFV.NOM.N.SG out-drink.PTCP.PFV.NOM.N.SG  
ex-unctum, e-lotum  
 out-anoint.PTCP.PFV.NOM.N.SG out-wash.PTCP.PFV.NOM.N.SG  
 in balineis.  
 in bath.ABL.PL

‘—LESBONICUS: What has been done with it (forty mines)? —STASIMUS: It has been eaten, drunk up, spent away in unguents, washed away in baths.’

The kind of objects appearing with the simple counterparts of these verbs is quite different. I capitalise here on the differences between *bibo* and *ebibo*, in an attempt to provide new evidence in support of a syntactic analysis of these phenomena.<sup>116</sup> The following is an example of simple *bibo* where there is no specific entailment that the water is exhausted through drinking. On the contrary, *bibo* expresses an activity:

(139) *Latin; Cat. Agr. 73, 64*

Per aestatem boues aquam bonam  
 through summer.ACC cow.NOM.PL water.ACC good.ACC  
 et liquidam bibant semper curato.  
 and clear.ACC drink.SBJV.3PL always care.IMP.FUT.2SG

‘One must always see to it that cows drink good and clear water all through the summer.’

The contrast is particularly dramatic in the next example, I have included the whole paragraph, since it involves both *bibo* and *ebibo*:

(140) *Latin; Petr. Sat. 20, 5*

‘Quid? ego’ inquit ‘non sum dignus qui bibam?’  
 what I say.3SG not am worthy.NOM who.NOM drink.SBJV.1SG

ancilla risu meo prodita complosit  
 serf.NOM.F.SG laugh.ABL mine.ABL betray.PTCP.PFV.NOM.F.SG clap.PRF.3SG

manus et ‘apposui quidem adulescens, solus  
 hand.ACC.PL and serve\_up.PRF.1SG certainly youth.VOC alone.NOM.M.SG

tantum medicamentum e-bibisti?  
 so\_much.ACC medicine.ACC out-drink.PRF.2SG

‘ita ne est?’ inquit Quartilla ‘quicquid satyrii  
 thus PART.INTER is say.3SG Quartilla.NOM whatever.ACC satyrion.GEN

fruit, Encolpius e-bibit?  
 be.PRF.3SG Encolpius.NOM out-drink.PRF.3SG

<sup>116</sup> On *ebibo* see also extensive discussions in Vendryès 1940 and Brachet 2000:359.

“Well, then, why should I not deserve to drink?” The serf, betrayed by my laugh, clapped her hands and (said) “I have served you up already, youth... By the way, have you drunk up such an amount of medicine all by yourself?”. “Really?”, said Quartilla, “has Encolpius drunk up all the satyrion<sup>117</sup>?”

Simple *bibam* is interpreted as an unbounded activity. Here the root is merged as a Compl-v, and is interpreted as an Incremental Theme:

- (141) *An analysis of simple bibo*  
 $[_{VP} \text{ qui } [_{v'} v \sqrt{BIB}]]$

On the contrary, the two instances of *ebibo* express the exhaustion of the liquid, as reflected on the translations. I propose that they correspond to a different structure:

- (142) *An analysis of tantum medicamentum ebibisti (in (140))*  
 $[_{VP} (tu) [_{v'} [_{v} v \sqrt{BIB}] [_{PathP} [_{DP} \text{ tantum medicamentum}] [_{Path'} \text{ Path } [_{PlaceP} [\text{DP-} \text{tantum medicamentum}]] [_{Place'} \text{ Place } \sqrt{EX}]]]]]]]$

The prefix is originated as a root merged as Compl-Place; here it is understood as a Terminal Ground, expressing the final state of the Figure *tantum medicamentum*: the state of disappearance (akin to the one encoded by *up* in English *drink up*). The DP in Spec-Place rises to Spec-Path. There it is interpreted as Measurer: when the amount described by *tantum medicamentum* reaches the state described by the root  $\sqrt{EX}$  the event, specified as a drinking event by the adjunct root  $\sqrt{BIB}$ , is over. I come back to the *bibolebibito* difference in relation to the licensing of null objects in Section 3.2.1.2.

I turn now to prefix *ab-* (with variants *a-* and *abs-*) ‘off, away’, which presents a central meaning of “separation from a surface”. This prefix is widely used in prefixation to surface-contact verbs indicating the way in which the separation takes place:

- (143) *Latin; Tac. Hist. 3, 32, 3*

Is	balineas	<u>ab</u> -luendo
he.NOM	bath.ACC.PL	off-wash.PTCP.FUT.PASS.DAT.M.SG
cruori	propere	petit. <sup>118</sup>
blood(M)DAT.SG	hastily	head.3SG

‘He hastened to the baths to wash off the blood.’

- (144) *Latin; Colum. Arb. 10*

Sarmenta [...]	arida [...]	dolabra	<u>ab</u> -radito.
shoot.ACC.PL	dry.ACC.PL	hatchet.ABL	off-razor.IMP.FUT.2SG

‘The dry vine shoots are to be razored off with a hatchet.’

- (145) *Latin; Liv. 1, 41, 5*

Inspectum	vulnus
examine.PTCP.PFV.NOM.N.SG	wound(N)NOM.SG
<u>abs</u> -terso	cruore.
off-wipe.PTCP.PFV.ABL.M.SG	blood(M)ABL.SG

‘That the wound had been examined after wiping the blood off.’

<sup>117</sup> A drinking aphrodisiac.

<sup>118</sup> *Abluendo cruori* is a so-called *gerundive construction*, with a passive verbal adjective *abluendo* concurring with dative *cruori*, which is the logical object of the construction.

(146) *Latin; Hor. Sat. 2, 4, 37*

<u>Cara</u>	piscis	a-verrere	<u>mensa</u> .
expensive.ABL.F.SG	fish.ACC.PL	off-sweep.INF	stand(F)ABL.SG

‘To sweep away all the fish from an expensive stand.’

The Ground in the above examples, corresponds to a surface which is discursively retrieved in (143), (144) and (145) (coreferent with *vulnus*); in (146) the prefix coexists with an overtly expressed ground in the ablative (*cara [...] mensa*).

As expected, the roots we find in the above prefixed verbs may appear in other syntactic environments. In the next examples, *tergo* and *verro* appear under an unergative form, without any object and with an activity interpretation:

(147) *Latin; Cic. Parad. 5, 37*

Qui	<u>tergent</u> ,	qui	ungunt,	qui	<u>verrunt</u> .
who.NOM.PL	wipe.3PL	who.NOM.PL	anoint.3PL	who.NOM.PL	sweep.3PL

‘The ones who wipe, the ones who anoint, the ones who sweep.’

The roots can appear in transitive predicates headed by simple verbs:

(148) *Latin; transitive uses of some of the simple verbs in (143) through (146)*

a. *Cic. Leg. 2, 59*

Mulieres	genas	ne	<u>radunto</u> .
woman.NOM.PL	cheek.ACC.PL	not	razor.IMP.FUT.3PL

‘Do not let the women scratch their cheeks.’

b. *Verg. Aen. 7, 626*

Clipeos [...]	<u>tergent</u>	arvina	pingui.
shield.ACC.PL	wipe.3PL	grease.ABL	thick.ABL

‘They polish shields with thick grease.’

c. *Plaut. Merc. 397*

Nil	opust	nobis	ancilla,
nothing.NOM	is_needed	us.DAT	slave_girl.NOM
nisi	quae [...]	aedis	<u>uerrat</u> .
except	who.NOM.F.SG	house.ACC.PL	sweep.SBJV.3SG

‘We need nothing but a slave girl who can sweep the house.’

While the objects in predicates headed by prefixed verbs are understood as entities which, through different process, become separated from a surface (explicit or not), the ones in (148)a through (148)c refer, on the contrary, to surfaces which the action portrayed by the verb is exerted on. Observe, for instance, that *genas* ‘cheeks’, in (148)a, are not cut off from anywhere, as is the case with *sarmenta* in (144). Instead, *genas* in (148)a are understood as surfaces where a scratching action takes place.

As is the case with *ex-*, the sense of *ab-* as “separation from a surface” meaning is easily extended to a disappearance meaning, including (in 153) the “spend by X-ing” sense we saw in (137) and (138). In this case, the Ground is understood as a general “here and now”:

(149) *Latin; Apul. Met. 10, 14*

Iucundiora [...] ab-ligurribam dulcia.  
succulent.COMPAR.ACC.N.PL away-lick.IPFV.1SG sweet.ACC.PL  
'I used to lick away the most succulent sweets.'

(150) *Latin; Cat. Agr. 76, 4*

Omne caseum cum melle ab-usus eris.  
whole.ACC cheese.ACC with honey.ABL away-use.FUT.2SG  
'You will have use up all the cheese with honey'

(151) *Latin; Ter. Eun. 232*

Patria qui ab-ligurrierat bona.  
paternal.ACC.N.PL who.NOM away-lick.PLUPRF.3SG good(N)ACC.PL  
'Who had spent the paternal goods in sweets.'

I return to example (150) and a discussion of the *utor/abutor* contrast in Section 3.2.1.3.

Finally, the prefix *in-* is present in predicates where there is motion into an enclosure, as the following examples make clear:

(152) *Latin; Cat. Agr. 37, 3*

[Sarmenta] con-cidito minute et ibidem  
sarment.ACC.PL together-cut.IMP.FUT.2SG minutely and right\_there  
in-arato aut in-fodito.  
in-plough.IMP.FUT.2SG or in-dig.IMP.FUT.2SG  
'Chop the sarments up minutely and plough them into the same place, or bury them in.'

(153) *Cic. Phil. 1, 16*

[Acta] quae ille in aes in-cidit.  
act.ACC.PL which.ACC.PL he in brass.ACC in-cut.PRF3SG  
'The acts which he engraved on brass.'

(154) *Latin; Cato, Agr. 84*

Ubi coctum erit, [...] papauer in-friato.  
when cook.PTCP.PFV.NOM.N.SG be.FUT.3SG poppy.ACC in-crumble.IMP.FUT.2SG  
'When it is cooked, crumble some poppy into it.'

(155) *Latin; Apul. Met. 7, 12*

Quasi soporiferum quoddam uenenum  
as\_though soporific.ACC certain.ACC poison.ACC  
cantharis in-miseret illis.  
jar.DAT.PL in-mix.IPFV.SBJV.3SG those.DAT  
'As though he were mixing some sort of soporific poison into those jars.'

(156) *Latin; Cato, Agr. 157, 7*

Eodem silpium in-radito.<sup>119</sup>  
there silphium.ACC in-grate.IMP.FUT.2SG  
'Grate silphium into it.'

<sup>119</sup> *Silphium*, -ii: a plant. Cato is describing a recipe for the cabbage, into which silphium must be grated.

(157) *Latin; Ov. Met. 6, 577*

Purpureasque            notas            filis  
purple.ACC.PL=and    motif.ACC.PL    yarn(N)DAT.PL  
in-texuit            albis.  
in-weave.PRF.3SG    white.DAT.N.PL  
‘And she weaves purple motifs into white yarns.’

The objects in the above examples are quite evidently semantically unselected by the base verbs. For instance in (152), a vine cannot be ploughed, but introduced somewhere through a ploughing event. Likewise, in (153) *acta* ‘acts’ cannot be *caesa* ‘cut’, but can be *incisa* ‘engraved’. In (156) the plant silphium is not the surface where a scraping event takes place, rather it is a figure which changes location through scraping. The same is applicable to (157), where *notae* ‘motifs, designs’ cannot be woven, but they can be woven into the fabric, that is, introduced into the fabric through weaving. The unprefixed counterparts of these verbs show completely different semantic relations with their objects (see (158); the first two examples are passives) and some of them are found in unergative environments (see (159)):

(158) *Latin; transitive uses of the simple counterparts of some of the verbs in (152) through (157)*

a. *Cato, Agr. 2, 4*

[Posse] hortum    fodiri.  
can.INF    yard.NOM    dig.INF.PASS  
‘The yard may be dug.’

b. *Varr. Rust. 1, 9, 7*

Terra [...] facile    frietur.  
earth.NOM    easily    grind.SBJV.PASS.3SG  
‘Earth that crumbles easily.’

c. *Ter. Haut. 285*

Texentem            telam            studiose            ipsam    offendimus.  
weave.PTCP.PRS.ACC.F.SG    cloth.ACC    painstakingly    her.ACC    find.PRF.1PL  
‘We found her painstakingly weaving a cloth.’

(159) *Latin; unergative use of the unprefixed counterparts of some of the simple verbs in (152) through (157), Ter. Haut. 285*

Te    in    fundo    conspicer    fodere    aut    arare.  
dig.INF    in    farm.ABL    spot.INF    dig.INF    or    plough.INF  
‘I see you digging or ploughing in your farm.’

I make a final observation on *immisceo*, in (155). This case is interesting because one of the usual arguments of simplex *misceo* is missing, namely, the one referring to the substance or set of things with which the object is mixed, which may appear in the dative, ablative or as a PP (see, respectively, (160)a, (160)b and (160)c); alternatively, *misceo* may appear with two coordinated DPs referring to the substance being mixed together (see (160)d):

(160) *Latin; simple misceo*

a. *Ov. Met. 4, 137*

Fletumque            cruori            miscuit.  
tear.ACC=and    blood.DAT    mix.PRF.3SG  
‘She mixed her tears with his blood.’

- b. *Hor. Sat. 2, 4, 55*  
 Surrentina [...] miscet faece Falerna vina.  
 Surrentinian.ACC.N.PL mix.3SG dregs.ABL Falernian.ABL wine(N)ACC.PL  
 ‘He mixes Surrentinian wines with Falernian dregs.’
- c. *Cato, Agr. 79*  
 Caseum cum alica [...] misceto.  
 cheese.ACC with spelt.ABL mix.IMP.FUT.2SG  
 ‘Mix the cheese with spelt.’
- d. *Plin. Nat. 31, 64, 5*  
 Vinum et aquam miscent.  
 wine.ACC and water.ACC mix.PL  
 ‘They mix wine and water together.’

The syntactic environment in which *immisceo* is found is different, and highly predictable: it is the syntactic environment of any UOC. It features, on the one hand, a DP, *soporiferum venenum* ‘soporific poison’, being interpreted as Figure (of a locative predicate expressed by *in cantharis illis* ‘into those jars’) and as a Measurer of the event, since the quantity of *soporiferum venenum* determines the temporal span of the mixing event. On the other hand, a dative DP expressing the final point of a spatial transition: *illis cantharis*. The main event, then, is a transition whereby the substance *venenum soporiferum* ends up into the jars (*illis cantharis*) through a mixing event (encoded in the root  $\sqrt{\text{MISC}}$ ). This semantics emerges from a structure such as the following one:

(161) *Analysis of (155)*

[<sub>VP</sub> pro [<sub>V</sub> [<sub>V</sub> v  $\sqrt{\text{MISC}}$ ] [<sub>PathP</sub> [<sub>DP</sub> *soporiferum venenum*] [<sub>Path</sub> Path [<sub>PlaceP</sub> [<sub>DP</sub> *soporiferum venenum*] [<sub>Place</sub> [<sub>Place</sub> Place  $\sqrt{\text{IN}}$ ] [<sub>DP</sub> *illis cantharis*]]]]]]]

Importantly, the substance, with which the *venenum soporiferum* is mixed and which is presumably contained in the jars is not expressed; in fact, it cannot be expressed in (155), at least as a part of the argument structure configuration in (161). This discussion shows that whatever event participants roots require as part of their idiosyncratic content (in this case, the “second” substance in a mixing event), can and must be overridden if the structure demands it. The picture where roots do not decide the syntax in which they appear but, rather, are imposed a particular interpretation as dictated by syntax itself, gains support, once again, from a close investigation of the behaviour of UOCs in Latin.<sup>120</sup>

### 3.2.1.2 Conditions on the licensing of null objects

In this section I point out a crucial syntactic difference between *bibo* and *ebibo* which, within the present account, receives a natural explanation. Specifically, *bibo* may appear without an object, focusing merely on a process (often of drinking wine), as has been shown above in (139) and further shown in (162) (in the usage referred to in traditional grammars as *absolute* —cf. Ernout & Thomas 1953: 211f.):

<sup>120</sup> See Zeller 2001b and McIntyre 2004 for data and accounts of how Germanic particles —to which I equal Latin prefixes in this study— can neutralise the usual argument structure displayed by a verb and oblige its internal argument to be demoted as an adjunct. I will return to this “demotion of arguments” in Sections 3.2.2.2, 3.3 and 3.4.

(162) *Latin; Object-less bibo*

*Andr. Commoediarum fragmenta in aliis scriptis servata, 4*

Edi                      bibi                      lusi.  
eat.PRF.1SG    drink.PRF.1SG    play.PRF.1SG  
'I ate, I drank, I played.'

On the contrary, *ebibo*'s rare object-less instances found in the corpus and shown in (163) appear after an entity is introduced in the discourse which provide the reference of the object. I will assume that an objective null category (represented by  $e_i$  in the examples) corresponds to the object of *ebibo* in these instances.<sup>121</sup>

(163) *Latin; ebibo with null objects*

a. *Plaut. Curc. 358*

Propino                      [magnum poculum]<sub>i</sub>:  
bring\_forth.1SG    big.ACC    goblet.ACC  
ille  $e_i$     e-bibit,                      caput                      de-ponit,                      con-dormiscit.  
he.NOM    out-drink.3SG    head.ACC    downward-put.3SG    together-sleep.3SG  
'I bring forth a big cup to him: he gulps *it* empty, lays his head down and falls asleep.'

b. *Cat. Agr. 71, 63*

Postridie                      caput<sub>i</sub>                      ulpici                      con-terito                      cum  
the\_next\_day    head.ACC    onion.GEN    together-grind.IMP.FUT.2SG    with  
hemina                      uini                      facitoque                       $e_i$  e-bibat.  
hemine.ABL    wine.GEN    make.IMP.FUT.2SG=and    out-drink.SBJV.3SG  
'The next day mash the head of an onion, mix it with a hemine of wine and make it drink it up.'<sup>122</sup>

c. *Gell. 10, 18, 3*

Artemisia [...]    ossa                      cineremque<sub>i</sub>                      eius  
Artemisia.NOM    bone.ACC.PL    ashes.ACC=and    he.GEN  
mixta                      odoribus                      con-tusaque  
mix.PTCP.PFV.ACC.N.PL    spice.ABL.PL    together-grind.PTCP.PFV.ACC.N.PL=and  
in faciem                      pulveris                      aquae                      in-didit  
in form.ACC    powder.GEN    water.DAT    in-give.PRF.3SG  
 $e_i$  e-bibitque.  
out-drink.PRF.3SG=and  
'Artemisia [...] mingled his bones and ashes with spices, ground them into the form of a powder, put them in water, and drank them up.'

The situation shown in (163) is amenable to the general fact that Latin licenses an empty category as object, as shown in the next example taken from Luraghi 1997.<sup>123</sup>

<sup>121</sup> Importantly, (163)a is not a Figure UOC. It is, rather, a Ground UOC, since the object (coindexed with *magnum poculum*) is interpreted as a Ground (the container out of which the wine is drunk). I will deal with Ground UOCs in Section 3.2.2.

<sup>122</sup> *Hemina*, -ae: a measure for wine.

<sup>123</sup> Discussion on the nature of the null category functioning as the object is outside the scope of the present work. Other studies on null objects in Latin include Panhius 1979, Mulder 1991 and Wurff 1994.

(164) *Latin; Cic. Cat. 1, 25, apud Luraghi 1997:242*

Ad	hanc	te <sub>i</sub>	amentiam	natura	peperit,
at	your.ACC.F	you.ACC	insanity(F)ACC	nature.NOM	bear.PRF.3SG
voluntas	e <sub>i</sub>	exercuit,	fortuna	e <sub>i</sub>	servavit.
will.NOM	train.PRF.3SG	destiny.NOM	preserve.PRF.3SG		

‘For such insanity nature bore you, your will trained you and destiny preserved you.’

This difference between *bibo* and *ebibo* emerges, I argue, from the configurational properties of the predicates they represent: *ebibo* represents a structure including a PathP, which needs a DP at its specifier being interpreted as a Measurer. By contrast, object-less *bibo*, expressing an activity, corresponds to a simple unergative structure without any specifier (except for Spec-v, where the external argument is merged). Thus, a structural difference, which also accounts for the interpretational differences between the simple and the prefixed verb, explains why *ebibo* cannot appear without an object (null or not) and *bibo* can.

### 3.2.1.3 Case alternations, situation aspect and the merging of roots

I focus now on the way prefixation changes the case-assigning properties of the predicate, and how that change is related to the inner-aspectual interpretation of the predicate. I take the *utor/abutor* ‘use’/‘use up’ contrast (see example (150)) as case study. Importantly, while *abutor* licenses an accusative in (150), repeated here as (165), the “object” of *utor* appears in the ablative (see (166)):

(165) *Latin; Cat. Agr. 76, 4*

<u>Omne</u>	<u>caseum</u>	cum melle	<u>ab-usus</u> eris
whole.ACC	cheese.ACC	with honey.ABL	away-use.FUT.2SG

‘You will have use up all the cheese with honey’

(166) *Latin; Caes. Gall. 7, 65, 5*

Minus	idoneis	<u>equis</u>	<u>utebantur</u> .
less	idoneous.ABL.M.PL	horse(M)ABL.PL	use.IPFV.3PL

‘They were using unserviceable horses.’

In fact, my prediction is that the object of *abutor* should appear always in the accusative in UOCs: it sits at Spec-Path, as evidenced by the fact that it behaves as a Measurer. In (165), for instance, the event is over only when the whole amount of cheese is used up. As a matter of fact, *abutor* does sometimes select the ablative case in Classical Latin. The next example, for instance, involves ablative *sagacitate* instead of accusative *sagacitatem*:

(167) *Latin; Cic. Nat. deor. 2, 151*

<u>Sagacitate</u>	<u>canum</u>	ad	utilitatem	nostram	<u>ab-utimur</u> .
sagacity.ABL	dog.GEN.PL	at	benefit.ACC	our.ACC	away-use.1PL

‘We (divertedly) use the sagacity of dogs in our benefit.’

However, a look at Gaffiot’s (1934) entry for *abutor* reveals a possible explanation for this double case-selection. The first sense in the entry, the only transitive one, reads “use until the object disappears”. Gaffiot furthermore marks it as archaic, providing examples from Cato, Plautus, Terentius and Sallustius. This is the sense concerning (165). The second sense is intransitive, selecting ablative, and is a more modern one.



The definition here reads differently, however: ‘use fully, freely’ or ‘make a deviant use of something’. This is the usage relevant in (167). Observe, in addition, that the ablative, as expected, does not license a Measurer interpretation for *sagacitate* in (167); in fact, as the famous Ciceronian sentence of (168) indicates, this sense of *abutor* as ‘make an improper use of, abuse’ is atelic, since it licenses the durative adverbial *quo usque*:

(168) *Latin; Cic. Catil. 1, 1*

Quo	usque	tandem	<u>ab-utere</u> ,
which.ABL.SG	up_to	finally	away-use.FUT.2SG
Catilina,	<u>patientia</u>	<u>nostra?</u>	
Catilina.VOC	patience.ABL	our.ABL	

‘Until when will you abuse our patience, Catilina?’

Within the present account, it is clear that this particular *abutor*, unlike the one in (165), cannot correspond to a vP embedding a PathP projection. One possible solution to the ablative-selecting *abutor* is to consider that the verb embeds a “complex” root, a combination of both  $\sqrt{AB}$  and  $\sqrt{UT}$ , yielding a predicate composition semantics conforming with the mentioned negative semantics of “improper use”. Recall that I made the assumption in Chapter 2, Section 3.1.2, that roots cannot project structure, and that, hence, there cannot be a RootP. However, Merge must arguably be distinguished from Projection: two elements yield a syntactic object if one of them has the ability to project. The combination of two roots is, hence, expected, as is also expected that neither of them shall project: they behave as a single root. Thus, in the combination of  $\sqrt{AB}$  and  $\sqrt{UT}$  no root projects: the category of the whole emerges from the eventive v head within which the complex is embedded. Having into account the atelic nature of *abutor*-predicates such as (167) and (168), a possible analysis is one involving the projection of a PlaceP with the complex root embedded at Compl-Place and the ablative DP merged as Spec-Place:<sup>124</sup>

(169) *A possible analysis for (167)*

[<sub>vP</sub> (nos) [<sub>v'</sub> v [<sub>PlaceP</sub> [<sub>DP</sub> sagacitate canum] [<sub>Place'</sub> Place  $\sqrt{AB}\sqrt{UT}$ ]]]]

### 3.2.1.4 Scopal relations between prefix and verb

Scopal effects have traditionally been tackled at the sentence level in discussions of configurationality. However, within an account, as the present one, where words are (mainly) created by the syntax, we expect there to be scopal effects within the word. I now show that there is a group of *ab*-prefixed Figure UOCs in Latin which show scopal effects between the prefix and the verb. Importantly, these effect follow naturally from an account of UOCs where the prefix is c-commanded by the v head and the root is merged as an adjunct to v. I refer to a group of *ab*-verbs where the base is a communication verb and the prefix seems to behave as a negation. I call them *ab*-verbs of denial:

<sup>124</sup> Wurmbrand 2000 advocates a complex predicate approach for idiomatic particle-verb combinations in German, while reserving a small clause approach for cases of transparent particle-verb combinations. I am sympathetic to her analysis, but I do not think that idiomaticity (here the possibility of retrieving particular meanings for roots within the phrase) is restricted to association of roots. See Chapter 2, Section 3.2.5. See McIntyre 2002 for a critique of Wurmbrand’s (2000) dichotomic approach to particle-verbs. Borer 2005b proposes an analysis of adjectival resultatives in English analogous to the one presented here for atelic *abutor*. See Chapter 4, Section 1.1.3 for a critique.

(170) *Latin; Pacuv. Trag. 55*

[Eam] consanguineam esse ab-dicant.  
 her.ACC consanguineous.ACC be.INF away-proclaim.3PL  
 ‘They proclaim her not to share the same blood.’

(171) *Latin; Cic. Div. 1, 31*

Cumque in quattuor partis vineam  
 since=and in four part.ACC.PL vine.ACC  
 divisisset trisque partis aves  
 divide.PLUPERF.SBJV.3SG three.ACC=and part.ACC.PL bird.NOM.PL  
 ab-dixissent, quarta parte [...] mirabili  
 away-say.PLUPERF.SBJV.3PL fourth.ABL part.ABL admirable.ABL  
 magnitudine uvam [...] invenit.  
 size.ABL grape.ACC find.PRF.3SG  
 ‘And after he had divided the vine in four parts and the birds had refused [lit. ‘had said away’] three of them, in the forth part he found a grape of admirable size.’

(172) *Latin; Plaut. Rud. 14*

In iure ab-iurant pecuniam.  
 in court.ABL away-swear.3PL money.ACC  
 ‘They deny by oath that they have debts.’

(173) *Latin; Plaut. Capt. 481*

‘Ubi cenamus una?’ inquam: atque illi ab-nuont.  
 where sup.1PL together say.1SG and they away-nod.3PL  
 ‘I say “Where shall we sup together?”: and they refuse with a nod.’

These verbs involve the negation of the proposition expressed by the object (which may take the shape of a whole proposition, as in the Exceptional Case Marking construction of (170) (with accusative *eam* as the subject of the embedded infinitive *esse*) or the elided object proposition of (173), or a (propositional) DP, as in (171) and (172)). In the above examples, the base verb is, respectively, *dico* (infinitive *dicare*) ‘proclaim, declare’, *dico* (infinitive *dicere*) ‘say’, *iuro* ‘swear’ and *nuo* ‘nod’ (which, being intransitive, makes its compounds “strong” cases of UOCs). Take the case of *abiuro*, in (172). Crucially, the negation is understood as having narrow scope with respect to the swearing event introduced by the root  $\sqrt{\text{IUR}}$ , and not the other way around. Thus, (172) does not imply that they do not swear that they have debts. The scopal properties of these verbs come for free in a syntactic model, if we assume that the negation component alluded to above is nothing but an inference from the general meaning of the prefix *ab* ‘away’: the *v* introducing the event and being conflated with the root  $\sqrt{\text{IUR}}$  is above the PathP including the object of the predicate and the prefix. Importantly, the root of the prefix is c-commanded by the *v* head introducing an event, and is predicted, correctly, to show narrow scope with respect to that *v* head:

(174) *An analysis of (172)*

[<sub>VP</sub> pro [<sub>v</sub> [<sub>v</sub>  $\sqrt{\text{IUR}}$ ] [<sub>PathP</sub> pecuniam [<sub>Path</sub> Path [<sub>PlaceP</sub> ~~pecuniam~~ [<sub>Place</sub> Place  $\sqrt{\text{AB}}$ ]]]]]  
 Scope: *v* > *ab*, \**ab* > *v*

I want to emphasise the difficulty any lexicalist approach to prefixed verbs would face when trying to account for both the denial interpretation of these verbs and the precise scopal effect I have described. By contrast, an approach which gives a preponderant role

to configurationality and which separates the encyclopaedic from the structural meaning of expressions derives these facts straightforwardly.

### 3.2.1.5 Deponency and the properties of roots

I turn finally to the contrast between unprefixed and prefixed deponent verbs and the consequences it has for a theory of the insertion and properties of roots. I take the *blandior/eblandior* ‘flatter’/‘obtain through flattery’ contrast as case study. The verb *blandior* may take an “object” in the ablative case, as in the next example, where this ablative is underlined:

(175) *Latin; Cic. Ac. I, 99, 83*

Video quam suaviter voluptas sensibus nostris blandiatur.  
 see.1SG how subtly pleasure.NOM sense.ABL.PL our.ABL.PL flatter.SBJV.3SG  
 ‘I see how subtly pleasure flatters to our senses.’

*Blandior* is not attested with an accusative object. Note that this circumstance cannot be attributed to its being a deponent, as deponency is largely orthogonal to argument structure (and case assignment) and there are, in fact, accusative-assigning deponents (see Section 3.1.3.3 and Chapter 2, Section 3.3.2). On the other hand, *eblandior*, as we know, appears with accusative objects:

(176) *Latin; Liv. 27, 31, 7*

Neque enim omnia emebat aut e-blandiebatur.  
 nor in fact all.ACC.N.PL buy.IPFV.3SG or out-flatter.IPFV.3SG  
 ‘Nor did he acquire everything by money or flattery.’

Accusative case on the object of *eblandior* is explained away if we assume that that object originates as a Figure, in the PlaceP where the prefix *e-* also originates and then rises to Spec-Path, where it is interpreted as a Measurer, and is assigned accusative case (see Chapter 2, Section 3.1.5). The assignment of accusative case to the object of *eblandior* is, thus, expected as indirectly related to the presence of the prefix. On the other hand, the encyclopaedic content of the verb, contained within the root, is preserved in both verbs. There is, finally, another property of the root which is involved in both verbs: deponency. It appears, then, that deponency is truly independent of argument structure, since it is, alongside the encyclopaedic meaning of the root, the only property that *blandior* and *eblandior* share. This provides good evidence for Embick’s (2000) hypothesis (exposed in Chapter 2, Section 3.3.2) that deponency is a formal property of some roots and that roots must be early inserted in the structure if we are to explain why the verbs involving those roots present particular syntactic properties (notably, an analytic paradigm for the perfect tenses). All in all, the picture that emerges from the *blandior/eblandior* case is one in which roots possess exclusively encyclopaedic content and formal (non-semantic) properties like deponency, and that argument structure properties depend solely on the configuration where the root is inserted.

## 3.2.2 Ground UOCs

### 3.2.2.1 Case and situation aspect when the object is a Ground

As mentioned at the end of Section 3.2, Ground UOCs are UOCs where the internal argument (either a surface object or a subject) is interpreted as a Terminal Ground, that

is, as a final location in a transition event.<sup>125</sup> Consider the following examples from Danish, German and English:

(177) *Danish; Svenonius 1996:32*

Tjeneren tørket{\*af} bordet {af}.  
waiter.DEF wipes off table.DEF off  
'The waiter wipes the table off.'

(178) *McIntyre 2004:538*

Pour the bucket \*(out).

(179) *German; Stiebels 1998:288, apud Mateu 2008b:241*

Sie \*(unter)-keller-ten das Haus.  
they under-cellar-PST.PL the.ACC house.ACC  
'They put a cellar under the house.'

In these examples the object of the construction corresponds to the Ground of a motion event which is made precise by the particle/prefix. Thus, in (177) there is an event of wiping something off the table, in (178) an event of emptying something out of the bucket and in (179) an event of putting a cellar under the house. Crucially, the Figure argument does not appear in the structure, except, maybe, in (179), where it appears to be the root of the verb itself. I will come back to this issue in Section 3.2.2.3. Observe that this scenario, where an argument (the Ground) is *promoted* to a different syntactic position (as object) and the argument which usually occupies that position is *demoted*, is reminiscent to that of passives or unaccusatives, where the object surfaces as a subject and the external argument (for passives) appears, at most, as an adjunct. It is for these reasons that Svenonius (1996:31f.) calls the particles licensing these constructions *unaccusative particles*, since the constructions where they appear presumably involve the kind of phenomenon referred to by Burzio's (1986) generalisation: in the absence of an external argument objective case is unavailable. In this case the missing external argument is the Figure, and the objective case is the one standardly assigned by the Ground-taking particle. For instance, in (177) the particle *af* does not project a Figure argument and, hence, cannot assign case to *bordet*, which raises to the position where it may receive (objective) case. In particular, Svenonius (2003:436) proposes that adpositional projections contain a lexical preposition which selects the Ground and a functional p-layer which selects the Figure, which qualifies, then, as a true external argument. In the next example, the lexical preposition *on* selects the Ground *waggon* and the functional preposition *p* selects, as a specifier, the Figure *hay*.

(180) *Svenonius 2003:436*

We loaded hay on the wagon  
[<sub>PP</sub> [<sub>DP</sub> hay] [<sub>p</sub> p [<sub>PP</sub> on [<sub>DP</sub> the wagon]]]]

In constructions such as (177) through (179), Svenonius claims, *p* is missing, the Figure is not selected and the Ground cannot receive case from the lexical preposition. Importantly, Svenonius (2003:436) states that "[o]vert manifestations of *p* which could be inserted in these structures may be *to* in English (with *P* incorporated in *into*) [...]."

<sup>125</sup> There are some —to my knowledge, not many— studies on these constructions in other languages. See Svenonius (1996:31f) on Scandinavian, Zeller 2001a on German, McIntyre 2003 on German, McIntyre 2004 on English and German, Svenonius 2003 on English, Svenonius 2004b on Russian, Mateu 2008b on German and Levin & Sells 2009 on English (calling the particles in these constructions *unpredicated particles*).

In my view, there is a fact about Ground UOCs which has been neglected in this case-based analysis and that might constitute the key to understand how they work: the fact that the Ground makes a crucial aspectual contribution in Ground UOCs but not when it appears “*in situ*”, in Figure UOCs. Specifically, the Ground is clearly interpreted as a Measurer for the event, in the present terms. Thus, in (177) the event is over only when the whole surface of the table is completely wiped off. Observe that when the Ground is not promoted to object it does not possess this interpretational status. Thus, in *Sue wiped the dust off the table*, the table does not measure out the event in any sense, as *the dust* effectively does. Specifically, Sue need not wipe the whole surface of the table for the event of wiping the dust off the table to be true. This effect in Ground UOCs is observed by McIntyre (2004), who notes the contrast between *Read through a book* and the Ground UOC *Read a book through*:

(181) McIntyre 2004:539

“[...] *reading through a book* is less thorough than *reading a book through*. Although the former could exhibit the bounded reading of *through* in the sense that the reading encompasses the beginning and end of the book, it is compatible with skim-reading or leaving out some sections because there is no holistic effect to ensure that the whole book is involved.”

Observe that in *Reading through a book* there is apparently no Figure. In fact, McIntyre (2004) proposes that the whole event of reading is a Figure traversing the Path expressed by *through a book* (he calls this kind of constructions *Event Path*). What is worth noting here is that the different position of the Ground determines the mentioned holistic effect or measuring-out effect. Crucially, McIntyre’s (2004) observation can be made stronger, by setting it in terms of (a)telicity: while *read through a book* is an atelic event, *read a book through* is necessarily telic. Similar observations on the measurer role of Grounds in these constructions are to be found in Levin & Sells 2009. As the next examples show, the quantity or non-quantity status of the object Ground is what determines, respectively, telicity and atelicity in the resultant predicate:

(182) Levin & Sells 2009:316

- a. She wiped the counter off in/\*<sup>?</sup>for ten minutes.
- b. She wiped glass off \*in/for two hours.

These facts receive an easy account in my theory, since the Figure and Ground interpretations of a DP are dissociated from its role in the calculation of situation aspect. Thus, we expect either one of them to be available to get merged as spec-Path and to be interpreted as Measurer. I illustrate with the analysis of (178):

(183) *An analysis of (178)*

[<sub>VP</sub> Sue [<sub>v</sub> [<sub>v</sub> √POUR] [<sub>PathP</sub> [<sub>DP</sub> the bucket] [<sub>Path</sub> Path [<sub>PlaceP</sub> [[<sub>Place</sub> Place √OUT] [<sub>DP</sub> ~~the bucket~~]]]]]]]

The DP *the bucket* is originally merged as Compl-Place, and is interpreted as a Ground, therefore. A v-selected Path raises the nearest DP in its c-command domain to its specifier (see Chapter 2, Section 3.2.4.2). This DP is usually the one sitting at Spec-Place, the Figure, but when the Figure is missing there is no DP available other than the Ground. It is at Spec-Path that *the bucket* is interpreted as a Measurer. As for case, the

bucket receives the same treatment than any other DP at Spec-Path: it receives accusative case (*Sue poured it out*) if v has a specifier, as in the case here. However, we will see that in unaccusative predicates with no Spec-v the Ground ends up receiving nominative case, as expected.

Note that a case-account, as Svenonius's (2003), is unable to explain why the Ground is interpreted as a Measurer only when it appears as the object of the verb. Indeed, this Measurer interpretation cannot be attributed to accusative case itself, since there are accusative-marked DPs which are not interpreted as Measurers (as *Peter* in the next sentences):

(184) *Accusative case does not determine Measurerhood*

- a. John loved Peter (for years).
- b. John considered Peter intelligent (for years).
- c. John thought Peter to be loyal (for years).

### 3.2.2.2 Transitive Ground UOCs in Latin

The next are examples of Ground UOCs in Latin. I underline the Ground:

(185) *Latin; Ov. Met. 6, 342*

Ubera=que                      e-biberant  
 breast.ACC.PL=and          out-drink.PLUPRF.3PL  
 avidi [...]                  nati.  
 eager.NOM.M.PL    born.NOM.M.PL  
 'And her babes had drunk her breasts to exhaustion.'

(186) *Latin; Plin. Nat. 8, 34*

Dracones              esse              tantos              ut              totum  
 snake.ACC.PL      be.INF          so\_many.ACC.PL    that    whole.ACC.M.SG  
 sanguinem          capiant,          itaque          elephantos          ab iis  
 blood(M)ACC.SG    take.SBJV.3PL    therefore    elephant.ACC.PL    by them.ABL  
 e-bibi.  
 out-drink.INF.PASS  
 'That the snakes are so large that they can take all the blood, and therefore the elephants are drunk dry by them.'

Observe that these examples involve the prefixed verb *e-bibo*, which we have already seen heading Figure UOCs (see Section 3.2.1.1). Ground UOCs with *ebibo* present accusative objects referring to the recipient of the liquid, instead of the liquid itself. In the above examples the object is *ubera* 'breasts', and *elephantos* 'elephants', respectively. It is worth regarding that while simple *bibo* may be used with container naming objects, as in (187) below, I have not found any such example (in a search of all the occurrences of simple *bibo* in the Antiquitas corpus) with a non-standard container, as the ones in (185) and (186):

(187) *Latin; Plaut. Stich. 706*

Vide                  quot                  cyathos                  bibimus.  
 see.IMP.2SG      how\_many      goblets.ACC      drink.PRF.1PL  
 'See how many goblets we have drunk.'

This fact suggests, I believe, that cases such as (187) involve a metonymical reading of the object, precisely because it refers to a canonical container holding a standard quantity of liquid. The predicates in (185) and (186), however, do not involve metonymy: neither the breasts nor the elephants are taken as standard measures for the liquids they contain, nor are they, for that matter, conceived of as containers of milk and blood, respectively.

The difference between Figure UOC *ebibo* and Ground UOC *ebibo* is easily grasped: in (185) and (186), for instance, the objects are not brought out or made disappear by virtue of a drinking event, as is the case in instances of *ebibo* in Figure UOCs. I repeat an example of Section 3.2.1.1 for the sake of comparison:

(188) *Latin; Petr. Sat. 20, 5*

Tantum medicamentum e-bibisti?  
 so\_much.ACC medicine.ACC out-drink.PRF.2SG  
 ‘Have you drunk up such an amount of medicine?’

In this example, the prefix *e-*, encoding, as was discussed in Section 3.2.1.1, a “state of disappearance” is predicated of *tantum medicamentum*, which is, thereby, a Figure. This is clearly not the interpretation of *ubera* and *elephantos* in (185) and (186), respectively. The same difference is appreciated when contrasting the Figure UOC *abluo* of (143), repeated here as (189)a, with the Ground UOC *abluo* of (189)b:

(189) *Latin; Figure and Ground UOCs based on ab-luo*

a. *Tac. Hist. 3, 32, 3*

Is balineas ab-luendo  
 he.NOM bath.ACC.PL off-wash.PTCP.FUT.PASS.DAT.M.SG  
cruori propere petit.  
 blood(M)DAT.SG hastily head.3SG  
 ‘He hastened to the baths to wash off the blood.’

b. *Cic. Tusc. 5, 16, 46*

Anticlea [...] Ulixi pedes ab-luens.  
 Anticlea(F)NOM.SG Ulysses.DAT feet.ACC away-wash.PTCP.PRS.NOM.F.SG  
 ‘Anticlea, as she washes Ulysses’s feet clean.’

Observe that in the predicate of (189)b Ulysses’s feet do not disappear by virtue of a washing event, as is the case with *cruori* ‘blood’, in (189)a. Rather, we understand that Ulysses’s feet are a surface off which (= *ab-*) the dirt is washed.<sup>126</sup> In turn, *pedes* in

<sup>126</sup> Importantly, from a neo-constructionist perspective there is nothing impeding a Figure UOC interpretation of the predicates examined here as Ground UOCs. For instance (186) is compatible with a situation where the elephants disappear through drinking, analogously to the interpretation of (188). Likewise, a sentence like (i) can be built where the elephants, as liquid entities, are drunk from a container (a lake):

(i) *Latin; a semantically aberrant made-up Figure UOC*

Dracones elephantos e lacu e-biberunt.  
 snake.NOM.PL elephant.ACC.PL out lake.ABL out-drink.PRF.3PL  
 ‘The snakes drank the elephants out of the lake.’

In these grammatical but semantically aberrant cases the object is merged as Spec-Place, and is, therefore, interpreted as a subject, of which a final state or location is predicated. I illustrate with the analysis of (i):

(ii) *An analysis of (i)*

[<sub>VP</sub> Dracones [<sub>V</sub> [<sub>v</sub> √BIB] [<sub>PathP</sub> elephantos [<sub>Path</sub> Path [<sub>PlaceP</sub> elephantos [<sub>Place</sub> [<sub>Place</sub> Place √E] lacu]]]]]]]

(189)b, *ubera* in (185) and *elephantos* (186) are not only the Grounds in their corresponding predicates, but are also Measurers: the events in which they are involved are completed according to the physical extension of the entities which they denote — a volume in (185) and (186) and a surface in (189)b. These facts emerge naturally from the following analysis:

(190) *An analysis of (186)*

[<sub>VP</sub> *Dracones* [<sub>v</sub> [<sub>v</sub>  $\sqrt{\text{BIB}}$ ] [<sub>PathP</sub> *elephantos* [<sub>Path</sub> Path [<sub>PlaceP</sub> [<sub>Place</sub> Place  $\sqrt{\text{E}}$ ] *elephantos*]]]]]

The root  $\sqrt{\text{BIB}}$  is merged as an adjunct to *v* and is interpreted, accordingly, as a Manner Co-event. The DP *elephantos* is first merged as Ground: together with the head Place, specified, by adjunction of the root  $\sqrt{\text{E}}$ , as the spatial relation “out”, signifies the final location of a transition event, a rough paraphrase of which could be “to cause something to go out of the elephants”. However, a Figure is not merged and, therefore, when Path is merged it raises to its specifier the only DP available in its c-commanding domain, namely *elephantos*. This is why *elephantos* is both interpreted as a Ground and as a Measurer.<sup>127</sup>

There are cases of Ground UOCs where the Ground is not physical, but metaphorical. Thus, for instance, we find predicates of utterance where the addressee is realised as the accusative object. The verb is marked with the prefix *ad-* ‘at’ (I underline the Ground):

(191) *Latin; Verg. Aen. 6, 40*

Talibus	ad-fata	<u>Aenean</u> ...
such.ABL.PL	at-say.PTCP.PFV.NOM.F.SG	Aeneas.ACC
‘Having addressed Aeneas with those words...’		

Note, however, that in Figure UOCs there is room in PlaceP for a DP to be merged as Ground, as shown in (ii). Thus, while a Figure interpretation is expected to be available for objects in predicates with non-object DPs or PPs as Grounds, this is clearly not possible in Ground UOCs, since the object itself is first merged as Ground in Compl-Place. Thus, in the following example we cannot understand *the bucket* as Ground:

(iii) #To pour the bucket out of the water.

In Latin we too expect a certain correlation to obtain between the morphosyntactic expression of the Ground and a Figure or Ground UOC interpretation of the predicate. In particular, in prefixed or unprefixed UOCs with a non-object DP or PP as Ground, a Ground interpretation of the object should not be available: the object is interpreted as Figure. By contrast, in prefixed UOCs with no DP or PP specifying the Ground, a Ground or Figure interpretation of the object is available, the choice being regulated through encyclopaedic and pragmatic knowledge. Although I have not carried out any corpus search to ascertain the validity of this correlation, the instances of Ground UOCs which I have considered here all involve a prefix (merged, by hypothesis, as an adjunct to Place).

<sup>127</sup> Zeller (2001a:8) also calls attention upon the fact that a same particle-verb in German may head a predicate where the object is interpreted as Figure or a predicate where it is interpreted as Ground, as is the case with *ebibo* and *abluo*. Compare, for instance, Latin *abluo* with German *abspülen*:

(i) *German; Zeller 2001a:8*

- a. Das Fett ab-spülen.  
the.ACC grease.ACC off-rinse.INF  
‘To rinse the grease off.’
- b. Den Teller ab-spülen.  
the.ACC dish.ACC off-rinse.INF  
‘To rinse the dish off.’

Zeller (2001a:8) reports that “[...] the verb *abspülen* exhibits the alternation that researchers have labeled “Objektvertauschung”, “Objektumsprung”, or “land-mark flexibility” (cf. e.g. Kühnhold 1973; Hundsnurscher 1986; McIntyre 2001).”



(192) *Latin; Plaut. Cist. 307*

Ad-hinnire    equolam                      possum    ego    hanc  
 at-neigh.INF    mare(F)DIM.ACC.SG    can.1SG    I    this.ACC.F.SG  
 ‘I can well neigh at this little mare myself.’

(193) *Latin; Plaut. Amph. 388*

Obsecro          ut [...]    liceat                      te                      al-loqui  
 beseech.1SG    that          be\_allowed.SBJV.3SG    you.ACC    at-speak.INF  
 ‘I beseech you to let me address you.’

These cases help us further illustrate how the syntactic structure dictates the number and interpretation of the arguments of a verb, overriding whatever information is contained in the encyclopaedic entry of its root. In particular, if it is assumed that the prefixed predicates in (191) through (193) involve movement of the Ground DP to Spec-Path position, there is predictedly at most and at least one overt argument per prefixed predicate, since, on the one hand, there is no position left for any other argument in PlaceP (since, by hypothesis, Spec-Place is not filled), and, on the other hand, each PathP must have its specifier. This is what happens in the above examples, with only an accusative object naming the addressee, and the utterance argument being expressed, at most, as an instrumental adjunct in the ablative, as is the case of *talibus* ‘with such (words)’ in (191). Descriptively, it could be said that the utterance argument is *demoted* to adjunct-status.<sup>128</sup> The unprefixed counterparts to *alloquor*, *affor* or *adhinnio* display, as expected, a different syntax. Notably, they cannot link an addressee as object. They are either unergative (see (194)a, (195) and (196)a), or take an accusative object, which is, however, interpreted as the utterance. In either case, they may optionally appear with a dative or a PP expressing the addressee (see (194)a for the former option and (194)c and (196)c for the latter):

(194) *Latin; simple for ‘say’*

a. *Liv. 25, 12, 6*

Mihi          ita    Iuppiter    fatus est.  
 me.DAT    thus    Jupiter    say.PRF.3SG  
 ‘Juppiter has talked to me thus.’

b. *Verg. Aen. 1, 586*

Ea                      fatus erat.  
 those\_things.ACC    say.PLUPRF.3SG  
 ‘He had said that.’

c. *Cic. Tim. 40*

Ad eos          is                      deus [...]    fatur                      haec.  
 at them.ACC    this.NOM    god.NOM    say.3SG    this.ACC.N.PL  
 ‘To those that god says these words.’

(195) *Latin; simple hinnio ‘neigh’, Ps. Apul. Herm. 4*

Proprium                      est    equi    hinnire.  
 typical.NOM.N.SG    is    horse.GEN    neigh.INF  
 ‘It is typical of the horse to neigh.’

<sup>128</sup> These *ad*-verbs are strikingly similar to *an*-prefixed verbs in German, discussed by Stiebels (1996) and McIntyre (2004), where the addressee is expressed as the accusative object DP:

(i) *German; McIntyre 2004:538*

*an-lügen* ‘lie to’, *an-motzen* ‘whinge to’, *an-schweigen* ‘be silence to’.

(196) *Latin; simple loquor ‘speak’*

a. *Ov. Rem. 285*

*Illa loquebatur.*  
 She.NOM speak.IPFV.3SG  
 ‘She was speaking.’

b. *Cic. Tusc. 1, 7, 13*

*Pugnantia te loqui non vides?*  
 contradiction.ACC.PL you.ACC speak.INF not see.2SG  
 ‘Are you not aware that you are saying contradictions?’

c. *Ov. Pont. 4, 6, 9*

*Certus eras [...] numen*  
 sure.NOM.M.SG be.IPFV.2SG divine.ACC  
*ad Augustum [...] loqui.*  
 at Augustus.ACC speak.INF  
 ‘You were resolute to speak to divine Augustus.’

It seems, once again, that verbs (in fact, roots) have little to say on the realisation of arguments. Rather, it is the syntactic structure what determines the number and quality of the arguments.

### 3.2.2.3 The “Figure” expressed in the verbal root

I turn back now to example (179) of Section 3.2.2.1:

(197) *German; Stiebels 1998:288, apud Mateu 2008b:241*

*Sie \*(unter)-keller-ten das Haus.*  
 they under-cellar-PST.PL the.ACC house.ACC  
 ‘They put a cellar under the house.’

Mateu (2008b) confronts Stiebels’s (1998) criticism of Hale and Keyser’s theory as unable to analyse certain complex denominal verbs in German like *Sie unterkellerten das Haus* or *Sie überdachten den Vorgarten*, literally “they fit the house with a cellar (under it)” and “they roofed (over) the front yard”. In these constructions the object is interpreted as a Ground, and the root embedded in the verb ( $\sqrt{\text{KELLER}}$ ,  $\sqrt{\text{DACH}}$ ) apparently corresponds to the Figure. Stiebels’s criticism is based on the assumption that the prefix, *unter-* or *über-*, is a lexical adjunct. Mateu proposes, instead, that the prefix is the head of a small clause whose complement is the surface object. Assuming Svenonius’s (1996f.) idea that these constructions involve some kind of Burzio-effect, he suggests that the absence of a *structural* Figure in Spec-Path generates an unaccusative structure where the Ground cannot get case within its PP and has to move out to be licensed:

(198) *Mateu’s (2008b:242) analysis of (197)*

$[_V [_V V \sqrt{\text{KELLER}}] [_{(\text{P})\text{ath}} \emptyset [_{(\text{P})\text{ath}} (\text{P})\text{ath} [_{\text{P}(\text{lance})} \text{unter-} [_{\text{DP}} \text{das Haus}]]]]]]$

Mateu treats the root ( $\sqrt{\text{KELLER}}$ ,  $\sqrt{\text{DACH}}$ ) as a modifier of the causing event, assuming that it is compounded with V; he disregards —correctly, I think— the status of the root as the *conceptual* Figure of the motion schema.

In Latin I have found a few cases of prefixed verbs illustrating this type. Thus, in (199) the seed of a fruit (*nucleus*) is taken out (prefix *e(x)-*) of it; in (200) chalk (*creta*) is

smear on (*in*) a victim before its sacrifice; finally, in (201), a bud (*oculus*) is ingrafted into (*in*) the tree:

(199) *Latin; Scrib. Larg. 233*

Uva passa                      e-nucleata.  
raisin(F)NOM                out-seed.PTCP.PRF.NOM.F  
'Seeded raisin.'

(200) *Latin; Petron. 102, 14*

In-creta                      facies.  
in-chalk.IMP.2SG        faces.ACC  
'Smear our face with chalk.'

(201) *Latin; Plin. Nat. 17, 133, 3*

[Arbores]                in-oculare.  
tree.ACC.PL    in-bud.INF  
'To inoculate the trees.'

I propose to analyse these predicates in the same fashion as Ground UOC *ebibo* above:

(202) *An analysis of (199)*

[<sub>VP</sub> [<sub>V</sub>  $\sqrt{\text{NUCLE}}$ ] [<sub>PathP</sub> [<sub>DP</sub> uva passa] [<sub>Path'</sub> Path [<sub>PlaceP</sub> [<sub>Place</sub> Place  $\sqrt{\text{E}}$ ] [<sub>DP</sub> ~~uva~~ ~~passa~~]]]]]]

In this analysis I incorporate Mateu's (2008b) proposal of treating the root of the verb as an adjunct to *v*, that is, of considering these constructions typical s-framed constructions involving Manner adjunction. In particular, the analysis in (202) treats the root  $\sqrt{\text{NUCLE}}$  as a modifier of the eventive functional head *v*. The root provides the verb with encyclopaedic content, as well as with a phonological matrix.

### 3.2.2.4 Unaccusative Ground UOCs

McIntyre (2004) calls attention upon a class of constructions where the Ground, rather than being realised as the object, is realised as the derived subject of an unaccusative predicate. Predicates of this type are found in Germanic:

(203) *German; McIntyre 2004:544*

Die        Wanne                fliesst        schlecht \*(ab).  
the.NOM bathtub.NOM    flow.3SG    badly        off  
'The bathtub empties badly.'

In Latin there are cases analogous to this one:

(204) *Latin; Plaut. Most. 111*

Venit                imber,        lauit                parietes<sub>i</sub>:        e<sub>i</sub> per-pluont.  
come.3SG        rain.NOM    wash.3SG    wall.ACC.PL        through-rain.3PL  
'The rain comes, it washes the walls: they let the rain filter through.'

(205) *Latin; Plaut. Pseud. 810*

Senapis [...] oculi                ut        ex-stillent        facit.  
mustard.NOM    eye.NOM.PL    that    out-drip.3PL    make.3SG  
'Mustard makes the eyes drip out (with tears).'

In the above examples, the Ground appears as the subjecte (in (204) it happens to be a *pro* subject, coreferential with accusative *parietes*) of the sentence. The holistic effect shown by the other cases of Ground UOCs obtains also in these unaccusative Ground UOCs: thus, *parietes* and *oculi* refer to entities completely affected by the respective process. The analysis of the predicates in (204) and (205) is essentially not different from the one proposed for the cases of transitive Ground UOCs. In unaccusative constructions, the Ground, after moving onto Spec-Path raises to Spec-T and is provided with nominative case. The analysis of (204) is sketched in (206) below:

(206) *An analysis of (204)*

[<sub>TP</sub> *parietes* [<sub>T</sub> [<sub>vP</sub> [<sub>v</sub> *v*  $\sqrt{\text{PLU}}$ ] [<sub>PathP</sub> *parietes* [<sub>Path'</sub> *Path* [<sub>PlaceP</sub> [<sub>Place</sub> *Place*  $\sqrt{\text{PER}}$ ] *parietes*]]]]]]]

### 3.3 Complex Effected Object Constructions

I use the label *Complex Effected Object Construction* (CEOC) for predicates involving an object interpreted as a created object and a verb which specifies the way the event is carried out.<sup>129</sup> Levin and Rapoport, in their 1988 seminal work, included constructions such as the following ones as involving *lexical subordination*, which, in the present terms, equals the adjunction of a root to v:

(207) *Levin & Rapoport 1988:283*

Pauline smiled her thanks.

In (207) the object *her thanks* is the entity resulting from a “smiling event”. The creation semantics make these constructions similar to unergative ones such as *Pauline smiled*, which would receive the following analysis in our terms:

(208) *An analysis of Pauline smiled*

[<sub>vP</sub> *Pauline* [<sub>v</sub>  $\sqrt{\text{SMILE}}$ ]]

In the spirit of Levin & Rapoport 1988, we could consider that in (207) *smile* is a kind of adjunct to the event, which expresses “thanks-creation”. In our vocabulary, the resulting analysis is the following one:

(209) [<sub>vP</sub> *Pauline* [<sub>v</sub> [<sub>v</sub>  $\sqrt{\text{SMILE}}$ ] [<sub>DP</sub> *her thanks*]]]

However, these constructions do not seem to obtain in Romance or v-framed languages in general, as observed by Mateu (2003). In particular, while, as shown in (210), sentences such as *John baked the cake* are ambiguous between a creation interpretation and a change-of-state interpretation (which is awkward, as far as world knowledge is concerned), their v-framed counterparts only license the change-of-state interpretation:

(210) *S-framed English: John baked the cake*

a.  $\Rightarrow$  John created a cake through baking

b.  $\Rightarrow$  John submitted an already made cake to a baking action

<sup>129</sup> Levinson (2007:115) introduces the difference between *explicit creation verbs* and *implicit creation verbs*. In the former case, an example of which could be *bake a cake*, the created object is expressed as an argument of the verb, while in the latter the created object appears to be the very root of the verb. Thus, in *Mary braided her hair*, a braid is entailed to be created when the event comes to conclusion, but an actual *braid* is not expressed as an argument of the verb. Here I will only deal with explicit creation predicates.

- (211) *V-framed Spanish*: John horneó el pastel  
 a. \* $\Rightarrow$  John created a cake through baking  
 b.  $\Rightarrow$  John submitted an already made cake to a baking action

Thus, Spanish *el pastel* necessarily refers to an entity which exists before the process named by *hornear*, and the sentence has a thematic paraphrase in (212):

- (212) *Spanish*  
 Lo que le hizo John al pastel fue hornearlo.  
 what DAT.3SG did.3SG John to=the cake be.PRF.3SG bake.INF=it.ACC  
 ‘What John did to the cake was bake it.’

In addition, as pointed out by Marantz (2005), a creation predicate like *John baked the cake*, when combined with a *re-* prefix in *John rebaked the cake*, yields a reading where there is a creation of another token of the same type of cake, rather than a double baking process exerted on the same (token) cake. Thus, it is possible to say *John baked the cake but he did not like it, so he threw it away and rebaked it*. This is completely odd in Spanish:

- (213) *Spanish*  
 #John horneó el pastel pero no le gustó;  
 John baked.3SG the cake but not DAT.3SG pleased.3SG  
 así que lo tiró y lo horneó de nuevo.  
 so it.ACC threw\_away.3SG and it.ACC baked.3SG again

The reason for the oddity of (213) is precisely that in Spanish *hornear* can only appear in predicates linked to a presupposition that the entity referred to by the object (*el pastel*) exists before the event named by *hornear*. In other words, in Spanish the creation reading, which allows the type reading of the object, is incompatible with a manner verb, like *hornear*.

The next Latin examples are cases of CEOCs and are a further argument to align Latin with s-framed languages, rather than v-framed ones. The last three of them are adapted from Lemaire 1983:<sup>130</sup>

- (214) *Latin; Cic. Fin. 2, 5, 17*  
 Qui alteri misceat mulsum.  
 who.NOM another.DAT mix.SBJV.3SG honeyed\_wine.ACC  
 ‘He who makes honeyed wine for someone else.’

- (215) *Latin; Cic. Mil. 65*  
 Vulnus [...] quod acu punctum.  
 wound(N).NOM.SG which.NOM.N.SG needle.ABL puncture.PTCP.PFV.NOM.N  
 videretur.  
 seem.IPFV.SBJV.3SG  
 ‘A wound which seemed to have been punctured with a needle.’

<sup>130</sup> Cf. also Haudry 1970 for remarks on the double sense (creation and change-of-state) of *sterno* ‘strew’.

(216) *Latin; Ov. Met. 3, 41*

[Serpens] volubilibus squamosos  
 snake.NOM voluble.ABL.M.PL scaly.ACC.M.PL  
 nexibus orbes torquet.  
 writhing(M)ABL.PL coil(M)ACC.PL twist.3SG  
 ‘The snake twists his scaly coils in voluble writhings.’

(217) *Latin; Liv. 38, 28, 3*

Viam silice sternendam [...] locauerunt.  
 way(F)ACC flint-stone.ABL strew.PTCP.FUT.PASS.ACC.F establish.PRF.3PL  
 ‘They established that the way was to be paved with flint-stone.’

(218) *Latin; Stat. Theb. 6, 84*

Aeriam truncis [...] cumulare pyram.  
 high.ACC.F log.ABL.PL gather.INF pyre(F)ACC  
 ‘To build a high pyre out of logs.’

In all these examples there is a verb which is used as a manner modification of a creation event. Thus, in (214), the DP *mulsum* is not mixed with anything, but is rather the result of a mixing process, and, hence, does not exist before that process. It is crucial to have in mind that *mulsum* refers to a mixture of liquids (specifically, wine and honey), in opposition to *merum*, which means ‘pure, unmixed wine’: *mulsum* denotes, undoubtedly, the result of the event specified by the verb, namely, mixing. In the same way, a wound (*vulnus*) appears through puncturing (see (215)), the snakes’ coils (*orbes*) appear through twisting (see (216)), the way (*viam*) is created through a strewing action (see (217)) and a pyre (*pyram*) is created by accumulating (trunks) (see (218)). The non-creation use of all these five verbs does not elicit these interpretations of the objects:

(219) *Non-creation uses of the verbs in (214) through (218)*

a. *Latin; Hor. Sat. 2, 4, 55*

Surrentina [...] miscet faece Falerna vina.  
 Surrentinian.ACC.N.PL mix.3SG dregs.ABL Falernian.ABL wine(N)ACC.PL  
 ‘He mixes Surrentinian wines with Falernian dregs.’

b. *Latin; Cels. 5, 28*

In-cidi enim cutis debet, aut acu  
 in-cut.INF.PASS indeed skin.NOM must.3SG or needle.ABL  
pungi.  
 puncture.INF.PASS  
 ‘The skin must be cut into, or punctured with a needle.’

c. *Latin; Ov. Met. 12, 475*

Stamina pollice torque.  
 yarn.ACC thumb.ABL wind.IMP.2SG  
 ‘Spin the yarn with your thumb.’

d. *Latin; Liv. 27, 47, 9*

[Fessi] sternunt corpora.  
 exhausted.NOM.M.PL strew.3PL body.ACC.PL  
 ‘Exhausted, they lay their own bodies down.’

e. *Latin; Liv. 24, 39, 5*

Vivi                      mortuis                      in-cidentes  
 alive.NOM.M.PL    dead.DAT.M.PL    in-fall.PTCP.PRS.NOM.M.PL  
cumularentur.  
 heap.IPFV.SBJV.PASS.3PL  
 ‘The ones alive would heap up when falling onto the dead ones.’

*Re*-prefixation allows to explore the semantics of CEOCs also in Latin. Consider the following example:

(220) *Latin; Cic. Cato, 83*

Neque vero eos solos convenire aveo quos  
 and.not certainly.them.ACC alone.ACC.PL encounter long.1SG whom.ACC.PL  
  
 ipse cognovi, sed illos etiam de quibus audivi  
 self.NOM.know.M.PR.1SG but those.ACC also about.whom.ABL.PL hear.PR.1SG  
  
 et legi et ipse conscripsi. Quo quidem  
 and read.PR.1SG and self.NOM write.PR.1SG which.ABL in\_fact  
  
 me proficiscentem haud sane quis facile  
 me.ACC depart.PTCP.PRS.ACC.M.SG not certainly who.NOM easily  
  
 re-traxerit nec tamquam Peliam re-coxerit.  
 back-drag.PR.1SG.nor as Pelias.ACC re-boil.PR.1SG

‘I certainly do not long to encounter only those whom I myself knew, but also those about whom I have heard and read and even written. Thus, it would not be easy to find someone who could drag me back when I depart, or, as Pelias was, reboil me.’

Cicero, talking about his fearlessness of death and his desire to see his forefathers, confesses that he would not like to share Pelias’s fate, a king who, according to the author, was dismembered and then boiled in a cauldron by the sorceress Medea, after which he came back out of the cauldron alive and rejuvenated.<sup>131</sup> The sense of *me* [...] *recoxerit* in (220) is, therefore, unequivocally, that of “creating *me* (Cicero) again as a result of a boiling process”, and not that of “boiling *me* again” (which Pelias —or, rather, Aeson: see footnote 131— had never before undergone).<sup>132</sup> Similarly, in the next example —where  $\sqrt{\text{COQU}}$ , referring to the submission of an object to the action of fire,

<sup>131</sup> A philological note. The identity of the rejuvenated man was, in fact, a different one. In Kelsey’s (1882) edition of Cicero’s *Cato Maior de senectute*, from which the excerpt is taken, we read the following note by James S. Reid: “A mistake of Cicero’s. It was not Pelias but his half-brother Aeson, father of Jason, whom Medea made young again by cutting him to pieces and boiling him in her enchanted cauldron. She, however, induced the daughters of Pelias to try the same experiment with their father; the issue, of course, was very different.” (Kelsey 1882: note to paragraph 83). See also Grimal 1969.

<sup>132</sup> There is another way to analyse *recoxerit* in this example. It is worth considering that it be a Figure UOC, with a locative *re-* ‘back’, meaning ‘boil me back’, that is, ‘bring me back (to life), through boiling’. The hypothesis gains strong support from the fact that *recoxerit* is coordinated with *retraxerit*, where *re-*, undoubtedly, has no restitutive or repetitive sense, but a Path (“back”) sense. In (221), however, no such analysis is possible: *re-* undoubtedly represents a restitutive adverbial prefix.

means ‘forge’— a repetitive reading of *re-* involving two forgings of the same (token) swords is impossible. Specifically, we must understand that new tokens of the same type of sword is created as a result of a forging event:

(221) *Latin; Verg. Aen. 7, 636*

Re-coquont patrios fornacibus enses.  
 re-forge.3PL paternal.ACC.M.PL furnace.ABL.PL sword(M)ACC.PL  
 ‘They forge the forefathers’ swords anew in the furnaces.’

A possible analysis for these predicates is the one suggested in (209). I illustrate with the analysis of the CEOC of (214):

(222) *An analysis of (214)*

[<sub>VP</sub> Qui [<sub>v</sub> [<sub>v</sub> v √MISC] mulsum]]]

In this analysis the root is merged as an adjunct to the eventive head, and the object is directly merged as an Incremental Theme at Compl-v. The question emerges now why this type of constructions is not possible in Romance and v-framed languages in general. Recall that in Section 1.5.2. it was proposed that in v-framed languages the v and the Path head undergo a process of Fusion at PF which prevents v to associate with an adjoined Manner root, since this adjunction creates a complex head which cannot undergo Fusion. Therefore, a Path-less structure, such as (222) should not, contrary to fact, be disallowed in v-framed languages, since v is not obliged to fuse with any head and may thus freely be merged with an adjunct Manner root. Mateu (2003:10) proposes, as the source of the mentioned v-/s-framed difference, that only s-framed languages allow a null verb (see V<sub>1</sub> in (223)), heading the main argument structure, to be combined with a phonologically full verb constituting a subordinate unergative configuration (see [<sub>V2</sub> √SMILE-V<sub>2</sub>] in (223)).<sup>133</sup>

(223) *Mateu’s (2003:7) analysis of (207)*

[<sub>V1</sub> [<sub>V2</sub> √SMILE-V<sub>2</sub>]-V<sub>1</sub>] [<sub>DP</sub> her thanks]]]

From a theoretical point of view, and, particularly, under the perspective that cross-linguistic differences stem solely from properties of the lexicon, it is not clear why v-framed languages should disallow the *combination* of the two argument structure configurations in (223). From an empirical perspective, this analysis precludes the possibility that in v-framed languages there be instances of combinations akin to that in (223). Specifically, I have argued in Sections 1.4 and 1.5.2, that such combinations are possible when there is no Path involved in the predicate, in existential predicates with a locative expression:

(224) *Catalan; Mateu 2002:188*

En aquesta coral n’hi canten molts, de nens.  
 in this choir PARTVE=LOC sing.3.PL many.PL of child.PL  
 ‘There are many children who sing in this choir.’

<sup>133</sup> Mateu & Rigau (2001) propose a similar analysis to the s-/v-framed distinction in general.



The fact that it is precisely these arguably Path-less constructions the ones in which conflation is allowed in v-framed languages, suggests that the v-/s-framed distinction is linked to the presence of Path and its expression, conflated or independent.<sup>134</sup>

I would like to propose a possible solution for this paradox, a solution inspired by Marantz's (2005) analysis of creation predicates like *bake a cake*. Marantz proposes that these predicates may be analysed as change-of-state predicates involving a transition from non-existence into existence. Thus, in *bake a cake*, there is some transition leading to a cake. In fact, CEOCs are characterised by the interpretation that the result of the event is the entity referred to by the object.<sup>135</sup> Since I have claimed that in change-of-state/location predicates the result of the event is encoded as Compl-Place, it follows that the object in a CEOC is (first) merged as Compl-Place, and, hence, receives a Ground interpretation. In turn, if these predicates are really change-of-state predicates, they must involve a Path projection. But, if we are right to claim that Path is involved in the s-/v-framedness variation, we get an answer to the question why CEOCs do not obtain in v-framed languages: they do not obtain because in these languages a predicate embedding a PathP projection is incompatible with a v head associated, by adjunction, with a Manner root. By contrast, s-framed languages like Latin readily accept the adjunction of a Manner root to the v head in CEOCs, since the Path head is independently realised—in our terms, it is not fused with v. But, if CEOCs are change-of-state predicates and the object is a Ground, merged at Compl-Place, where is the Figure? I propose that, in fact, CEOCs must receive the same analysis as Ground UOCs: they are transition predicates without a Figure, and with a Ground that is also interpreted as a Measurer (at Spec-Path). I illustrate with the analysis of (214):

(225) *An analysis of a CEOC in terms of a Ground UOC*

[<sub>vP</sub> Qui [<sub>v'</sub> [<sub>v</sub> √MISCE] [<sub>PathP</sub> mulsum [<sub>Path'</sub> Path [<sub>PlaceP</sub> Place ~~mulsum~~]]]]]

The interpretation of the object as the result of a transition (the created object), is licensed when *mulsum* is Ground, at Compl-Place. On the other hand, when Path is merged, it provokes the ascension of the only DP in its c-commanding domain, namely the Ground *mulsum*, to its specifier. By virtue of this new position *mulsum* is interpreted as a Measurer. In the present case, this means that the mixing event is over whenever the whole quantity of *mulsum* 'honeyed wine' is created. On the other hand, the root √MISCE is adjoined to v, and specifies the event as a mixing event that has as a result the creation of *mulsum*. In turn, if a structure such as the above arrives at PF in a v-framed language, the requirement of fusing Path and v would clash with the fact that v forms a complex head with the root √MISCE. The derivation, hence, would crash at PF:

<sup>134</sup> Mateu (2010), revamping Snyder's (2001) empirical claim that the availability of complex predicates depends on the availability of productive compounding (his *Compounding Parameter*; see Chapter 4, Section 5.1 for more discussion) proposes that v-framed languages are characterised by the fact that they disallow, unlike s-framed languages, "compounding of a root with a null light verb during the syntactic derivation" (Mateu 2010:26). However, it is not at all clear why such compounding operation should be allowed in some languages and not in others.

<sup>135</sup> É. Kiss (2008a:30) makes a similar claim about creation predicates in Hungarian: "[...] in creation/coming-into-being sentences the change is from non-existence to existence, or from absence to presence. Events of this type are completed when the referent of their theme appears in its entirety; the result is the theme itself." According to this author creation predicates are the only ones expressing an accomplishment without a particle or any other resultative predicate in Hungarian. See below for a parallelism in Latin.

(226) *Catalan rendition of (214)*

\*Qui barreja el vi. (In the creation sense.)  
who mixes the wine

As it turns out, an analysis unifying CEOCs and Ground UOCs gains empirical support from the fact that both constructions involve, and may overtly manifest, a demotion of the Figure argument. This is shown by the next Ground UOC involving a speaking verb. Observe that the utterance argument is expressed in the ablative, as an adjunct:

(227) *Latin; Verg. Aen. 6, 40*

Talibus ad-fata Aenean...  
such.ABL.PL at-say.PTCP.PRF.NOM.F.SG Aeneas.ACC  
'Having addressed Aeneas with those words...'

Likewise, in the next CEOCs, the entity which is strewn (*sternendam*) and the entity which is gathered (*cumulare*) to make the way (*viam*) and the pyre (*pyram*), respectively, are demoted as ablative adjuncts:

(228) *Latin; Liv. 38, 28, 3*

Viam silice sternendam [...] locauerunt.  
way(F)ACC flint-stone.ABL strew.PTCP.FUT.PASS.ACC.F establish.PRF.3PL  
'They established that the way was to be paved with flint-stone.'

(229) *Latin; Stat. Theb. 6, 84*

Aeriam truncis [...] cumulare pyram.  
high.ACC.F log.ABL.PL gather.INF pyre(F)ACC  
'To build a high pyre out of logs.'

Finally, I point out that CEOCs must be distinguished from other constructions, as the next ones, with like creation interpretation:

(230) *Latin; Hor. Epist. 1, 18, 15*

Quod placet ut non acriter e-latrem?  
what.ACC please.3SG that not fiercely out-bark.SBJV.1SG  
'That I should not bark out fiercely what pleases me?'

(231) *Latin; Cic. Att. 7, 19*

[Eam epistulam] eram  
that.ACC letter.ACC be.IPFV.1SG  
e-lucubratu.  
out-work\_by\_the\_light\_of\_a\_lamp.PTCP.PFV.NOM.M.SG  
'I had worked that letter out by the light of a lamp.'

(232) *Latin; Verg. Aen. 1, 427*

Columnas rupibus ex-cidere.  
column.ACC.PL boulder.ABL.PL out-cut.INF  
'To hew the columns out of the boulders.'

(233) *Latin; Liv. 21, 26, 8*

[Naves] cavabant ex singulis arboribus.  
ship.ACC.PL carve.IPFV.3PL out single.ABL.PL tree.ABL.PL  
'They carved a ship out of each tree.'

I claim that these constructions, provided with a distinct predicative piece—which I have underlined above: a prefix in (230), (231) and (232) and a PP in (233)—, are Figure UOCs. Hence, the object is not first merged as Compl-Place, but as Spec-Place, and Compl-Place is occupied by the predicative piece (by the prefix, and by a DP in (232) and (233)). I illustrate with an analysis of (231):

(234) *An analysis of (231)*

[<sub>VP</sub> (ego) [<sub>v'</sub> [<sub>v</sub> v √<sub>LUCUBR</sub>] [<sub>PathP</sub> [<sub>DP</sub> eam epistulam] [<sub>Path'</sub> Path [<sub>PlaceP</sub> [<sub>DP</sub> ~~eam epistulam~~] [<sub>Place'</sub> Place √<sub>E</sub>]]]]]]]

By virtue of this analysis, the creation interpretation of the predicates above is but an inference of their transition semantics. Thus, in (230) and (231) the objects *quod placet* and *eam epistulam* are Figures of which a final state/location represented by the root √<sub>E</sub> is predicated. This state/location is, of course, metaphorical (in (231) it could be understood deictically, as “outside one’s own intellect”). In turn, in (232) and (233) the transition involves “out of the boulders” and “out of the trees”, respectively, as final locations.

### 3.4 Locative Alternation

#### 3.4.1 Approaches to the LA

The Locative Alternation (LA) is a widely known and certainly not understudied phenomenon which can be illustrated by the next pair of sentences:

(235)

- a. Sue loaded apples into the basket.
- b. Sue loaded the basket with apples.

The sentences in (235) contain the same verb and correspond to the same conceptual scene: by virtue of Sue’s action, apples end up in some basket. However, each sentence has syntactic and semantic properties of its own. Thus, in (235)a, the change-of-location (COL) alternant, the object is the thing being located in a place, which is expressed via a PP; in (235)b, the change-of-state (COS) alternant, the syntax of those two participants of the event is reversed, so that the object expresses the location and the PP encodes the thing being moved. Moreover, it has very often been observed that while (235)b entails that the basket ends up full of apples, (235)a does not. (235)b exhibits, therefore, the phenomenon known as “holistic effect”.<sup>136</sup>

Many studies have been devoted to the LA and a division can be made into two basic types of approach. On the one hand, there are approaches where the COS alternant is derived from the COL alternant, which is, thus, more “primitive” (see Larson 1990, Damonte 2004, Wunderlich 2006, among others). These approaches, basing on classical theta-roles such as Theme and Location, aim at preserving a privileged linking relation between the Theme role (*apples* in (235)) and the syntactic position of object. On the other hand, there are approaches where the alternation is not seen as a phenomenon to be explained in terms of a derivational relation between both alternants (see Pinker 1989, Mulder 1992, Baker 1997, Mateu 2001c, Borer 2005b, among others). These approaches adopt a significantly more abstract view of theta-roles which allows them an

<sup>136</sup> See Anderson 1971, Dowty 1991 and Beavers 2006, among others. See also Section 3.2.2.1.

isomorphic mapping between the object and its thematic interpretation without resort to a derivational mechanism. In particular, for these approaches both *apples* and *the basket* receive the same “theta-role”, so it comes as no surprise that they are both realised as objects. Here I will follow a hybrid approach to the LA: although I believe that the non-derivational approach is basically right for most cases of LA, I will propose that some instances of LA do involve, at least in Latin, the derivation from one alternant to the other.

### 3.4.2 The LA and the s-/v-framed distinction

Importantly, the LA is the locus of cross-linguistic variation, being quite rare in v-framed languages. Specifically, COL alternants are hard to obtain in these languages (Mateu 2001c; see Rosselló 2008 for Catalan). I illustrate this cross-linguistic asymmetry with the following failed alternations in Catalan, which are perfectly acceptable in English. Importantly, the a-sentences are COL alternants and the b-sentences are COS alternants:

#### (236) *Catalan* ruixar ‘spray’

- a. \*En Marc va ruixar aigua sobre la planta.  
     the Marc PRF.3SG spray.INF water on the plant  
     ‘Marc sprayed water onto the plant.’
- b. En Marc va ruixar la planta {d’/amb} aigua.  
     the Marc PRF.3SG spray.INF the plant of/with water  
     ‘Marc sprayed the plant with water.’

#### (237) *Catalan* untar ‘smear’

- a. \*<sup>/?</sup>La Maria va untar mantega a la llescade pa.  
     the Maria PRF.3SG smear.INF butter at the toast  
     ‘Maria smeared butter onto the toast.’
- b. La Maria va untar la llescade pa {de/amb} mantega.  
     the Maria PRF.3SG smear.INF the toast of/with butter  
     ‘Maria smeared the toast with butter.’

Attending to this fact, Mateu (2001c) entertains the hypothesis that COL alternants of the Germanic kind (see (235)a) are s-framed constructions, and hence, unavailable in v-framed languages. For instance, (236)a and (237)a would be ungrammatical in Catalan because they involve the combination of a verb naming the manner in which the event takes place (spraying, smearing) and a PP specifying the final location of the entity encoded by the object (*sobre la planta* ‘on the plant’, *a la llesca de pa* ‘onto the toast’).

If the availability of the LA is related to s-framedness, we expect Latin to display the LA freely. This prediction is born out, as shown by the examples (238) through (242), where a-sentences are COL alternants and b-sentences are COS alternants:

#### (238) *Latin* spargo ‘scatter’

- a. *Cato*, Agr. 36  
     Stercus columbinum spargere oportet  
     manure(N)ACC of\_pigeon.ACC.N scatter.INF be\_necessary.INF  
     in pratum.  
     in meadow.ACC  
     ‘Pigeon manure must be scattered onto the meadow.’

- b. *Cato, Agr. 103*  
Pabulum [...] amurca spargito.  
fodder.ACC amurca.ABL scatter.IMP.FUT.2SG  
‘Scatter the fodder with amurca.’
- (239) *Latin sterno ‘spread’*  
a. *Ov. Fast. 4, 653*  
Sternitur in duro vellus utrumque solo.  
spread.PASS.3SG in hard.ABL.N fleece.ACC either.ACC floor(N)ABL  
‘Both fleeces are spread on the hard floor.’  
b. *Cic. Mur. 75*  
Stravit pelliculis haedinis lectulos.  
spread.PRF.3SG skin(F)DIM.ABL.PL of\_goat.ABL.F.PL bed.DIM.ACC.PL  
‘He covered the little beds with goatskins.’
- (240) *Latin lino ‘smear’*  
a. *Ov. Medic. 81*  
Medicamina [...] lini per corpora possint.  
makeup.NOM.PL smear.INF.PASS through body.ACC can.SBJV.3PL  
‘Such a makeup as may be smeared on the body.’  
b. *Ov. Pont. 1, 2, 16*  
Vipereo spicula felle linunt.  
of\_viper.ABL.M arrow.ACC.PL bile(M)ABL smear.3PL  
‘They smear their arrows with viper bile.’
- (241) *Latin farcio ‘stuff’*  
a. *Sen. Dial. 3-4-5, 3, 19, 4*  
In os farciri pannos imperavit.  
in mouth.ACC stuff.INF.PASS rag.ACC.PL order.PRF.3SG  
‘He ordered to stuff the rags into his mouth.’  
b. *Plin. Nat. 36, 172, 5*  
Medios parietes farcire fractis  
central.ACC.M.PL wall(M)ACC.PL stuff.INF broken.ABL.N.PL  
caementis.  
quarry-stone(N)ABL.PL  
‘To stuff the central part of a wall with fragments of quarry-stones.’
- (242) *Latin stipo ‘cram’*  
a. *Varro, Ling. 5, 36*  
Asses [...] in aliqua cella stipabant.  
coin.ACC.PL in some.ABL.F.SG room(F)ABL.SG cram.IPFV.3PL  
‘They used to cram the coins in some room.’  
b. *Cic. Phil. 3, 30*  
Senatum stiparit armatis.  
senate.ACC cram.PRF.SBJV.3SG armed.ABL.M.PL  
‘(That) he had crammed the senate with armed men.’

I provide, below, a non-derivational analysis of the LA in (238). I analyse the COL alternant in (243)a and the COS alternant in (243)b:

(243) *An analysis of (238)*

- a. [<sub>VP</sub> PRO [<sub>V</sub> [<sub>V</sub>  $\sqrt{\text{SPARG}}$ ] [<sub>PathP</sub> stercus [<sub>Path</sub> Path [<sub>PlaceP</sub> ~~stercus~~ [<sub>Place</sub> [<sub>Place</sub> Place  $\sqrt{\text{IN}}$ ] pratum]]]]]]]  
b. [<sub>VP</sub> (tu) [<sub>V</sub>  $\sqrt{\text{V}}$  [<sub>PathP</sub> pabulum [<sub>Path</sub> Path [<sub>PlaceP</sub> ~~pabulum~~ [<sub>Place</sub> Place  $\sqrt{\text{SPARG}}$ ]]]]]]]

Observe that in this non-derivational analysis the LA presented by *spargo* ‘scatter’ boils down to the possibility of associating the same root with different positions of one basic abstract configuration encoding an externally originated transition. Specifically, in the COL alternant the root  $\sqrt{\text{SPARG}}$  ‘scatter’ is merged as an adjunct to *v*, and is interpreted, consequently, as a Manner Co-event of the transition (change-of-location) event. The COL alternant is, as desired, an s-framed construction. In the COS alternant the root is merged at Compl-Place, and is interpreted as a Terminal Ground, as the final state of a transition (change-of-location) event. As regards the object, it is a Figure in both cases, since it is first merged at Spec-Place. However, since in the COL alternant it appears in a predicative relation with a location, codified by *in pratum* —with a root  $\sqrt{\text{IN}}$  specifying the head Place and inducing a spatial reading thereof—, it is interpreted as an entity which changes location. By contrast, in the COS alternant it holds a predicative relation with the verbal root, and is therefore interpreted as an entity which enters into a specific state (a state of being “scattered”, identified with  $\sqrt{\text{SPARG}}$ ). Observe, importantly, that I am positing the projection of a PathP for both COL and COS alternants, and that in both cases the Path head raises the nearest DP in its c-commanding domain, the Figure, to Spec-Path, where it is interpreted as a Measurer. This means that in both cases the so-called holistic effect must emerge, as is the case, arguably: in (243)a *stercus* measures out the event as much as *pabulum* does in (243)b. This is in tune with Dowty’s (1979) observation that the objects of either COL or COS alternants are interpreted as incremental themes, and that, if possessing the appropriate quantificational properties, they might induce telicity in the predicate.<sup>137</sup>

(244) Dowty 1979, *apud* Baker 1997:88

- a. John sprayed this whole can of paint onto subway cars in an hour.
- b. John sprayed this wall with paint in an hour.

Thus, the fact that *pratum* in (238)a is not interpreted holistically (the field need not end up covered with manure) is a syntactic effect: it cannot raise to Spec-Path, and, hence, cannot be interpreted as a Measurer.

Observe, last, that I am treating the ablative *amurca* in the COS alternant of (238)b as an adjunct, as also proposed by Rappaport & Levin 1988, Mateu 2001c and Borer 2005b.<sup>138</sup>

<sup>137</sup> See also Pinker 1989:67 and Borer 2005b:92, who capitalises on this fact to show that in both COL and COS the object is a subject-of-quantity, sitting at Spec-Asp<sub>Q</sub> (see Chapter 2, Section 2.2.3).

<sup>138</sup> By contrast, and specifically for Latin, Pinkster (1995:17) considers these ablatives as arguments (*complements* in his terminology). Lemaire (1983) does not make a distinction between the ablative of the COS alternant and the accusative of the COL alternant in terms of the argument/adjunct distinction. On the other hand, Hirschbühler & Labelle (2009) claim that in French COS alternants, *avec*-PPs (*avec* = ‘with’) behave like adjuncts while *de*-PPs (*de* = ‘of’) behave like arguments. For instance, some verbs seem to require the *de*-PP obligatorily:

(i) French; Hirschbühler & Labelle 2009:266

- a. ?\*Luc a criblé le mur (avec des balles).
- b. Luc a criblé le mur de balles.

‘Luc riddled (lit. sift-ed) the wall with bullets.’

I suspect that the same phenomenon obtains in Catalan (*amb*-PPs vs. *de*-PPs) and Spanish (*con*-PPs vs. *de*-PPs). However, I have not found evidence of this double expression of the “demoted change-of-location Figure” in Latin.

### 3.4.3 The LA and prefixation. The heterogeneity of the LA

The LAs shown in examples (238) through (242) do not exhaust the exploration of the LA in Latin. Rather, it has been observed (Hofmann & Szantyr 1972, Lemaire 1983), that this form of argument structure alternation is very frequently mediated through prefixation. In the following sections I capitalise, therefore, on the patterns of prefixation shown by both alternants in the LA in Latin, and put them in relation both with other constructions of the language and with similar patterns in other languages. I purport to show that the different morphological manifestations of the LA in this language suggest that it might be a rather heterogenous phenomenon, calling for a non-uniform account.

#### 3.4.3.1 Prefixation in the COL alternant

One first prefixal pattern shown by the LA in Latin involves the presence of a prefix in the COL alternant. The verbs *laedo* ‘hit, harm’ and *quatio* ‘shake, agitate’ illustrate this pattern (I keep presenting the COL alternant first):<sup>139</sup>

(245) *Latin in-lido ‘thrust against’ and laedo ‘hit’*

a. *Verg. Aen. 1, 112*

Notus                      [naves]                      in-liditque                      vadis.  
south\_wind.NOM      ship.ACC.PL      in-hit.3SG=and      sandbank.DAT.PL  
‘The south wind thrust the ships against the sandbanks.’

b. *Plaut. Bacch. 281*

Lembus      ille                      mihi                      laedit                      latus.  
boat.NOM      that.NOM      me.DAT      hit.3SG      side.ACC  
‘That boat hit my side.’

(246) *Latin; quatio ‘shake, agitate’ and in-cutio ‘stamp against’*

a. *Quint. Inst. 2, 12, 10*

Terrae                      pedem                      in-cutere.  
earth.DAT      foot.ACC      in-shake.INF  
‘To thrust the foot against the earth.’

b. *Hor. Carm. 1, 4, 7*

Terram      quatiunt      pede.  
earth.ACC      shake.3PL      foot.ABL  
‘They shake the earth with their feet.’

The prefixed counterparts *incutio* and *illido* are not found as COS alternants (Lewis & Short 1879). In the analysis entertained here, the prefix corresponds to a root merged as an adjunct to Place, where it is thus interpreted. The verbal root is merged as an adjunct to v, specifying the kind of transition undergone by the Figure.

#### 3.4.3.2 Spatial prefixation in the COS alternant

As shown by Lemaire (1983), many cases of LA involve a same prefix for both alternants. I illustrate with *circumicio* ‘throw around’ and *induco* ‘smear’:

<sup>139</sup> *Laedo* and *quatio* can be said to enter, in (245) and (246), what Levin and Rappaport Hovav (2005) call the *with/against* alternation, exemplified below:

(i) *Levin & Rappaport Hovav 2005:187*

a. Kerry hit the stick against the fence.  
b. Kerry hit the fence with the stick.

(247) *Latin circum-icio* ‘throw around, surround’

a. *Liv. 38, 19, 5*

Fossam [...] uerticibus iis, quos  
ditch.ACC peak(M)DAT.PL those.DAT.M which.M.ACC.PL  
in-sederant, circum-iecere.  
in-sit.PLUPRF.3PL around-throw.PRF.3PL

‘They put a ditch around the peaks where they had settled down,’

b. *Tac. Ann. 2, 11, 2*

Planitiem saltibus circum-iectam.  
plain(F)ACC forest.ABL.PL around-throw.PTCP.PFV.ACC.F  
‘A plain surrounded by forests.’

(248) *Latin in-duco* ‘smear’

a. *Cels. 7, 7*

Ulceri medicamentum [...] in-ducatur.  
ulcer(N)DAT.SG medicament.ABL.N.SG in-lead.SBJV.PASS.3SG  
‘Let the medicament be smeared into the ulcer.’

b. *Plaut. Most. 827*

Postes [...] sunt in-ducti pice.  
door-post.NOM.PL be.PRS.3PL in-lead.PTCP.PFV.NOM.M.PL pitch.ABL.SG  
‘The door-posts have been smeared with pitch.’

In the COS alternants of these instances of the LA the objects, which happen to be passivised in both examples, hold a semantic relation with the prefixes, namely, as Grounds. Thus, in (247)b the forests (*saltibus*) are around (*circum-*) the plain (*planitiem*), and in (248)b the pitch (*pice*) is smeared onto (*in-*) the door-posts (*postes*). Thus, these cases of COS alternants can be treated as Ground UOCs, with no DP merged at spec-Place and with the Ground raising to Spec-Path:

(249) *An analysis of (247)b*

[<sub>vP</sub> [<sub>v</sub> V  $\sqrt{\text{ICI}}$ ] [<sub>PathP</sub> planitiem [<sub>Path'</sub> Path [<sub>PlaceP</sub> [<sub>Place</sub> Place  $\sqrt{\text{CIRCUM}}$ ] planitiem]]]]]

Therefore, in these cases of COS alternants endowed with a spatial prefix, I argue for a derivational COL-COS approach to the LA: these COS are derived from structures where the object is first merged as a Ground and there is no Figure merged at spec-Place.

### 3.4.3.3 *Com*-prefixation in the COS alternant

Finally, I want to call attention upon the fact that many verbs which are prefixed with *co(m)-* ‘together’ are only interpreted as COS alternants. Thus, in the following examples the object (passivised or not) —*Campum Martium*, *ora* and *me*, respectively— seems to be interpreted as an entity which changes state through a locating event (of putting buildings, makeup or tears, respectively):

(250) *Latin; Cic. Att. 13, 33a, 1, 6*

Campum Martium co-aedificari.  
Campus\_Martius.ACC together-build.INF.PASS  
‘That the Campus Martius be covered with buildings.’



(251) *Latin; Ov. Rem. 351*

Con-linit ora venenis.  
together-smear face.ACC makeup.ABL.PL  
'She covers her face completely with makeup.'

(252) *Latin; Cic. Planc. 99*

[Me] con-spersitque lacrimis.  
me.ACC together-scatter=and tear.ABL.PL  
'And he covered me with tears.'

By contrast, the absence of the *com-* prefix licenses a COL reading. Thus, the following predicates feature an unprefix verb and present a COL reading and a COL syntax: the object (again, passivised or not) is interpreted as a Figure and *in arce*, *per corpora* and *in pratum* are the Grounds:

(253) *Latin; Plin. Nat. 22, 44, 3*

In arce templum aedificaret.  
in citadel.ABL temple.ACC build.IPFV.SBJV.3SG  
'That he built a temple in the citadel.'

(254) *Latin; Ov. Medic. 81*

Medicamina [...] lini per corpora possint.  
makeup.NOM smear.INF.PASS through body.ACC can.SBJV.3PL  
'Such a makeup as may be smeared on the body cos.'

(255) *Latin; Cato, Agr. 36*

Stercus columbinum spargere oportet in pratum.  
manure(N)ACC of\_pigeon.ACC.N scatter.INF be\_necessary.3SGin meadow.ACC  
'Pigeon manure must be scattered onto the meadow.'

Likewise, a spatial prefix licenses, as we saw above for *illido* and *incutio*, a COL reading of the predicate. Thus, in the next examples, the passivised objects *sacellum* and *farina* and the object *quidquid pingue secum tulit* are interpreted as Figures, while *in qua*, *arentibus locis* and *terrae* (in combination with the prefix) are interpreted as Grounds:

(256) *Latin; Cic. Har. Resp. 31*

Domo tua, in qua [...] est in-aedificatum.  
house(F)ABL your.ABL.F in which.ABL.F is in-build.PTCP.NOM.N  
sacellum.  
little\_sanctuary.NOM.N  
'Your house, in which a little sanctuary was built.'

(257) *Latin; Sen. Nat. 4a, 2, 9*

[Nilus] quidquid pingue secum tulit,  
Nile.NOM whatever.ACC rich.ACC with\_it carry.PRF.3SG  
arentibus locis ad-linit.  
dry.DAT.PL place.DAT.PL at-smear.3SG  
'The Nile smears onto the dry places whatever richness it carries.'

(258) *Plin. Nat. 23, 162, 4*

[Farina] in-spergitur ulceribus.  
flour in-scatter.PASS.3SG ulcer.DAT.PL  
'The flour is sprinkled into the ulcers.'

Inspired by Hoekstra & Mulder's (1990) and Mulder's (1992) analysis of the *be*-prefix in Dutch, I want to propose that, in fact, the COS variants with a *com*-prefix are a case of s-framed constructions where the root is, again, merged as an adjunct to *v*, and where the Ground is, in fact, the root which will end up as prefix. This root is interpreted, in combination of the root of the verb, as inducing a complete affection of the entity encoded by the Figure DP.<sup>140</sup> For instance, in (250) the Campus Martius is entailed to be completely covered with buildings. Thus, in these *com*-prefixed COS alternants what is predicated of the Figure argument is the prefix itself (its root, to be precise), and not the verbal root. On the other hand, they are not cases of Ground UOCs, that is, the object is not a promoted Ground. I illustrate with the analysis of (250):

(259) *An analysis of (250)*

[<sub>vP</sub> [<sub>v</sub> *v*  $\sqrt{\text{AEDIFIC}}$ ] [<sub>PathP</sub> [<sub>DP</sub> *Campum Martium*] [<sub>Path'</sub> *Path*] [<sub>PlaceP</sub> [<sub>DP</sub> *Campum Martium*] [<sub>Place'</sub> *Place*  $\sqrt{\text{COM}}$ ]]]]]

Observe that, as usual, the merging of *PathP* as a sister to *v* brings about movement of the highest DP, *Campum Martium*, onto its specifier. A paraphrase for this predicate would be “to affect the Campus Martius completely through a building event”.

That these *com*-prefixed COS alternants are s-framed constructions is supported by the fact that they mirror analogous predicates in other languages claimed to be s-framed. Thus, in the following sentences the particles *be* (Dutch), *be* (German) and *meg* (Hungarian) induce a complete affection interpretation:

(260) *Dutch; Hoekstra & Mulder 1990:20*

Hij be-hing                      de    muur    met    posters.  
he    *be*-hang.PST.3SG    the    wall    with    posters  
'He covered the whole wall with posters.'

(261) *German; Wunderlich 1987:298*

Er be-giesst            die            Blumen            mit    Wasser.  
he   *be*-pour.3SG    the.ACC.PL    flower.ACC.PL    with    water.DAT  
'He waters the plants (with water).'

(262) *Hungarian; Ackerman 1992:59*

A    paraszt    meg-rakta                      a    szekeret    (szénával).  
the   peasant   *meg*-load.PST.3SG    the   cart.ACC    hay.INSTR  
'The peasant loaded the cart full with hay.'

Specifically for Dutch, Hoekstra & Mulder (1990:18-21) and Mulder's (1992:179-180) provide evidence that the prefix *be*-, inducing complete affection, is in fact a predicate heading a small-clause-like structure, since it happens to be in complementary distribution with a resultative AP (*vol* in the example):

<sup>140</sup> This “complete affectedness” sense of *com*- is observed by Moussy (2005:256), but not by Leumann (1975) or García Hernández (1980). Lemaire (1983:293) does note the contrast between *con-scribo* ‘cover with inscriptions’ and *in-scribo* ‘inscribe, write in(to) or upon’, but ascribes the opposition to an alleged “contact” sense of *com*- as opposed to *in*-, which introduces the sense of insertion. However, this cannot explain cases like (250), or, as we shall see (264)b, where there is no sense of contact but where the sense of complete affectedness is quite perspicuous.

(263) *Dutch; Mulder 1992:179*

\**Hij be-hangt de muur vol me foto's.*  
 he be-hangs the wall full with photos

As shall become clear in Chapter 4, I cannot apply this test to Latin, since Latin does not license complex AP resultatives. However, *com-* can change the argument structure properties usually displayed by the unprefix verb, and, in that sense, it is amenable to an analysis along the lines of those proposed above for other prefixes which induce changes in argument structure. I underpin this claim with the contrast between *mingo* ‘piss’, an intransitive creation verb (see (264)a) and *commingo* ‘piss all over’ (see (264)b):

(264) *Latin mingo ‘piss’ and commingo ‘piss all over’*

a. *Mart. 3, 78, 1*

Minxisti                      currente                      semel,                      Pauline,                      carina.  
 piss.PRF.2SG                      run.PTCP.PRS.ABL.F                      once                      Paulinus.VOC                      boat.ABL  
 ‘Once you pissed while your boat was sailing, Paulinus.’

b. *Hor. Sat. 1, 3, 90*

Com-minxit                      lectum.  
 together-piss.PRF.3SG                      bed.ACC  
 ‘He pissed the bed.’

As usual, I would treat the unselected object *lectum* in (264)b as a Figure, while the prefix originates as a predicative root in Compl-Place and the verbal root is an adjunct to v:

(265) *An analysis of (264)b*

[<sub>VP</sub> [<sub>v</sub>  $\sqrt{\text{MING}}$ ] [<sub>PathP</sub> [<sub>DP</sub> *lectum*] [<sub>Path'</sub> *Path* [<sub>PlaceP</sub> [<sub>DP</sub> ~~*lectum*~~] [<sub>Place'</sub> *Place*  $\sqrt{\text{COM}}$ ]]]]]

From this discussion a possible scenario emerges where the LA might be more heterogenous than previously thought. Specifically, COS alternants may respond to different syntactic strategies based on the type of element merged as the Terminal Ground at Compl-Place. They can be change-of-state predicates with the verbal root merged as a Terminal Ground (see (238)b), they can correspond to Ground UOCs, with the object first merged as a Terminal Ground (see (247)b) and they can correspond to predicates with the prefix *com-*, inducing a complete affectedness semantics, merged as a Terminal Ground (see (250)). In the second, case, crucially, the COS alternant can be said to derive from a basically COL structure lacking, however, a Figure. I summarise the scenario for the LA in both v- and s-framed languages in the table below:<sup>141</sup>

<sup>141</sup> Hofmann & Szantyr (1972:35) call attention upon a kind of LA built around adjectival predicates:

(i) *Latin; based on Hofmann & Szantyr 1972:35*

a. flores                      plenae                      in campo  
 flower(F)NOM.PL                      full.NOM.F.PL                      in field.ABL  
 b. campus                      floribus                      plenus  
 field(M)NOM                      flower.ABL.PL                      full.NOM.M

These examples show that *plenus* ‘full’ could be predicated both of the entity which is full of something (see (ib)) and of the matter or objects of which something is full (see (ia)). I leave this striking kind of LA for future research.

(266) *The LA in v- and s-framed languages*

			V-FRAMED LANGUAGES <sup>142</sup>	S-FRAMED LANGUAGES
COL ALTERNANTS (WITH OR WITHOUT A PREFIX)			*/?	(238)a: Stercus columbinum <u>spargere</u> oportet in pratū. (248)a: Ulceri medicamentum <u>in-</u> <u>ducatur</u> .
COS ALTERNANTS	DERIVED: GROUND UOCs		*	(248)b: Postes sunt <u>in-ducti</u> pice.
	UNDERIVED	WITH AN INDEPENDENT PREDICATIVE PARTICLE ( <i>COM-</i> )	*	(250): Campum Martium <u>co-</u> aedificari. (260): Hij <u>be-hing</u> de muur met posters.
		WITH NO INDEPENDENT PREDICATIVE PARTICLE	(236)b: En Marc va ruixar la planta {de/amb} aigua.	(238)b: Pabulum amurca <u>spargito</u> .

### 3.5 *Pseudoreversatives*

The last constructions I would like to deal with are the ones McIntyre (2002:114) calls *Pseudoreversatives*, which, to my knowledge, have not been dealt with before in the literature on Latin. These are constructions where “the result expressed or implied by the base verb gets reversed by adding a particle which contradicts this result” (McIntyre 2002:114).<sup>143</sup> The next German particle-verbs illustrate:

(267) *German; McIntyre 2002:114*

- a. aus-parken  
out-park.INF  
‘Drive (a car) out of a parking space’
- b. ab-schwellen  
down-swell.INF  
‘Swell down, become less swollen’
- c. los-binden  
free-tie.INF  
‘Untie (a horse, etc.)’

These constructions once again exemplify the s-framed pattern: the verb indicates the nature of the process involved and a morphophonologically different element encodes the Core Schema. Thus, in (267)a the conceptual scene evoked is the same as that evoked by the verb *parken*, the driving of a vehicle, but the result part of the event usually entailed by *parken* is missing: the car does not end up in the parking. The addition of the particle *aus-* imposes a different result state: the car ends up out (of the

<sup>142</sup> See Munaro 1994 for alleged Italian cases of LA involving a contrast between an unprefix verb and a prefixed verb.

<sup>143</sup> See also Stiebels 1996.

parking). Pseudoreversatives are, therefore, a particularly interesting probe into the nature of the semantic contribution of the verb in s-framed constructions: it is truly understood as an adjunct, a modifier of the event, the result being codified by an independent element (the particle, in the above examples). Unsurprisingly, Latin features pseudoreversatives, as exemplified below (I underline the prefix licensing the construction and being interpreted as the Core Schema):

(268) *Latin; Verg. Aen. 4, 325*

Quid moror? an mea Pygmalion  
 what.ACC delay.1SG whether mine.ACC.N.PL Pymalion.NOM  
 dum moenia frater de-struat [...]?  
 until wall(N).ACC.PL brother.NOM down-build.SBJV.3SG  
 ‘What am I waiting for? Maybe for my brother Pygmalion to destroy my walls?’

(269) *Latin; Plaut. Curc. 219*

Valetudo de-crescit, ad-crescit labor.  
 health.NOM down-grow.3SG at-grow.3SG work.NOM  
 ‘Health wanes, work increases.’

(270) *Latin; Ov. Met. 647*

Dis-iunxisse iuencos.  
 asunder-yoke.INF.PFV oxen.ACC  
 ‘Unyoking the oxen.’

(271) *Latin; Ov. Fast. 1, 408*

Dis-suto [...] sinu.  
 asunder-sew.PTCP.PFV.ABL.M pleat(M).ABL  
 ‘With an unsewn pleat.’

(272) *Latin; Plaut. Cist. 188*

Ex-pungatur nomen, nequid debeam.  
 out-puncture.SBJV.PASS.3SG name.NOM nothing.ACC owe.SBJV.1SG  
 ‘Let my name be erased (from the register of debtors), so that I’m left with no debts.’

(273) *Latin; Colum. 4, 14*

Ne ventis [pampini] ex-plantentur.  
 lest wind.ABL.PL shoot.NOM.PL out-plant.SBJV.PASS.3PL  
 ‘Lest the vine shoots be uprooted by the wind.’

In all these examples the result inferred from the unprefix verb is superseded by that conveyed by the prefix. Thus, in (272) *nomen expungo* refers to the action opposite to *nomen pungo* ‘puncture a name’, that is, write a name through puncture, probably on a waxen tablet with a sharp instrument. The name is, in effect, taken out of the tablet, and this is conveyed by *ex*-. The effect expressed by *expungo* is, thus, that of erasing.

I propose that these constructions receive the same analysis as Figure UOCs. They involve a PathP via which the result encoded by the prefix is implemented, and a root adjoined to v. The object is merged as Spec-Place, and is interpreted as a Figure. In the following example, the walls (*mea moenia*) are predicated to end up down (*de*-). The Figure raises then to Spec-Path and is interpreted as a Measurer of the event:

(274) *An analysis of (268)*

[<sub>VP</sub> [<sub>DP</sub> Pygmalion frater] [<sub>v</sub> [<sub>v</sub> v  $\sqrt{\text{STRU}}$ ] [<sub>PathP</sub> [<sub>DP</sub> mea moenia] [<sub>Path</sub> Path [<sub>PlaceP</sub> [<sub>DP</sub> ~~mea moenia~~] [<sub>Place</sub> Place  $\sqrt{\text{DE}}$ ]]]]]]]

The verbal root is merged as an adjunct to *v*, and whatever resulting state it may convey as part, of course, of its *encyclopaedic content*, in this case that of being built, is overridden by  $\sqrt{\text{DE}}$ . More clearly: the root  $\sqrt{\text{DE}}$ , by virtue of its position at Compl-Place, *must* be interpreted as a final state (a Terminal Ground) and the root  $\sqrt{\text{STRU}}$ , by virtue of its position as an adjunct to *v*, *cannot* be interpreted as a final state.<sup>144</sup>

It is crucial to have in account, as does McIntyre (2002), that Pseudoreversatives (hence the name) are not equivalent to predicates endowed with a *reversative* particle, and which are to be found in Romance or Germanic: Catalan *des-fer*, ‘un-do’, English *un-lock*, etc.; these particles only furnish the reversative meaning. By contrast, the Latin prefixes involved in the above pseudoreversatives preserve a spatial meaning.<sup>145</sup> In particular, the reversative interpretation is a secondary effect derived from a clash between the semantics of the prefix and the semantics of the verb, as has been shown for (268). The examples (268) through (274) are illustrative of the fact that the prefixes do have a locational meaning. In (271) the verb *dis-suo* ‘asunder-sew’ is secondarily interpreted as the opposite of *suo* ‘sew’, but the final state encoded by the prefix is specifically that of separation (of two pieces of fabric, in this case). This effect is different to the one produced by the prefix *ex-* in *explanto* (see (273)) where the final result is for the plant to be *out* of the earth. Observe, finally, the contrast obtained by the combination of two different prefixes with the same verb in (269).

I want to emphasise the importance of Pseudoreversatives in arguing for a neo-constructionist approach to argument structure and to the interpretation of roots in particular. Pseudoreversatives teach us, specifically, that some of the meaning components traditionally attributed to roots, such as “state” are, in fact, derived from the structure. Thus, run-of-the-mill change-of-state verbs like *iungo* ‘join’ or *planto* ‘plant’, simply cannot be interpreted as such if their root is not inserted as Compl-Place. These facts severely undermine, in my opinion, perspectives where roots are distributed in ontologies which determine where in the syntactic configuration they may appear. Rather, a different scenario, like the one depicted by Acedo-Matellán & Mateu (2010), gains strength where roots, like arguments, receive an interpretation dictated by their position in the configuration.

### 3.6 Summary

In this section I have presented a wide range of constructions responding to the s-framed pattern: they are constructions where the verbal root has been argued to be merged as an adjunct to *v*, the PathP being independently realised. Most of the constructions I have dealt with present a prefix which I have argued to originate within PlaceP. I have first focused on CDMCs, showing that they conform to the s-framed model. I have provided evidence from the licensing of cognate objects, measure phrases and agentive nominals that suggests that intransitive CDMCs are in fact telic, unaccusative predicates. They contrast, in that sense, with constructions involving non-directed motion. I have then turned to UOCs, which overtly manifest the lack of a thematic relation between the verb and the object. I have drawn a division between

<sup>144</sup> Latin *de-struo* is the strict equivalent of German *ab-bauen*.

<sup>145</sup> As regards *de-*, Brachet (2000:192f.) points out that it is found as a pure “opérateur d’inversion”. However, he acknowledges (ibid.:197f.) that in the first attestations of *de*-prefixed verbs exhibiting a reversative meaning, the prefix retains the ‘downward’ nuance: *descendo* (on *scando* ‘go up’), *decreresco* (on *cresco* ‘grow’), *demolior* (on *molior* ‘construct’).

UOCs where the unselected argument is interpreted as Figure and those where it is interpreted as Ground. As regards the former, I have shown that the unselected argument is first merged as Spec-Place, and rises then to Spec-Path, where it is interpreted as a Measurer. UOCs are mainly licensed by prefixes, and I have argued that the prefix corresponds in fact to a root merged as Compl-Place, where it is interpreted as a Terminal Ground predicated of the Figure DP. The verbal root is a mere adjunct to *v*. I have resorted to a series of phenomena involved in Figure UOCs to show the superiority of a neo-constructionist account over lexicalist accounts: the interpretation of object-less predicates involving a prefixed verb, case alternations, situation-aspect interpretation, scopal effects within the word and the status of deponency. As regards Ground UOCs, I have argued that the unselected object in fact corresponds to a Ground, a DP merged as Compl-Place, which then rises to Spec-Path and is interpreted as a Measurer: these constructions involve no Figure DP. I have argued that an analysis of Ground UOCs which takes into account situation-aspect effects is superior to an account in terms of case-assignment, specifically the need of the DP to be assigned case. Then I have dealt with CEOCs. Capitalising on the fact that they are licensed in s-framed languages, I have proposed that they involve the projection of a PathP and that they boil down, in fact, to Ground UOCs: the effected object is first merged as Compl-Place and rises then to Spec-Path, where it is understood as a Measurer. In turn, the verbal root is merged as a *v*-adjunct. This straightforwardly explains why *v*-framed languages do not license them: the Path-*v* fusion hypothesised for *v*-framed languages is incompatible with a complex *v* involving a root adjoined to it. On the other hand, the analysis explains why both Ground UOCs and CEOCs both show a “demotion” of the Figure argument. The next constructions I have dealt with are those involved in the Locative Alternation. I have provided evidence that Latin widely allows this type of alternation, as expected if one assumes, as I have, that the LA is only available in s-framed languages. Although I have shown my sympathy for non-derivational approaches to the relation between the COL and the COS alternants, I have suggested, basing on the prefixing pattern of the LA, that this alternation may involve cases calling for a derivational approach between both alternants. In particular, I have argued that Latin shows many instances of the LA where both the COL and the COS are endowed with the same spatial prefix. For these cases I have assumed an analysis of the COS alternants in terms of Ground UOCs: the argument interpreted as the location is in fact first merged as a Ground, and there is no projection of a specifier for PlaceP. This explains the semantic relation between the prefix and the object interpreted as final location. I have also shown that Latin, as other s-framed languages like Dutch, German and Hungarian feature COS alternants endowed with a predicative piece (the prefix) licensing a complete affectedness interpretation of the object. This predicative piece does not license a COL interpretation of the object. I have argued that it is merged as Compl-Place, since it is predicated of the object merged as a Figure (in Spec-Place). The last constructions I have dealt with are the so-called Pseudoreversatives. These constructions involve a prefix which has the power of overriding the resultative interpretation licensed by the verb in isolation and of imposing a result (a final state or location) of its own. I have argued that Pseudoreversatives are better accounted for as s-framed constructions, that is, with the verbal root merged as a *v*-adjunct, and the root of the prefix merged as Compl-Place. I have capitalised on the idea that Pseudoreversatives constitute a strong argument in favour of an account of prefixed verbs where the prefix is really the only predicate and the verb (its root) is a mere adjunct of the eventive head.

#### 4 Overall summary

In this chapter I have shown that Latin is an s-framed language, in Talmy's (2000) sense, since the Core Schema, that is, the component specifying a transition into a final state or location, and the eventive component of transition events are realised independently. Alongside, I have endeavoured to show the success of a neo-constructionist model as the one introduced in Chapter 2, Section 3 in dealing with the constructions which make Latin an s-framed language.

In Section 1 I have introduced Talmy's theory of the s-/v-framed distinction, and I have adapted it to the theory introduced in Chapter 2, Section 3. I have first made a correspondence between the semantic components in Talmy's theory of transition events and the syntactic-semantic terms of my theory: Terminal Ground, Terminal Figure, Place, Path and Manner. I have shown that the s-/v-framed distinction can be explained as a result of a different interpretation of the structure at PF: in v-framed languages, v and Path are specified as fusing with each other. That disallows the merging of a Manner root as an adjunct to v, since Fusion operates, by definition, on simple heads. This mechanism explains why v-framed languages do not feature constructions involving a manner-naming verb and an expression encoding the Core Schema. In s-framed languages there is no Fusion operation applying to v and Path, and, hence, they can be realised by independent phonological units. In particular, v can be associated with a Manner root merged as an adjunct. This analysis, where v-framed languages are more complex than s-framed ones with respect to the PF derivation, makes the welcome prediction that s-framed languages allow v-framed constructions, that is, predicates where the verb encodes the Core Schema: there is nothing in s-framed languages precluding these constructions.

In Section 2 I have provided an overview of the expression of the PathP in Latin: as a prefix, a PP or a DP. It can also correspond to a combination of a prefix and a PP or a DP. I have pointed out that APs cannot express the PathP in Latin. I have discussed how the accusative and ablative case are licensed within the PP, and I have also shown that a dative-marked DP might be interpreted directionally.

In Section 3 I have presented the evidence that Latin is an s-framed language by approaching a set of constructions which adapt to the s-framed schema: CDMCs, Figure UOCs, Ground UOCs, CEOCs, constructions involved in the LA and Pseudoreversatives. All these constructions have been argued to involve a verbal root merged as an adjunct to v and being interpreted, consequently, as a Manner Co-event. In turn, the PathP is expressed through an independent element. In most constructions that element have been shown to be a prefix, originating as a root merged as Compl-Place or as an adjunct to Place. The prefix is interpreted as a predicate of the internal argument: it specifies the final location or state of the transition event. In the case of CEOCs I have argued that the internal argument is in fact merged as Compl-Place and is interpreted, therefore, as a result of the transition event, an effected object. In the discussion of all these constructions I have tried to show how the facts naturally derive from a syntactic neo-constructionist account where it is the syntactic structure, independently of the roots inserted therein, what determines the structural semantics and the argument structure properties of the constructions.



## Chapter 4

### Latin within the cross-linguistic scenario: A refinement of Talmy's typology

In Chapter 3 I showed that Latin is an s-framed language, through the examination of a range of different constructions which conform to the s-framed pattern: the PathP realised as an element morphophonologically different from *v*, which is therefore able to conflate with a root expressing manner. In this chapter, partly based on Acedo-Matellán (in press), I set Latin in relation to other s-framed languages with respect to the type of s-framed constructions it allows. In particular, I focus on the fact that Latin does not feature s-framed constructions based on adjectival predicates, i.e. complex adjectival resultative constructions. In Section 1 I show that corpus research proves this disallowance to be true, and I discuss why it is a puzzle in the present framework. After considering Slavic, a group of languages established as s-framed, and exhibiting the same disallowance for adjectival resultatives, I make the observation that both Latin and the Slavic languages in fact do not allow PP resultatives either if they are not headed by a prefixed verb. The generalisation is then formulated that complex resultative constructions are always prefixed in these languages, and the hypothesis is put forth that the prefixation requirement is at the base of the non-existence of AP resultatives. In Section 2 I provide evidence that the generalisation holds both for Latin and Slavic. In Section 3 I put forth an approach to the crosslinguistic allowance of complex adjectival resultative constructions based on the consideration of two factors: the affixal relation between *v* and Path, implemented as an instance of Lowering (of *v* to Path) and the inflectional marking of predicative adjectives. The empirical coverage of this analysis is presented in Section 4. In Section 5 I discuss some other previous approaches to the category-dependently uneven distribution of complex resultative constructions cross-linguistically, and I deal with some of the problems my own view faces. An overall summary is presented in Section 6.

#### 1 The nonexistence of complex adjectival resultatives in Latin and Slavic

##### 1.1 (Complex) resultative constructions: initial clarifications

Before dealing with the nonexistence of complex adjectival resultative constructions in s-framed Latin and Slavic it is of necessity that we clarify the term *complex resultative construction*; first, by distinguishing the phenomenon it names from simple resultative constructions; second, by making a distinction between strong resultatives and weak resultatives, the former being found only in s-framed languages, the latter being found in both s- and v-framed languages; and, finally, by discussing the kind of situation (Aktionsart) complex resultative constructions usually portray.

##### 1.1.1 Complex and simple resultative constructions

I take complex resultative constructions to be constructions which depict a *complex event* (see Levin & Rappaport Hovav 2005:113) involving the attainment of a resulting state/location but, also, a differentiated activity leading to that state/location.<sup>146</sup> The

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<sup>146</sup> The term *resultative construction* has almost always been applied to complex resultative constructions where the XP expressing the result state is an AP —see Halliday 1967, Simpson 1983, Levin & Rapoport

constructions referred to in Chapter 3, Section 3 as s-framed are all in fact complex resultative constructions in this sense. For instance, in (1) the location expressed by the prefixed *ad-* (assimilated as *ac-* in the example), understood as the vicinity of a reference point already introduced in the discourse, is attained as the result of a running event encoded in the verb *currit*:

- (1) *Latin Complex Directed Motion Constructions; Cic. Verr. 2, 5, 16, 2*  
 Subito ipse ac-currit.  
 suddenly himself.NOM.M.SG at-run.3SG  
 ‘Suddenly he himself arrives in haste.’
- (2) *Latin Figure and Ground Unselected Object Constructions*
  - a. *Liv. 27, 31, 7*  
 Neque enim omnia emebat aut e-blandiebatur.  
 nor hence everything.ACC buy.IPFV.3SG or out-flatter.IPFV.3SG  
 ‘Nor did he acquire his object in all cases by money or flattery.’
  - b. *Plin. Nat. 8, 34*  
 Elephantos ab iis e-bibi.  
 elephant.ACC.PL by them.ABL out-drink.INF.PASS  
 ‘That the elephants are drunk dry by them.’
- (3) *Latin Complex Effected Object Constructions; Cic. Fin. 2, 5, 17*  
 Qui alteri misceat mulsum.  
 who.NOM another\_one.DAT mix.SBJV.3SG honeyed\_wine.ACC  
 ‘He who mixes honeyed wine for another one’
- (4) *Latin COL alternants of the Locative Alternation; Ov. Medic. 81*  
 Medicamina [...] ut [...] lini per corpora possint.  
 make\_up.NOM that smear.INF.PASS through body.ACC can.SBJV.3PL  
 ‘Such a makeup as may be smeared on the body.’
- (5) *Latin Pseudoreversatives; Plaut. Cist. 188*  
 Ex-pungatur nomen, nequid debeam.  
 out-puncture.SBJV.PASS.3SG name.NOM anything.ACC owe.SBJV.1SG  
 ‘Let my name be erased, so that I’m left with not debts’

The *complex* component of the formula *complex resultative construction* is crucial. Indeed, the term *resultative* has sometimes been applied to any construction implying a resulting state, as in Nedjalkov 1988. Thus, sentences such as *He made the table clean* or *He cleaned the table* could be called (*simple*) *resultative constructions*, but not *complex resultative constructions*, since they do not involve any differentiated activity event leading to the resulting state. In the first case, the result state is encoded by the AP, while the verb expresses an abstract change of state, but no differentiated process leading thereto. In the second case the result state is encoded by the deadjectival verb *clean*. These constructions are perfectly possible in v-framed languages, as the well-formedness of the next Catalan sentences shows:<sup>147</sup>

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1988, Hoekstra 1988, Carrier & Randall 1992, Levin & Rappaport Hovav 1995, Neeleman & van der Koot 2002, Mateu 2002, Boas 2003, Kratzer 2004 and Tomioka 2006, among others. Crucially, I use the term in a wider sense.

<sup>147</sup> As to the difference between the light verbs in (6) and (7), Mateu (2002:166) proposes that *deixar* realises a little *v* into which a head analogous to our Path has incorporated; *fer* would correspond solely to a causative little *v* (Mateu, p. c.). I note here that at least Spanish and French do not license the simple causative with their *fer*-cognates:

- (6) *Catalan*  
 La Sue va fer la taula neta.  
 the Sue PRF.3SG make the table clean  
 ‘Sue made the table clean.’
- (7) *Catalan*  
 La Sue deixà la taula neta.  
 the Sue leave.PRF.3SG the.F table clean  
 ‘Sue made the table clean.’
- (8) *Catalan*  
 La Sue netejà la taula.  
 the Sue clean.PRF.3SG the table  
 ‘Sue cleaned the table.’

In the discussion central to this chapter I will focus almost only on complex resultative constructions, but see Section 1.2 and, particularly, Section 3.3, devoted to simple resultative constructions in Latin based on a light change-of-state verb and an AP, as in (6).

#### 1.1.2 Strong and weak resultative constructions

A second initial clarification that needs be made is the one involved in the difference between so-called *strong* and *weak* (complex) resultative constructions. Importantly, Washio (1997), in his comparison of English and Japanese adjectival resultative constructions, makes a distinction between these two types of resultative constructions, illustrated by the next examples:

- (9) *Washio 1997:5*  
 a. John hammered the metal flat.  
 b. John painted the wall blue.

In the strong resultative construction of (9) the activity event expressed by *hammered*, in the absence of the adjective *flat*, does not necessarily lead to any result state: John could hammer indefinitely on a diamond-hard metal, without the slightest flattening thereof being attained. This of course changes when the adjective is added. By contrast, the verb *painted* in the weak resultative construction of (9)b entails the attainment of a result state, namely, that of being painted, and the AP *blue* is a specification of that result state. Washio observes that the adjectival resultatives allowed in Japanese are always of the weak type (see the Japanese rendition of (9)b in (10)b), the strong type being disallowed (see the Japanese rendition of (9)a in (10)a):

- (10) *Japanese; Washio 1997:5*  
 a. <sup>??</sup>John-ga kinzoku-o petyankoni tatai-ta.  
    John-NOM metal-ACC flat pound-PST  
 b. John-ga kabe-o buruuni nut-ta.  
    John-NOM wall-ACC blue paint-PST

- 
- (i) *Spanish and French (Belgian informant)*  
 a. \*Sue ha hecho la mesa limpia.  
    Sue has made the table clean  
 b. \*Sue a fait la table propre.  
    Sue has made the table clean

As Washio (1997:25f.) himself observes, the contrast of (10) is to be found, to a certain extent, in other languages, like Romance:<sup>148</sup>

(11) *Italian; Napoli 1992, apud Washio 1997:26*

- a. \*Gianni ha martellato il metallo piatto.  
Gianni has hammered the.M metal(M) flat.M
- b. Gli operai hanno caricato il camion pieno.  
the workers have loaded the.M truck(M) full.M  
'The workers have loaded the truck full.'

The division of languages allowing and disallowing strong resultative constructions seems amenable to the s-/v-framed distinction (with the provisos made in footnote 148 for Romance): the former allow strong resultatives because in them the Core Schema expressing a result state can be completely independent from the verb, which expresses a pure process. Since in the latter the Core Schema must be expressed through the verb, the only type of resultatives that they may allow are those in which the verb already entails a result state (the Core Schema) further specified by an adjective (weak resultatives). From this perspective, weak resultative constructions turn out to be simple resultative constructions in the sense expressed in 1.1.1: they imply no differentiated process leading to a result state; rather, the result state encoded by the AP is a mere specification of the one already encoded (entailed) by the verb, pretty much in the sense of Tortora's (1998) *Further Specification Constraint*.<sup>149</sup> To capture this idea, I propose that the AP in weak resultative constructions is an adjunct to PlaceP, and must be thus interpreted as a modifier of the (final) state encoded by PlaceP. Thus, an analysis of the Japanese weak resultative of (10)b, neglecting —for clarity's sake— word order and tense and case morphology, would be as follows:<sup>150</sup>

<sup>148</sup> The status of weak (adjectival) resultatives is not completely clear in Romance. Thus, while (ia) seems to be out, (ib) is okay:

(i) *French; Green 1972, apud Washio 1997:28*

- a. \*J'ai peint le mur rouge  
I=have painted the wall(M)SG red.M.SG
- b. Comment peindre le fond de ce dessin? Je le peindrais bleu.  
How paint.INF the background of this drawing I it.ACC.M paint.FUT.1SG blue.M.SG  
'How would you paint the background of this drawing? I would paint it blue.'

A possible way to understand this contrast is to think that (ia) is not ungrammatical, but strongly biased towards a parsing of the adjective as forming part of the DP. By contrast, when the object is a clitic, as in (ib), this interpretation is utterly impossible.

Weak resultatives with painting verbs are not straightforwardly acceptable in Italian either (Napoli 1992, apud Washio 1997:29).

<sup>149</sup> To be precise, Tortora's (1998) constraint, a relativised version of Tenny's (1987) *Single Delimiting Constraint*, is put forth to exclude cases of resultative predicates introducing a result state which is not a specification of the one already encoded by the verb (as *worthless*, in (i), instead of *open*):

(i) *Tortora 1998:339-342*

The vase broke open/\*worthless.

<sup>150</sup> Note that, being a low adjunct, in particular a VP-internal one, the result AP in weak resultative constructions is expected to fail, as it does, the *do-so* test (Levin & Rappaport Hovav 1995; see also Tortora 1998 for an application to goal PPs in directed motion constructions), as arguments do, provided that the *do-so* proform stands for the whole VP:

(i) *English informants*

\*?John painted the walls white and Sue did so pink.

The same prediction is born out for French:

(12) *Japanese; an analysis of (10)b*

[<sub>vP</sub> John [<sub>v</sub> v [<sub>PathP</sub> kabe [<sub>Path</sub> Path [<sub>PlaceP</sub> buruu [<sub>PlaceP</sub> kabe [<sub>Place</sub> Place  $\sqrt{\text{NUT}}$ ]]]]]]]]

In the present discussion the weak/strong distinction, as applied to adjectival and, crucially, non-adjectival resultative constructions, will be relevant in Section 2.1.<sup>151</sup>

1.1.3 Situation aspect in complex resultative constructions. The AP as a result predicate  
The last preliminary qualification I'd like to make refers to the situation aspect of complex resultative constructions. This qualification is important, since I will be using telicity to distinguish true complex resultative constructions from other, atelic, constructions, which resemble them. This is why I will revise here the cases involving a mismatch between resultativity and telicity. Alongside, I will defend the view that in (complex) AP resultative constructions the AP is to be analysed as a resultative predicate.

(Complex) resultative constructions are standardly assumed to be accomplishments, involving a process, expressed by the verb, incrementally leading to a result state expressed by the AP (or the respective XP) and predicated of the internal argument. In this sense they are generally taken to be telic, featuring a telos or culmination point: the result state. I myself have adopted this view in defining complex resultative constructions in Section 1.1.1.<sup>152</sup> However, Borer (2005b:225f.), building on Wechsler

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(ii) *French; Belgian informant*

\*Jel'=ai                      peint              bleu              et              Marie l'a                      fait              jaune.

I 3M.SG=have.1SG painted    blue.M.SG and    Mary it.ACC.M.SG=have.3SG made yellow.M.SG

<sup>151</sup> Mateu (2010) proposes an l-syntactic account of the strong/weak distinction within resultatives. He adopts Haugen's (2009) distinction between *conflation* and *incorporation*, the former corresponding to a basically compounding operation and the latter corresponding to what we have termed, following Hale & Keyser (2002), *conflation*, that is, the transmission of a phonological matrix from a root into some null head above it. Mateu (2010) argues that strong resultatives are formed by conflation (à la Haugen 2009) of a manner root and a null light verb; by contrast, weak resultatives are formed, first, by incorporating an abstract l-morpheme into v from the position that would correspond to our Compl-Place and, second, by spelling out the head and tail copies of this incorporation-formed chain through different roots —this is possible thanks to the adoption of a Late Insertion view of the morphophonology-syntax interface. Thus, for instance, in the Japanese example above *nut-* 'paint' is the spelling out of the abstract l-morpheme incorporated into v (the head position) while *buruu-* 'blue' is the spelling out of that same abstract l-morpheme in tail position. The interpretation of  $\sqrt{\text{BURUU}}$  as a type of paint ( $\sqrt{\text{NUT}}$ ) is delivered through pragmatic knowledge. While incorporation is available in all languages, conflation, Mateu claims, is only available in some languages; the parameterisable availability of Haugen's (2009) conflation is aimed as a parallel of Snyder's (2001) *compounding parameter* —see Section 5.1—which is, however, primarily thought of in terms of compounding in general, and not restricted to verbal compounding. See also Mateu & Rigau 2010 for the application of Haugen's (2009) distinction to Romance (notably, Italian) and Germanic *verb particles*. See, finally, Mateu & Rigau 2009 for an analysis of Romance particle verb constructions and prefixed verbs of the *im-bottigliare* 'in-bottle' type inspired in Hale & Keyser's (2000) *cognition* analysis of English predicates like *warm up*, where the particle is argued to be a cognate of the root incorporated into the verb. Mateu & Rigau (2009:234) call this mechanism *p-cognition* because it is an extension of the one put forth by Hale & Keyser (1997b) to account for *cognate* and hyponymic complements of otherwise unergative verbs, as in *Kim danced {a funny dance/ a jig}*. I note here that Hale & Keyser (2000, 2002) significantly modified their account of cognate objects so as to accommodate it in a view of conflation which does not require transmission of phonological properties between heads. As a result, cognate objects are understood as base-generated in their positions, the cognate/hyponymic relation to the verbal head being based rather on selection restrictions (see, particularly, chapter 3 in Hale & Keyser 2002).

<sup>152</sup> See, for this view, Dowty 1979, Rappaport Hovav and Levin 1998, Rapoport 1999, Rappaport Hovav and Levin 2001, Mateu 2002 and 2005, among others.

2001, observes that complex resultative constructions are not necessarily telic, both when the internal argument is a bare plural or mass NP, as in (13), and, more surprisingly, when it is a quantity DP, as in (14) (and see, also, MacDonald 2008:193f., who advocates a dissociation between resultativity and telicity on the basis of examples such as (13), not (14)):

- (13) *Wechsler 2001, apud Borer 2005b:225*  
 a. John hammered metal/cans flat (for an hour/\*in an hour).  
 b. Kim sang babies asleep (for an hour/\*in an hour).  
 (14) *Wechsler 2001, apud Borer 2005b:225*  
 a. You can paint these walls white for hours, and they won't become white (e.g. because something in the plaster oxidizes the paint).  
 b. We yelled ourselves hoarse (for ten minutes).

On the basis of these facts, Borer rejects a syntactic analysis of resultatives interpreted as incremental processes leading to a result state; instead, she puts forth an account where the verb and the adjective in a resultative construction are two listemes forming a complex head (a complex predicate) —as *paint-white* for (14)a— which, as such, is neither telic nor atelic, as any other listeme in her framework. This complex listeme may be embedded under an Asp<sub>Q</sub>P projection, giving rise to telicity if a quantity DP is merged as the specifier (as in *You can paint these walls white in a few days*) or under an F<sup>S</sup>P projection, giving rise to atelicity (as in (13) and (14)) —see Chapter 2, Section 2.2.3. The accomplishment reading of telic resultatives would therefore be the result of imposing a telic structure, the Asp<sub>Q</sub>P projection, on a complex listeme such as *paint-white*.

Whatever the right approach is to the aspectual data in (13) and (14), I believe that, *pace* Borer 2005b, there are reasons to think that the AP in resultative constructions does not form a complex predicate with the verb. One of them is the incompatibility of result APs with the telicity signalling particle *up*, in English. Borer (2005b:211) suggests that this particle does not directly induce telicity: in her terms, it does not *assign range* to the open value heading Asp<sub>Q</sub>P; rather, *up* is an adjunct forcing the projection of and modifying Asp<sub>Q</sub>P, which is still in need of range assignment from a quantity DP sitting in the Spec-Asp<sub>Q</sub> position. Thus, *up* is only possible if Asp<sub>Q</sub>P is projected, but its presence cannot by itself license the projection of Asp<sub>Q</sub>P. This explains the following paradigm, where *the letters*, a quantity DP, is an appropriate range assigner for the head of Asp<sub>Q</sub>P, and non-quantity *letters* is not:

- (15) *Borer 2005b:209 and 210*  
 a. Kim wrote the letters up.  
 b. \*Kim wrote letters up. (Single-event interpretation.)

But, if *up* is an (optional) adjunct in telic predicates and the adjective in resultative constructions merely forms a complex listeme with the verb, it is not clear why these two elements are not always compatible with each another:<sup>153</sup>

<sup>153</sup> Den Dikken (1995) discusses similar data:

(i) *Jackendoff 1977:67, apud Den Dikken 1995:50*  
 They painted the barn up red.

He also observes that the combination of the particle and the resultative AP is highly restricted with respect to the relative order of particle and adjective:

(16) *English informants*

- a. ?John hammered the metal up flat.
- b. \*?John hammered up the metal flat.
- c. \*John hammered the metal flat up.
- d. \*John hammered flat the metal up.
- e. \*John hammered flat up the metal.

See footnote 153 for an interpretation of the pattern in (16). Now I observe that, from Borer's perspective, the only distinction between *John hammered the metal flat in two hours* and *Kim wrote the letters in two hours* is reduced to whether the listeme embedded under Asp<sub>Q</sub>P is complex (*hammer-flat*) or not (*write*), a distinction not capable, within Borer's (2005b) system, of generating a difference in grammaticality. So it comes as a surprise that only the latter is fully compatible with the adjunct *up*.<sup>154</sup> Facts similar to those like (16) are found in Dutch, illustrated by well-known examples from Hoekstra & Mulder 1990 —and see also Chapter 3, Section 3.4.3.3, for a comparison between Dutch *be-* and Latin *com-*:

(17) *Dutch; Hoekstra & Mulder 1990:19 and 21*

- a. Dat Jan de tuin {vol/be-}plant.  
that Jan the garden full/be-plant.3SG  
'That Jan fills the garden with plants.'
- b. Dat ik de tuin (\*vol) be-plant.  
that I the garden full be-plant.1SG  
'That I fill the garden with plants.'

In (17)b the result AP *vol* seems to be also incompatible with the prefix *be-*, which, as *up*, also signals complete affection (see McIntyre 2002:97f.; see also Mulder 1992 for a further analysis of the *be-/vol* complementary distribution). I think that the

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(ii) *Den Dikken 1995:50*

- a. \*?They painted up the barn red.
- b. \*They painted the barn red up.

Den Dikken proposes that this kind of predicates actually contain two small clauses, one inside the other. The inner SC is the one formed by the object and the adjective, [the barn red], and the outer SC is one headed by the particle, which is ergative and takes the other SC as its sole internal argument, [up [the barn red]]. See Kayne 1985 for a different analysis. Importantly for the present perspective, the most deviant cases in (16) are, crucially, those where the particle follows the adjective, namely (16)c through (16)e. I suggest that in the other cases, where the adjective follows the particle, the adjective can actually be analysed as a low adjunct, further specifying the result state encoded by the particle (a state identified with complete affectedness —see Chapter 3, Section 3.4.3.3). In (16)c through (16)e, however, it is the particle which is forced to be analysed as an adjunct, by virtue of its relative position with respect to the verb and the adjective; but this interpretation is severely awkward, since the content of the adjective is of course more specific than that of the particle. If this observation is on the right track, I take it to constitute further evidence in favour of a result predicate approach to resultative constructions.

<sup>154</sup> Another problem that Borer does not address is the fact that the adjective and the verb may appear separate, which is unexpected if they form a complex listeme. And, finally, it is not clear, within her account, why strong resultative constructions are systematically ungrammatical in v-framed languages like Romance. Indeed, if the peculiarity of these constructions boils down to the embedding of two listemes, rather than one, within the functional structure, why are such languages unable to combine them? Of course that operation could be stipulated as unavailable in their grammars —this is, very roughly, the approach put forth by Snyder (1995, 2001) (see Section 5.1). But Borer rejects any account of cross-linguistic variation which is not based on morphophonological properties of the functional lexicon (see Borer 2005b:343f.).

complementary distribution of these elements argues against an analysis in terms of complex predicate formation. I will cling, then, to an analysis of complex resultatives where the AP really is a result predicate and is therefore in complementary distribution with any other element which also arguably qualifies as a result predicate (cf. *up* for English and *be-* for Dutch).

Turning back to the atelicity of complex resultative predicates, I will adopt the strong position that these constructions are telic, unless the object is a non-quantity DP, namely a mass DP. In these cases, I argue for the coexistence of both resultativity and atelicity. For example, in (13)a, although PathP is projected and resultativity obtains, the non-quantity DP *metal*, which raises from Spec-Place to Spec-Path, cancels a telic interpretation of the predicate. In particular, a transition of becoming flat is entailed to have taken place: some metal must have become flat; however, since the quantity of metal is not determined, the end of the flattening event cannot be determined either. Thus, atelicity arises. On the other hand, when the object is a bare plural, as in (13)b, there is a telic interpretation available which Borer does not mention, namely a *Sequence of Similar Events interpretation* (MacDonald 2008:45; see also Chapter 2, Section 3.2.4.2):

(18) Kim sang babies asleep in ten minutes for a day.

(18) entails that it takes ten minutes for Kim to sing asleep each one of an indefinite number of babies, which she does for a day long. Here too, the transition implied by the projection of PathP, which embeds *asleep*, is not overridden, and overtly licenses a telic interpretation for each one of an indefinite number of similar events of getting babies asleep.

As for the example in (14)a, where one cannot appeal to a non-quantity status of the object to explain the atelic reading, I note that not all authors agree on its grammaticality. For instance, MacDonald (2008:196) observes that “AP resultatives are incompatible with durative phrases on a single event interpretation”, providing the following examples (and note, specially, (19)c):

(19) *MacDonald 2008:196*

- a. John wiped the table clean (<sup>#</sup>for an hour).
- b. Bill hammered the metal flat (<sup>#</sup>for an hour).
- c. They painted the barn yellow (<sup>#</sup>for an hour).

Cases such as (14)b are residual. Wechsler (2005:271) points out that the result adjective is in these cases reinterpreted as an intensifier, so that the whole sentence *We yelled ourselves hoarse* comes to mean something like *We yelled a lot*. I grant that this analysis does not constitute a possible avenue within the present framework, where structural semantics, including (a)telicity, cannot be overridden. However, pending a better solution, I leave the problem at that.<sup>155</sup>

<sup>155</sup> Actually, under neo-constructional assumptions, the possibility could be explored that atelic complex resultative constructions are built through the projection of PlaceP; the distinction between telic and atelic resultatives would stem from the fact that Path is, respectively, projected or not (and see also McGinnis 2003 for a suggestion that telic and atelic *paint*-resultatives might involve different structures):

(i) *Telic vs. atelic* John paints the walls white

a. [<sub>VP</sub> John [<sub>V'</sub> [<sub>V</sub> V <sup>√</sup>PAINT] [<sub>PathP</sub> [<sub>DP</sub> the walls] [<sub>Path'</sub> Path [<sub>PlaceP</sub> [<sub>DP</sub> ~~the walls~~] [<sub>Place'</sub> Place <sup>√</sup>WHITE]]]]]]]]



There are other mismatches between resultativity and telicity worth commenting on. The first one is witnessed in predicates where a durative adverbial measures the final resulting state encoded by the result predicate. This is illustrated by the next example:

(20) *German; Kratzer 2000:5*

Wir werden das Boot für ein paar Stunden auf-pumpen.  
 We will.1PL the boat for a pair hours up-pump.INF  
 ‘We will pump up the boat for a few hours.’

As Kratzer herself notes, the sentence above implies that “the boat will remain inflated for a few hours”, and not that there will be any pumping-up event which will last two hours. Accordingly, the adverbial *für ein paar Stunden* can be claimed to be measuring the result state incarnated as PlaceP where the root  $\sqrt{\text{AUF}}$ , is embedded as Compl-Place (and see Section 4.2.1 for more details on German particles as resultative predicates).

A final remark is to be made about the situation aspect of CDMCs, since I have assumed that these constructions are also complex resultative constructions. CDMCs are usually taken to be telic. Cases in point are the examples of (21). That these examples are CDMCs is proved by the fact that in both cases a BE-auxiliary is selected for the perfect, signalling the unaccusativity of these constructions, with the bounded PP (*de kamer in, ins Zimmer*) corresponding to a PathP and the subject (*John*) corresponding to a Figure:

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b.  $[_{VP} \text{John } [_{V'} [_{V} v \sqrt{\text{PAINT}}] [_{\text{PlaceP}} [_{DP} \text{the walls}] [_{\text{Place}'} \text{Place } \sqrt{\text{WHITE}}]]]]$

Observe that in the above analysis the root which shall finally emerge as an adjective, *white*, is in both cases in Compl-Place position, that is, it is interpreted as a Ground. In particular, in (ia), an accomplishment, it is a Terminal Ground and in (ib), a transitive activity, it is a Central Ground. Thus, the former is interpreted, roughly, as “cause the walls to become white through painting”, and the latter, as “provide the walls with whiteness through painting” (note that I am treating *Paint the walls white* as a strong resultative. It is true that an analysis as a weak resultative is also possible. Crucially, for present purposes I must adopt an analysis as strong resultative). This is the analysis proposed by Acedo-Matellán & Mateu (2010) for telic and atelic cases of instrument verbs like *hammer* —against the explicit analysis of Harley’s (2005) and the implicit one of Harley & Haugen’s (2007) and Haugen’s (2009). The difference between (telic and atelic) *paint white* and (telic and atelic) *hammer* would lie in the fact that in the former there are two independent roots, one adjoined to *v* and the other as Compl-Place. Thus, if it is assumed that telic *up* —and the Dutch prefix *be-*, for that matter— is also inserted at Compl-Place, encoding a result state of complete affectedness, the English and Dutch cases above are explained away as cases of competition of two different elements — $\sqrt{\text{UP}}$  and  $\sqrt{\text{WHITE}}$ ,  $\sqrt{\text{BE}}$  and  $\sqrt{\text{VOL}}$ — for the same Compl-Place position:

(ii) *An analysis of (15a)*

$[_{VP} \text{John } [_{V'} [_{V} v \sqrt{\text{WRITE}}] [_{\text{PathP}} [_{DP} \text{the letters}] [_{\text{Path}'} \text{Path } [_{\text{PlaceP}} [_{DP} \text{the letters}] [_{\text{Place}'} \text{Place } \sqrt{\text{UP}}]]]]]]]$

Note that we also expect complex resultatives based on *to*-PPs to be exclusively telic, unless the object is a non-quantity DP.

(iii) John painted the house to utter whiteness in/\*for an hour.

(iv) We laughed ourselves into a state of frenzy in/\*for an hour.

This is due to the fact that *to* is the direct phonological realisation of Path: this type of complex resultatives overtly correspond to structures where PathP is projected. On the contrary, adjectival resultatives may correspond to both Path and Path-less structures, since Path is not distinctively realised.

Last, I would like to point out that within this account we expect that, due to grammar/concept compatibility, some roots are better suited than others to appear in an atelic, Path-less structure as a Central Ground. Thus, while  $\sqrt{\text{WHITE}}$  would be flexible enough to be interpreted as a final, “closed scale” state or —for some speakers— as an “open scale” state, that would not be the case with a root such as  $\sqrt{\text{EMPTY}}$ :

(iii) *English informants*

Sally drank the teapot empty in/\*for 5 minutes.

(21) *Dutch and German; Randall et al. 2004:335*

- a. John is in twee seconden de kamer in gedanst.  
John is in two seconds the room in dance.PTCP.PFV  
'John has danced into the room in two seconds.'
- b. John ist in zwei sekunden in-s Zimmer getanzt.  
John is in two seconds in-the.ACC room dance.PTCP.PFV  
'John has danced into the room in two seconds.'

However, it would be too rash to conclude from the above data that CDMCs are always telic, since, as shown in (22)b, German licenses CDMCs based on an unbounded directional expression (*durch den Saal, herum-*). That the construction in (22)b is a CDMC is proved by the fact that the auxiliary BE is selected for the perfect tense, a fact that dissuades from positing an unergative analysis. This contrasts with the Dutch correlate in (22)a, where *have*, and not *be*, is selected, arguing for the adjunct (to vP) status of the PP *door de saal* and the unergative status of the predicate.<sup>156</sup>

(22) *Dutch and German; Randall et al. 2004:335*

- a. John heeft door de saal urenlang rond-gedanst.  
John has through the room for hours around-dance.PTCP.PFV  
'John has danced around the room for hours.'
- b. John ist Stundenlang durch den Saal herum-getanzt.  
John is for hours through the.ACC room around-dance.PTCP.PFV  
'John has danced around the room for hours.'

That the sentence in (22)b does not involve an unergative predicate expressing raw non-directed motion is further proved by the fact that unquestionably non-directed motion

<sup>156</sup> Folli & Harley (2006) point out that the preposition *naar*, which they dub 'towards', may appear with auxiliary BE. However, they do not mark their example as telic or atelic:

(i) *Dutch; Folli & Harley 2006:136*

- Jan is naar het bos gerend.  
Jan is towards the woods run.PTCP.PFV  
'Jan ran towards the woods.'

Gehrke (2008:77), building on Hoekstra 1999:76f., observes that *naar*-PPs, as other PPs, may be complements or adjuncts, depending on their position. Crucially, when *naar* is a complement, as in (i) (BE-selection and preverbal position are proof thereof), it must be interpreted as a bounded Path, triggering telicity: 'Jan ran to the woods'. Therefore, the translation by Folli & Harley (2006:136) for *naar*-PPs cannot be correct, and cannot be taken as a counterexample to the observations by Randall *et al.* (2004) on the relation between CDMCs and telicity in Dutch. Other alleged counterexamples adduced by Folli & Harley (2006) are the next ones from Italian:

(ii) *Italian; Folli & Harley 2006:136*

- a. Gianni è corso verso il bosco.  
John is run.PTCP.PFV.M.SG towards the woods  
'John ran towards the woods.'
- b. Gianni è scivolato in direzione della pianta.  
John is slide.PTCP.PFV.M.SG in direction of=the tree  
'John slid in the direction of the tree.'

According to Folli & Harley (2006), these Italian examples where BE is selected as auxiliary for the perfect demonstrate that an unbounded PP (*verso il bosco, in direzione della pianta*) may license an internal subject (*Gianni*) in an unaccusative structure. However, as shall be shown in Section 2.1, BE-selection in Italian seems to depend more on the type of manner-of-motion verb—or, rather, *root*, in our view—than on the presence of a PP. On the one hand, *correre* 'run' is able to appear with BE in the absence of a PP, bounded or not; on the other hand, *camminare* 'walk', for instance, does not license BE-selection even in the presence of a bounded PP.

predicates, featuring either no spatial PP or a locative PP at most, present a HAVE-auxiliary:

(23) *German; Randall et al. 2004:334*

John hat stundenlang auf dem Tisch getanzt.  
 John has for hours on the.DAT table dance.PTCP.PFV  
 ‘John has danced on the table for hours.’

The German data suggest, therefore, that CDMCs cannot be claimed to be universally telic. However, basing on the fact that in many languages, like Dutch, CDMCs must be telic (and see footnote 156 for discussion of apparent counterexamples in Dutch and Italian), I will use telicity as a criterium to detect CDMCs in Latin (and Slavic).

In sum, if provisions are made for the resultativity-telicity mismatches we have seen, mainly induced by the cases of non-quantity direct objects and of durative adverbials measuring the result state/location, I think that telicity can be taken as a quite reliable criterium in distinguishing complex resultative constructions from unergative constructions encoding an activity.

### 1.2 *Latin does not feature complex AP resultatives*

As pointed out above, complex resultative constructions typically feature a predicative element expressing the resulting state. The result predicate, underlined in the following examples, may correspond to different categories: an AP (see the German example of (24)), a PP (see the Norwegian example of (25)) or a particle/prefix (see the English and Latin examples of (26) and (27), respectively):

(24) *German; Kratzer 2004:1*

Die Teekanne leer trinken.  
 the teapot empty drink  
 ‘To drink the teapot empty.’

(25) *Norwegian; Tungseth 2003:475*

Jon syklet til byen på en time.  
 Jon bike.PST into town in one hour  
 ‘Jon biked into town in an hour.’

(26) *Hale & Keyser 2002:73*

He slept the hours away.

(27) *Latin; Plin. Nat. 10, 197*

[Serpentes] [ova] solida hauriunt, [...] atque  
 snake(M)NOM.PL egg.ACC.PL whole.ACC.PL swallow.3PL and  
 putamina ex-tussiunt.  
 shell.ACC.PL out-cough.3PL  
 ‘Snakes swallow the eggs whole and expel the shells through cough.’

As pointed out already in Chapter 3, Section 1.2, the adjectival type (see (24)) is included by Talmy (2000) himself within the range of constructions possible in s-framed languages and impossible in v-framed ones. This is illustrated in (28) through a contrast between s-framed German and v-framed Spanish: while German encodes the resulting state of the complex event as an AP, leaving the verb to express manner, Spanish encodes the resulting state as the verb, and the manner has to be expressed as

an adjunct. A literal Spanish translation of (28)a is not well-formed (\*El perro ha mordido el zapato destrozado):

(28) *German and Spanish; Talmy 2000:247*

- a. Der Hund hat den Schuh [kaputt]<sub>Core schema</sub> -gebissen  
the dog has the shoe in\_pieces -bite.PTCP.PFV  
‘The dog bit the shoe to pieces.’
- b. El perro [destrozó]<sub>Event + Core schema</sub> el zapato a mordiscos  
the dog destroy.PRF.3SG the shoe to bite.PL

As was pointed out in Chapter 3, Section 2.6, anyone acquainted with Latin does not recognise the type represented by (24) or (28)a as possible in this language, much as it is an s-framed one. That is, Latin does not seem to feature resultative constructions where the result predicate is an AP, as illustrated through the next made up example:

(29) *Latin made-up ungrammatical example*

- \*Ovidia poculum vacuum bibit.  
Ovidia.NOM goblet(N)ACC.SG empty.ACC.N.SG drink.3SG

To see whether (29) represents a general situation in Latin, that is, whether this language in fact cannot generate AP resultative constructions, I have performed a corpus search, based on the one designed by Boas (2003) for English.<sup>157</sup> Boas selected a set of adjectives recurrently used in the literature on resultatives as result predicates, such as *dead*, *clean*, *awake*, etc. Afterwards, he conducted a search to find out which verbs were most often used in resultative constructions with those adjectives.<sup>158</sup>

In applying this methodology to Latin, I have first established the correspondences of the English adjectives in Boas’s set and then the correspondences of (some of) the verbs he established as more collocative for each adjective, wherever possible. I next present the list of the combinations I have searched for:

(30) *Adjectives and verbs used in the search for adjectival resultatives in Latin*

ADJECTIVES	VERBS
<i>aeger</i> ‘ill’	<i>bibo</i> ‘drink’
<i>cassus/inanis/vacuus</i> ‘empty’	<i>bibo</i> ‘drink’, <i>haurio</i> ‘scoop’, <i>poto</i> ‘drink’
<i>experrectus</i> ‘awake’	<i>calcitro</i> ‘kick’, <i>clamo</i> ‘scream’, <i>figo</i> ‘prick’, <i>grunnio</i> ‘grunt’, <i>osculor</i> ‘kiss’, <i>plaudo</i> ‘clap’, <i>quatio</i> ‘shake’, ‘jerk’, <i>terreo</i> ‘induce terror’
<i>amens/demens/insanus</i> ‘insane, mad’	<i>clamo</i> ‘scream’, <i>loquor</i> ‘talk’, <i>strideo</i> ‘yell’
<i>mortuus</i> ‘dead’	<i>caedo</i> ‘cut, knock’, <i>calcitro</i> ‘kick’, <i>cudo</i> ‘knock’, <i>occido</i> ‘kill’, <i>tundo</i> ‘strike, knock’, <i>verbero</i> ‘smite’

<sup>157</sup> Analogously, Whelpton (2006) sets off from Boas’s (2000) appendix of examples of adjectives, taken from the *British National Corpus*, for his own investigation on Icelandic resultatives (see Section 4.2.3).

<sup>158</sup> See Boas 2003:15f.

ADJECTIVES	VERBS
<i>mundus/nitidus</i> ‘clean’	<i>frico</i> ‘rub’, <i>lambo</i> ‘lick’, <i>lavo</i> , ‘wash’, <i>luo</i> ‘wash’, <i>polio</i> ‘scour, polish’, <i>rado</i> ‘scrape’, <i>sorbeo</i> ‘suck’, <i>sugo</i> ‘suck’, <i>tergeo</i> ‘wipe’, <i>verro</i> ‘sweep’
<i>niger</i> ‘black’	<i>amburo</i> ‘burn’, <i>aspergo</i> ‘spray’, <i>cremo</i> ‘burn’, <i>pingo</i> ‘paint’, <i>maculo</i> ‘stain’, <i>spargo</i> ‘spray’, <i>tingo</i> ‘dye’, <i>tundo</i> ‘beat’, <i>uro</i> ‘burn’, <i>verbero</i> ‘smite’
<i>opimus/pinguis</i> ‘fat’	<i>cibo</i> ‘feed’, <i>pasco</i> ‘pasture’
<i>planus</i> ‘flat’	<i>aro</i> ‘plough’, <i>caedo</i> ‘cut, knock’, <i>cudo</i> ‘knock’, <i>premo</i> ‘press’, <i>sicco</i> ‘dry’, <i>sorbeo</i> ‘suck’, <i>sugo</i> ‘suck’, <i>tero</i> ‘grind’, <i>tundo</i> ‘beat’, <i>volvo</i> ‘roll’
<i>plenus</i> ‘full’	<i>farcino</i> ‘stuff’, <i>farcio</i> ‘stuff’, <i>saturo</i> ‘stuff’, <i>sorbeo</i> ‘suck’, <i>stipo</i> ‘cram’, <i>sugo</i> ‘suck’
<i>quietus/tranquillus</i> ‘calm’	<i>cano</i> ‘sing’, <i>lallo</i> ‘lull’
<i>raucus</i> ‘hoarse’	<i>clamo</i> ‘scream’, <i>loquor</i> ‘talk’, <i>strideo</i> ‘yell’
<i>aridus/siccus</i> ‘dry’	<i>amplector</i> ‘hug’, <i>bibo</i> ‘drink’, <i>bullio</i> ‘boil’, <i>clamo</i> ‘scream’, <i>complector</i> ‘hug’, <i>ferveo</i> ‘boil’, <i>fleo</i> ‘weep’, <i>flo</i> ‘blow’, <i>frico</i> ‘rub’, <i>mulceo</i> ‘caress’, <i>mulgeo</i> ‘milk’, <i>ploro</i> ‘cry’, <i>premo</i> ‘squeeze’, <i>rado</i> ‘scrape’, <i>sanguino</i> ‘bleed’, <i>sorbeo</i> ‘suck’, <i>strideo</i> ‘yell’, <i>stringo</i> ‘squeeze’, <i>sugo</i> ‘suck’, <i>tergeo</i> ‘wipe’, <i>verro</i> ‘brush’
<i>surdus</i> ‘deaf’	<i>caedo</i> ‘cut, knock’, <i>clamo</i> ‘scream’, <i>cudo</i> ‘knock’, <i>strideo</i> ‘yell’, <i>tundo</i> ‘beat’
<i>tortus</i> ‘crooked’	<i>caedo</i> ‘cut, knock’, <i>cudo</i> ‘knock’, <i>tundo</i> ‘beat’

I have filtered Boas’s subcorpus somewhat: I have dismissed verbs such as *get*, *render* or *make*, which head simple resultative constructions (see Section 1.1). In some cases I have added verbs which I imagined could be possible with the adjective. This is the case of the verbs combining with *aeger* ‘ill’, or *pinguis/opimus* ‘fat’. The subcorpus obtained was composed by all the sentences where each adjective combined with at least one of the verbs of the same row in the box. Despite the ample range of adjectives and verbs used and their high absolute frequency in the Antiquitas corpus (and in Latin in general), the results have been utterly in the negative. Therefore, my conclusion is that Latin disallows this type of complex resultative constructions.

This situation constitutes a puzzle within the perspective adopted here, where adjectives are expected to be able to fulfil the role of result predicates in s-framed languages in general. However, as shall be shown in Section 1.3, Latin is not the only s-framed language in banning the formation of AP resultatives.

Latin, on the other hand, does permit the formation of *simple* adjectival resultative constructions (see Section 1.1.1), mainly based on the verbs *reddo* ‘render’ and *facio* ‘make’, and, to a lesser extent, *relinquo* ‘leave’:

- (31) *Latin; Plaut. Capt. 197*  
 Eam [servitatem] lenem [...] reddere.  
 that.ACC.F.SG serfdom(F)ACC.SG mild.ACC.F.SG render.INF  
 ‘To make that serfdom mild.’
- (32) *Latin; Cic. Phil. 6, 18*  
 Senatum [...] firmiorem [...] fecistis.  
 senate(M)ACC.SG firm.COMPAR.ACC.M.SG make.PRF.2PL  
 ‘You made the Senate stronger.’
- (33) *Latin; Cic. Catil. 1, 16*  
 Simul atque ad-sedisti, partem istam subselliorum  
 At once and at-sit.PRF.2SG part(F)ACC.SG that.ACC.F.SG seat.GEN.PL  
 nudam atque inanem reliquerunt.  
 nude.ACC.F.SG and empty.ACC.F.SG leave.PRF.3PL  
 ‘At the moment you sat down among them, they left that part of the seats nude and empty.’

In the above examples the semantics of resultativity is encoded within the AP. However, what is lacking in those predicates is some element expressing a process leading up to the result state. I shall come back to simple resultatives in Latin in Sections 3.2 and 3.3.

### 1.3 *Slavic does not feature complex AP resultatives*

Slavic languages are considered by Talmy (2000:222) to be s-framed, since they typically convey the Core Schema as an element different from the verb:<sup>159</sup>

- (34) *Russian; Talmy 2000:222*  
 Ptica [v]<sub>Core Schema</sub> -letela.  
 bird.NOM in -flew  
 ‘The bird flew in.’

However, as happens in Latin, when the result predicate is an AP the construction turns out to be ungrammatical:

- (35) *Russian; Strigin 2004:5*  
 \*Ona mylila men’a skolzkim.  
 she soap.PST me slippery  
 ‘She soaped me slippery.’

<sup>159</sup> For other treatments of Slavic as s-framed, see Mateu 2002:196, 2008b:236f. (on Russian, specifically). Gehrke (2008:203f.) argues that Russian and Czech behave like v-framed languages in that they do not allow the integration of a non-verbal predicate into an activity VP to derive an accomplishment structure. In these languages, resultativity—in her framework, an essential ingredient of accomplishmenthood—is to be expressed on the verb, as occurs with prefixed verbs. However, she misses the point that verbal prefixes are precisely the kind of non-verbal predicates “integrated into an activity structure” which are allowed in these languages (and, as shall be shown, in Latin). At the basis of her argument lurks the word/non-word distinction which it is our endeavour to show as (syntactically) spurious (see Chapter 2, Section 3.3.1): Slavic (and Latin) can be taken to be v-framed since the verb, that is, a *word* which may include, for instance, a verbal prefix, is the privileged unit where resultativity is expressed. We note, however, that Talmy’s (2000) typology is constructed on considerations about morphemes or roots, and not about words (Leonard Talmy, p. c.; cf. his concept “lexicalisation pattern”, for instance the one involving the conflation of the Core Schema with the verb, which implies that Path and Verb are one and the same *morpheme* or *root*.).

Importantly, the contrast between (34) and (35) is not to be stated in terms of change of location versus change of state. As it turns out, Russian (and Slavic, in general), succeeds in mimicking typical adjectival resultative constructions found in English, expressing a change of state, and even featuring unselected objects (*ètu dorogu, ruku*, in the examples below); however, these languages must resource to adpositional prefixes to express those complex events:

(36) *Russian; Spencer & Zaretskaya 1998:19*

- a. Oni na-ezdili ètu dorogu.  
they on-drive this road.ACC  
'They've made this road nice and smooth (by driving over it).'
- b. Ona pere-igrála ruku na pianino.  
she pere-played hand on piano  
'She's hurt her hand playing the piano.'

We must conclude that a formal factor, categorial or otherwise, must be responsible for the contrast between (34) and (36), on the one hand, and (35), on the other hand.

Svenonius (2004b) and Gehrke (2008) point out the lack of AP resultative constructions in Slavic languages. Thus, Svenonius (2004) states that "[...] Slavic languages do not allow the free formation of resultatives like *shoot Dillinger dead*, the way Germanic languages do (Spencer and Zaretskaya 1998, Strigin and Demjjanow 2001)". Gehrke (2008:203) makes the same claim for the same two languages when she observes that "[...] there seems to be some morphological requirement to express resultativity on the verb in these languages. Indicative of this approach is that these Slavic languages lack adjectival resultatives of the English type (e.g. *hammer the metal flat*) but generally have to use accomplishment/achievement verbs (that are additionally marked for resultativity by an internal prefix) and/or PPs in such constructions." Other authors have mentioned this state of affairs for other Slavic languages. Snyder (2001:329) includes Russian and Serbo-Croatian in his list of languages disallowing AP resultatives. Angelina Markova and Wojciech Lewandowski (p. c.) respectively report that Bulgarian and Polish do not feature these constructions. I illustrate with Bulgarian:

(37) *Bulgarian; Angelina Markova (p. c.)*

- a. Te go za-streljaha(\*umrial).  
they him za-shot dead  
'They shot him (dead).'
- b. Toj iz-chisti masata (\*chista)(ot prah).  
He out-wiped table.the clean (of dust)  
'He wipes the table clean of dust.'

Markova informs that AP resultatives expressing change of colour are not possible in Bulgarian:

(38) *Bulgarian; Angelina Markova (p. c.)*

- Bojadisah stenata chervena.  
paint.PST.1SG wall.the red  
'I painted the wall red.'

However, as discussed in Section 1.1.2, resultatives of this type are typical examples of weak resultatives. If, as argued before, weak resultatives are in reality simple resultative constructions, the resultative AP merely specifying the result state already encoded by the verb, data such as (38) do not constitute counterexamples to the claim that Slavic does not admit complex adjectival resultative constructions.

#### 1.4 Neither Latin nor Slavic feature complex PP resultatives without a prefixed verb

I conclude this section presenting an empirical observation which may shed light on why s-framed languages like Latin or Slavic do not allow resultative constructions based on APs; it may also help us maintain a syntactic modelling of the Talmian typology as the basic explanation for the availability of resultative constructions cross-linguistically, regardless of the category of their resultative secondary predicates. The observation is the one in (39) and is first illustrated in (40) and (41) for Latin and Bulgarian, respectively:

- (39) Neither Latin nor Slavic, both disallowing AP resultatives, seem to allow the expression of PP resultatives without a result-conveying prefix attached onto the verb.

- (40) *Latin; Caes. Liv. 22, 42, 5*

Qui	ubi	*( <u>ad</u> -)equitavit	portis...
who.NOM.SG	as_soon_as	at-ride.PRF.3SG	doors.DAT

‘This one, as soon as he had ridden up to the gates...’

- (41) *Bulgarian; Angelina Markova (p. c.)*

*( <u>iz</u> -)kopah	sukrovishte	(iz	dupkata).
out-dig.PST.1SG	treasure.the	out	hole.the

‘I dug a treasure out of the hole.’

The observation in (39) involves the conception of prefixes as conveyors of the resulting state or location of a complex telic event (the *result predicate*). In Chapter 3 I adopted this as the right analysis for prefixes in Latin: the sequence we identify as a prefix in the surface is the result of the affixation of phonological material coming from the complement in PlaceP, the projection codifying states and locations. Here I add that a resultative analysis is also proposed for Slavic verbal prefixes by Arsenijević (2006), Gehrke (2008) or Žaucer (2009). This view holds well for the examples in (40) and (41), where the prefixes *ad*- and *iz*- clearly express the final location of the complex directed motion constructions they are involved in.

If the observation in (39) is on the right track, which I will attempt to show later, a possible way to make sense of it is through an implication construed in the following terms:

- (42) In some (s-framed) languages, there is a morphological requirement on the element expressing the result predicate and the verb: they have to form a single (prosodic) word. This requirement impedes those languages to feature complex adjectival resultative constructions.

If the morphological packaging, or to borrow Pinault’s (1995) term, the *univibration* affecting the result predicate and the verb is taken as obligatory, possible or impossible, and if no other factor is taken into account, the implication in (42) yields a certain



distribution of s-framed languages with respect to their allowance of complex resultatives based on APs:

- (43) *Relation between univertation of the result predicate and the verb and availability of AP resultatives*

	UNIVERTATION OF THE RESULT PREDICATE AND THE VERB		
	IMPOSSIBLE	POSSIBLE	OBLIGATORY
AP RESULTATIVES	available	available	unavailable

I will come back to this typology in Section 4. But first it should be shown that the observation in (39) is empirically correct for Latin and Slavic. This is carried out in Section 2.

### 1.5 Summary

Neither Latin nor Slavic, although being s-framed languages, admits the construction of complex resultatives where the result predicate is an AP. These same languages do not seem to allow the construction of complex resultatives if the verb is not prefixed. The hypothesis has been put forth that these two facts are related, so that the univertation requirement on the verb and the result predicate bleeds the generation of AP resultatives.

## 2 Latin and Slavic complex resultatives always feature a prefixed verb

### 2.1 Latin complex resultative constructions

In the case of Latin, I have conducted three corpus searches in order to ascertain whether this language expresses complex resultative constructions always through the aid of a prefix. The first two searches aim at finding constructions formed by a PP and a surface contact verb, in the first search, and a sound emission verb, in the second search, taking into account only unprefix verbs. Thus, the procedure to reveal (39) as valid is a *reductio ad absurdum*: if the search produces any result, i.e., any complex resultative construction based on one of the unprefix verbs, (39) would be invalidated for Latin. The type of resultative constructions I am looking for in these searches is respectively illustrated by the English constructions in (44) and (45).<sup>160</sup>

- (44) *Rappaport Hovav & Levin 1998:97*  
Terry swept the crumbs into the corner.
- (45) *Folli & Harley 2006:145*  
Mary whistled Rover to her side.

<sup>160</sup> The material used for these two searches is displayed in (i) and (ii), respectively:

- (i) *Latin; Search for complex PP resultatives with unprefix surface contact verbs*
- Verbs: *calco* ‘tread, press’, *frico* ‘rub’, *rado* ‘scrape, scratch; razor’, *tergeo* ‘wipe’, *tero* ‘rub, grind; thresh’, *verro* ‘sweep’
  - Prepositions: *ab* ‘off, away’, *ad* ‘at, beside, by’ *de* ‘downward; from, away’ *ex* ‘out of’ and *in* ‘in’.
- (ii) *Latin; Search for complex PP resultatives with unprefix sound emission verbs*
- Verbs: *fremo* ‘roar’, *strideo* ‘yell’, *rideo* ‘laugh’, *sibilo* ‘whistle’, *latro* ‘bark’, *ululo* ‘howl’, *mugio* ‘moo’, *hinnio* ‘neigh’, *strepo* ‘make a lot of noise’, *grunnio* ‘grunt’, *rudo* ‘bray’, *ballo* ‘bleat’
  - Prepositions: *ab* ‘off, away’, *ad* ‘at, beside, by’ *de* ‘downward; from, away’ *ex* ‘out of’ and *in* ‘in’

The search involving sound emission verbs, did not render any result whatsoever, confirming (39) for Latin.

The search involving surface contact verbs, yielded some few apparent examples, the ones in (46) through (48), where I have underlined the allegedly licensing PPs:

(46) *Latin calco 'tread, press'*

a. *Cato, Agr. 117*

[Oleas]                      in orculam                      calcat.  
olive.ACC.PL              in    vessel.ACC              press.IPV.FUT.2SG  
'Press [the olives] down into an earthenware vessel.'

b. *Stat. Theb. 8, 541*

Clipeum=que              in pectora                      calcat.  
shield.ACC=and              in chest.ACC              press.3SG  
'He stands/presses his shield against his chest.'

(47) *Latin tero 'rub, grind; thresh'*

a. *Petron. 68, 1*

Sparsērunt [...]              ex lapide speculārī                      pulverem  
sprinkle.PRF.3SG              out    mica.ABL                      powder(M)ACC.SG  
tritum.  
grind.PTCP.PFV.ACC.M.SG  
'They sprinkled powder ground out of mica.'

b. *Plin. Nat. 26, 147*

Astragali                      radix                      in pulverem                      trita.  
astragalon.GEN              root(F)NOM.SG              in powder.ACC              grind.PTCP.PFV.NOM.F.SG  
'Astragalon root ground into powder.'

c. *Plin. Nat. 28, 207*

[Caseum]                      veterem [...]                      in farinam                      tritum.  
cheese(M)ACC              old.ACC.M                      in flour.ACC              grind.PTCP.PFV.ACC.M.  
'Cured cheese, ground into flour.'

(48) *Latin verro 'sweep'*

a. *Hor. Sat. 2, 3, 235*

Piscis                      hiberno                      ex aequore                      verris.  
fish.ACC.PL              stormy.ABL.N.SG              out    sea(N)ABL.SG              sweep.2SG  
'You sweep the fish from a stormy sea.'

b. *Hor. Carm. 1, 1, 9*

Proprio                      condidit                      horreo                      quidquid  
own.ABL.M.SG              hide.3SG                      barn(M)ABL.SG              whatever.ACC  
de Libycis                      verritur                      areis.  
off    Lybian.ABL.PL              sweep.PASS.3SG              threshing-floor.ABL.PL  
'He hides in his own barn whatever is swept out of Lybian threshing-floors.'

Example (46)a is an excerpt from Cato's *De agricultura* where the procedure to season green olives is described. After the olives have been soaked in vinegar and mixed with other spices, they have to be pressed in order to loose the liquid. This is expressed by *in orculam calcatō*. But note that the olives need not end up into the vessel as a result of a pressing event (*calcatō*); rather, it seems, they're first put therein and then they are pressed. This is the interpretation chosen by Nisard (1877): "foulez-les avec vos mains bien sèches dans un vase de terre", "press them with well dry hands in an earthenware vessel". That this must be the right interpretation is supported by the other example

involving *calco*, (46)b, where the PP *in pectora* clearly represents an unbounded directional PP, since there is of course no entailment that the shield end up within the soldier's chest (see also Chapter 3, Section 2.7.1). As for the examples in (47), they could be taken as cases of weak resultatives, since the PPs merely modify the result state encoded by the verb *tero* 'grind'. Independent evidence of this is that in v-framed languages, with no allowance for complex resultative constructions, predicates analogous to those in (47) are fine:

(49) *Spanish; examples from a Google search*

- a. Triturar      en polvo    fino   las    nueces.  
crush.INF      in powder fine   the    nut.PL  
'To grind the nuts into fine powder.'
- b. El    arroz    crudo    se            puede    moler      en harina.  
the    rice      raw      REFL.3SG can.3SG grind.INF    in flour  
'Raw rice can be ground into flower.'

Notwithstanding other examples, such as (48)a, which really seem to imply both a final location and telicity, it seemed to me that another search was needed which overtly took into account the aspectual dimension of the complex predicate in Latin. So, I searched for combinations of, on the one hand, prefixed and unprefixed manner-of-motion verbs, and, on the other, a series of telicity-signalling expressions. Here the results were significant: out of the 149 telic predicates yielded by the search, 8, listed in (50), are headed by unprefixed manner-of-motion verbs, while 141, represented through the sample in (51), are headed by prefixed ones —see the Appendix for the totality of telic cases of prefixed verbs.<sup>161</sup>

<sup>161</sup> The search for telic complex directed motion constructions with unprefixed and prefixed verbs involved the following criteria:

- (i) *Prefixed and unprefixed verbs* ("p-" represents any prefix):  
(p-)ambulo 'walk'; (p-)curro 'run'; (p-)equito 'ride'; (p-)fluo 'flow'; (p-)gredior 'walk, step'; (p-)labor 'slip'; (p-)navigo 'sail'; (p-)repo 'crawl'; (p-)salio 'jump'; (p-)volo 'fly'
- (ii) *Telicity-signalling expressions*
  - a. *Adverbs*  
*extemplo, repente, repentino, statim, subito or subitum*, 'suddenly'
  - b. *Prepositions*  
*intra* 'in' (as in *intra tres dies* 'in three days')
  - c. *Complementisers*  
*simul ac, simul atque, ubi or ut primum*, 'as soon as'
  - d. *Ablative forms of nouns and adjectives encoding periods of time*  
*dies* 'day', *hora* 'hour', *nox* 'night', *mensis* 'month', *annus* 'year', *diurnus* 'of the day', *diutinus* 'lasting', *diuturnus* 'lasting', *nocturnus* 'of the night', *menstruus* 'which lasts a month', *menstrualis* 'which lasts a month', *annuus* 'which lasts a year', *annalis* 'of a year', *annualis* 'a year old', *aestas* 'summer', *hiems* 'winter', *ver* 'spring', *autumnus* 'autumn', *mane* 'morning', *vesper* 'evening', *vesperus* 'of the evening', *calendae/kalendae* 'calends', *idus* 'ides', *nonas* 'nones', *lustrum* 'lustrum', *meridies* 'noon', *vigilia* 'time of keeping watch by night', *hibernus* 'wintry', *hibernus* 'winter', *saeculum/seculum/saeculum* 'century', *saecularis* 'of a century', *aestivus* 'of the summer', *aestivalis* 'of the summer', *vernus* 'of the spring', *vernalis* 'of the spring', *autumnus* 'of the autumn', *autumnalis* 'of the autumn', *horalis* 'which lasts an hour', *matutinus* 'of the morning', *postmeridianus* 'of the afternoon', *vespertinus* 'of the evening', *spatium* 'time span'
  - e. *Ablative form of adjectival suffixes indicating a period of time*  
*-dius* 'of X days', *-ennius* 'of a year', *-noctius* 'of X nights', *-menstruus* 'of X months', *-menstris* 'of X months'

(50) *Latin; telic predicates headed by unprefix manner-of-motion verbs*

- a. *Cic. Quinct. 53*  
 Non statim ad C. Aquilium [...] cucurrisses?  
 not at once at C. Aquilius.ACC run.PRF.SBJV.2SG  
 'Wouldn't you have run up to C. Aquilius at once?'
- b. *Petron. 136, 3*  
Statimque, ad re-ficiendum ignem in viciniam cucurrit.  
 at once=and, at re-make.GER.ACC fire.ACC in neighbour's.ACC run.PRF.3SG  
 'And immediately, he ran to the neighbours' to kindle the fire.'
- c. *Suet. Otho 8, 2*  
 Ac repente omnes in Palatium cucurrerunt.  
 and suddenly all.NOM.PL in Palace.ACC run.PRF.3PL  
 'Then on a sudden everybody hastened into the Palace.'
- d. *Sil. 7, 187*  
Subito vilis rubenti fluxit mulctra mero.  
 suddenly, worthless.NOM red.ABL flow.PFV.3SG milk-pail.NOM wine.ABL  
 'On a sudden, the worthless milking-pail flowed with red wine.'
- e. *Cic. Att. 6, 2, 1*  
 Se statim ad te navigaturum esse.  
 REFL.3SG.ACC at once at you.ACC sail.INF.FUT.ACC.M be.INF  
 'That he was on the point of setting sail to join you.'
- f. *Cic. Fam. 16, 1, 2, 4*  
 Si statim navigas, nos Leucade consequere.  
 if at once sail.2SG us.ACC Leucas.ABL follow.FUT.2SG  
 'If you sail off at once, you will overtake me at Leucas.'
- g. *Lucr. 1, 184*  
 E terra=que ex-orta repente arbusta  
 out earth.ABL=and out-rise.PTCP.PFV.NOM.N.PL suddenly bush(N).NOM.PL  
salirent.  
 leap.IPFV.SBJV.3PL  
 'And branching trees would suddenly leap out of the turf.'
- h. *Enn. Ann. 1, 90*  
Simul ex alto longe pulcherruma praepes  
 suddenly out high.ABL far beautiful.SUPERL.NOM nimble.NOM  
 laeva volavit avis.  
 left.NOM fly.PFV.3SG bird.NOM  
 'Suddenly there appeared to the left, in the distance, out of the high, a most beautiful bird flying with good omen.'

(51) *Latin; a sample of telic predicates headed by prefixed manner-of-motion verbs*

- a. *Liv. 34, 37, 1*  
 Deinde subito ad arma dis-currerunt.  
 then suddenly at weapon.ACC.PL apart-run.PRF.3PL  
 'Then, on a sudden, they ran in all directions for the weapons.'
- b. *Liv. 22, 42, 5*  
 Qui ubi ad-equitavit portis.  
 who.NOM.SG as soon as at-ride.PFV.3SG doors.DAT  
 'This one, as soon as he had ridden up to the gates...'

- c. *Val. Max.* 6, 9, 7  
 [Vires                    atque       opes                    humanae]  
 strength.NOM.PL    and       wealth.NOM.PL    human.NOM.PL  
ad-fluunt       subito,       repente       di-labuntur.  
 at-flow.3PL    suddenly    suddenly    apart-slip.3PL  
 ‘The vigours and the wealths of humans come suddenly in a flow, and suddenly slip asunder.’
- d. *Liv.* 40, 22, 7  
Triduo                    a-scenderat                    biduo                    est  
 three\_days.ABL    at-climb.PLUPRF.3SG    two\_days.ABL    be.3SG  
de-gressus.  
 downward-walk.PTCP.PFV.M.NOM.SG  
 ‘He had walked down in two days, though he had climbed up in three.’
- e. *Plin. Nat.* 6, 97  
XXX       dierum                    spatio                    prae-navigaverint.  
 30       day.GEN.PL    span.ABL    before-sail.PLUPRF.SBJV.3PL  
 ‘It took thirty days to sail past their territory.’
- f. *Suet. Diius Augustus* 94, 4  
 Draconem                    repente       ir-repsisse                    ad eam  
 snake(M)ACC.SG    suddenly    in-glide.INF.PFV    at her.ACC  
pauloque       post       e-gressum.  
 a\_little=and    after       out-walk.PTCP.PFV.ACC.M.SG  
 ‘That, on a sudden, a snake glided in towards her and glided away soon after.’
- g. *Liv.* 22, 48, 2  
Repente    ex       equis                    de-siliunt.  
 suddenly    out    horses.ABL    down-leap.3PL  
 ‘Suddenly they lept down from their horses.’

The many examples found where a prefixed verb is used prove right the observation made in (39). These examples can be argued to represent complex resultative constructions; as such, they receive, within the present framework, the following analysis:

(52) *Latin; an analysis of (51)c*

[vP [<sub>v</sub> V  $\sqrt{\text{FLU}}$ ] [<sub>PathP</sub> vires [<sub>Path</sub>’ [<sub>Path</sub> [<sub>PlaceP</sub> [<sub>PlaceP</sub> vires [<sub>Place</sub>’ Place  $\sqrt{\text{AD}}$ ]]]]]]]]

The root  $\sqrt{\text{AD}}$  is merged as Compl-Place, and is later associated morphologically with the verb at PF. The v head is independently associated, by adjunction, with a root expressing the Manner component,  $\sqrt{\text{FLU}}$  ‘flow’, which conflates into v. The s-framed pattern is preserved, since the Path and the verb correspond to different phonological realisations.

The predicates in (50), on the other hand, seem to be counterexamples to (39). Interestingly, however, out of the 8 predicates headed by unprefix verbs that are shown in (50), 5 are headed by *curro* ‘run’, *salio* ‘jump’ and *volo* ‘fly’. These verbs exhibit a special behaviour in v-framed languages like Italian or French, a behaviour which can be, despite appearance, put in relation to that of the Latin cognate verbs of (50). Specifically, these verbs can head constructions which at first glance could be taken as CDMCs, which, as we know, are not possible in v-framed languages. First, it has been observed that Italian *correre* ‘run’ and French *courir* ‘run’ may appear in telic

predicates of directed motion, as respectively illustrated in (53)a and (53)b. (53)a additionally shows that telic *correre* triggers selection of BE as auxiliary for the perfect tense and must hence be considered as heading an unaccusative predicate expressing an accomplishment rather than an activity:

(53) *Italian and French; Folli & Ramchand 2005:95 and Pourcel and Kopecka 2006:35*

- a. Gianni è corso in spiaggia in/\*per un secondo.  
 John is run.PTCP.PFV.M.SG in beach in/for one second  
 ‘John ran to the beach in a second/\*for one second.’
- b. Il court dans le jardin.  
 he runs in the garden  
 ‘He runs into the garden.’

An analogous scenario can be described for *jump* and *fly*. Mateu (2010), for instance, shows that these verbs display unaccusative behaviour in Italian —specifically, BE-selection in the perfect— if accompanied with a PP:<sup>162</sup>

(54) *Italian; Mateu 2010:31*

- a. Gianni è/\*ha volato a Mar de Plata.  
 Gianni is/\*has flown to Mar de Plata  
 ‘Gianni has flown to Mar de Plata.’

<sup>162</sup> See Folli & Ramchand 2005:97 for a list of manner-of-motion verbs in Italian which can head unaccusative, change-of-location predicates. These authors also point out to the fact that there are verbs in this language which do not license the construction —see below in the main text. With respect to auxiliary selection in French, it is well known to be notably different from that in Italian or Dutch, where BE-selection correlates well with unaccusativity (see Sorace 2000). However, it is worth noting that popular varieties of French maintain BE-selection for *courir* ‘run’ and *sauter* ‘jump’, an option that was common to all varieties in earlier stages of the language. Thus, for instance, Grevisse (1993:1185), who observes that BE was the usual auxiliary for *courir* in the common usage until the 17th century, provides the next example in contemporaneous French, excerpted from Roger Martin du Gard’s (1922) *Le Pénitencier* (*Les Thibault*, vol. 2: *Le Pénitencier*. Paris: Gallimard):

(i) *French; apud Grevisse 1993:1185*

Pasquin est couru le chercher.  
 Pasquin is run.PTCP.M.SG him.ACC search.INF  
 ‘Pasquin has run off to look for him.’

With respect to *sauter* ‘jump’, Grevisse (1993:1186) observes that it can as well sporadically be construed with BE, and provides an example from Émile Zola’s (1876) *Son Excellence Eugène Rougon* (Paris: Charpentier et compagnie):

(ii) *French; apud Grevisse 1993:1186*

La rondelle [...] était sautée dans le corsage d’une dame.  
 the token(F) had jump.PTCP.F in the bodice of=a lady  
 ‘The round token had jumped into the bodice of a lady.’

With respect of this, my Belgium French informant reports that BE-selection with *courir* and *sauter*, where they head telic change-of-location predicates, is also alive nowadays in varieties of Belgium French. Thus, in these varieties minimal pairs such as the one in (iii) obtain; in (iiia) HAVE-selection conjures up an atelic process reading of *sauter* (a series of jumps) and a locative (stative) reading of *dans la voiture*, while in (iiib) BE-selection triggers a telic transition reading of *sauter* and a result location reading of *dans la voiture* (there is a single jump which gets her into the car):

(iii) *Contemporary Belgium French*

- a. Elle a sauté dans la voiture pendant cinq minutes.  
 she has jump.PTCP.M in the car for five minutes
- b. Elle est sautée dans la voiture en une seconde.  
 she is jump.PTCP.F in the car in a second

- b. Gianni *è/\*ha saltato dalla finestra.*  
 Gianni is/\*has jumped from.the window  
 ‘Gianni has jumped from the window.’

Crucially, not all verbs in Romance behave this way. For instance, Folli & Ramchand (2005) show that Italian *camminare* ‘walk’ and *galleggiare* ‘float’, are unable to license unaccusative predicates (with BE-selection) even in the presence of a goal PP:

(55) *Italian; Folli & Ramchand 2005:97*

- a. \*Gianni *è camminato* in spiaggia.  
 John is walk.PTCP.PFV.M.SG in beach  
 ‘John walked to the beach.’  
 b. \*La barca *è galleggiata* sotto il ponte.  
 the boat is float.PTCP.PFV.F.SG under the bridge.  
 ‘The boat floated under the bridge.’

Within the neo-constructional framework adopted here, we cannot appeal, as a first resource, at alleged formal lexical properties of *run*, *jump*, *fly* as opposed to other verbs of manner of motion as the ones in (55) to explain the behaviour of either type. Rather, the fact that both classes of verbs tend to be the same in different languages argues for an account in terms of grammar-concept compatibility, better than for one in terms of idiosyncratic lexical marking: it is the case that verbs such as *run*, *fly* or *jump* accept with more ease a linguistic construal in terms of telic change of location than other manner of motion verbs such as *float* or *walk*. First, it has to be noticed that the type of motion described by these three verbs is usually directed (though not necessarily bounded) motion, that is, it usually involves a change of position (as opposed to *float* or *dance*, for instance). Secondly, at least *run* and *jump* can be standard ways of attaining a goal of motion, as can *fly* in the case of descriptions of trips to distant destinations, such as in (54)a. Thirdly, there is a conceptual component of rapidity in the three of them, as opposed to, say, *walk* (see (55)a), which makes them apt to be used as change-of-location predicates, that is, to describe a transition from one place to a different one. These conditions allow *run*, *jump* and *fly* to be used as change-of-location verbs. Specifically, I claim that they head weak resultative (unaccusative) constructions, analogous to the ones seen in Section 1.1.2. I illustrate with an analysis of (53)a:

(56) *Italian; an analysis of (53)a*

[<sub>VP</sub> V [<sub>PathP</sub> Gianni [<sub>Path</sub> [<sub>PlaceP</sub> [<sub>PlaceP</sub> [<sub>Place</sub> Place  $\sqrt{\text{IN}}$ ] spiaggia] [<sub>PlaceP</sub> Gianni  
 [<sub>Place</sub> Place  $\sqrt{\text{CORR}}$ ]]]]]]]

The root  $\sqrt{\text{CORR}}$  is first merged as Compl-Place, where it is interpreted as a terminal Ground (since PlaceP is embedded within PathP), and the subject, *Gianni*, is merged at Spec-Place, where it is interpreted as Figure. In v-framed Italian v and Path end up forming one and the same head by Lowering and Fusion (see Chapter 3, Section 1.5.2). This fused head receives the phonological matrix of the root  $\sqrt{\text{CORR}}$  after Vocabulary Insertion, at Conflation. As for the PP *in spiaggia*, I take it to be an adjunct to PlaceP: it provides a specification of the result location, much as the AP in other weak resultatives serves as a specifier of the result state encoded by the verb.<sup>163</sup> Note that an analysis of

<sup>163</sup> The attentive reader probably notes that there might be a contradiction in claiming an adjunct status for the goal PP in these constructions, where it seems to be compulsory. I take this obligatoriness to be also a pragmatic effect, active only in motion constructions, where absence of the goal provokes straightforward

these predicates as weak resultatives is in conformity with the fact that the languages where they are found are v-framed and, hence, not featuring strong resultative constructions. These weak resultatives are licensed precisely because they do not involve different morphophonological realisations for v and Path. The analysis is inspired by a similar one in Mateu 2010. The difference between Mateu's (2010) analysis and mine is the treatment of the PP which typically appears in these Romance constructions of directed motion. While I take it to be an adjunct to PlaceP, he, assuming a Late Insertion approach to the realisation of roots, proposes that it is the phonological realisation of PlaceP (his  $P_{loc}$  projection), after the root has incorporated up into v. See footnote 151 for a more detailed explanation. At this point I really do not see which one of the hypothesis fares (empirically) better, if they can be shown to make different predictions at all—but see footnote 163 for an important remark about the PPs which appear in Romance directed motion constructions with verbs like *run*; see also Chapter 2, Section 3.3.2 for arguments against a Late Insertion approach to the phonology of roots.<sup>164</sup>

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awkwardness. A first indication that this might be right is the next Italian example, where *correre* might appear with BE in the absence of a goal PP:

(i) *Italian; Sorace 2000:876*

Maria {ha corso/ è corsa} velocemente.  
 Maria has run.PTCP.PFV.M.SG/ is run.PTCP.PFV.F.SG fast  
 'Maria ran fast.'

Further evidence comes from the fact that the use of these roots in telic Path constructions without Place-adjunct PPs can be argued to have given rise, by coercion, to new meanings for the mentioned verbs, making use of and preserving the rapidity component in the conceptual content of the root:

(ii) *French; Belgian informant*

Les plombs ont sauté (\*pendant cinq minutes).  
 the fuses have.PL jump.PTCP.PFV  
 'The fuse has blown.'

(iii) *Spanish*

Harta de tanta humillación, Celsa saltó en pocos segundos.  
 Fed up.F.SG of so\_much.F.SG humiliation Celsa jump.PRF.3SG in few.PL seconds  
 'Fed up with so much humiliation, Celsa blew up in a few seconds.'

(iv) *Catalan*

En pocs minuts han volat tots els pastissos.  
 in few.PL minutes have.PL fly.PTCP.PFV all.PL the cakes  
 'All the cakes have disappeared in a few minutes.'

(v) *Italian; Google search*

D'un tratto è corsa voce che un satellite artificiale era stato  
 of=a shot is run.PTCP.PFV.F.SG voice(F)SG that a satellite artificial was been  
 lanciato su.  
 thrown up

'Unexpectedly the rumour spread that an artificial satellite had been launched.'

<sup>164</sup> Mateu (2010) also claims that his analysis of Romance apparent CDMCs can be extended to the English cases where a manner-of-motion verb licenses a directional reading without the preposition *to* (see Den Dikken 2008, Gehrke 2008, Ramchand 2008 and Real-Puigdollers 2010). Thus, while *run*-verbs (ia) are compatible with both a locative reading and a directional reading of an *in*-PP, *dance*-verbs (ib) are compatible only with a locative reading thereof:

(i) *Mateu 2010:23*

- a. The boy ran in the kitchen.
- b. The boy danced in the kitchen.

In the directed-motion interpretation of (ia), Mateu (2010:24) argues, the verb *run* "can be claimed to involve Incorporation of P(ath) into the verb *run*, this manner verb acquiring its Path/Result sense". I note here that an approach to the *run/dance* difference based on grammar-concept compatibility, as the one I have sketched above, immediately derives the fact that it is also verbs like *run* or *jump* (cf. directionally interpreted *He jumped in the ditch*) which behave in a special way in English. Finally, I'd like to report that another possible way to approach the telic, directional reading of (ia) is to consider the possibility



I go back now to the Latin data in (50). A neo-constructional analysis of the Romance data considered so far, whereby the construal of *run*-verbs as change-of-state verbs hangs on a compatibility of the conceptual dimension of these roots with a telic PathP structure, and not on lexical marking of the roots/verbs within independent lexicons, predicts that roots with similar conceptual content in other languages will also be amenable to the same construal.<sup>165</sup> I argue that this is what happens with at least some of the Latin verbs in (50) —and also with certain uses of English *run* or *jump* as opposed to verbs like *dance*, as explained in footnote 164. Thus, a predicate such as (32) would also receive a weak resultative analysis, within this view:

(57) *Latin; an analysis of (32)*

[<sub>vP</sub> V [<sub>PathP</sub> Omnes [<sub>Path'</sub> Path [<sub>PlaceP</sub> [<sub>PlaceP</sub> [<sub>Place</sub> Place <sub>√IN</sub>] palatium] [<sub>PlaceP</sub> ~~Omnes~~  
[<sub>Place'</sub> Place <sub>√CURR</sub>]]]]]]]

Last, I would like to point out that there is evidence that the weak resultative analysis of (57) can be extended to the Slavic languages, since the counterpart of *jump* in these languages may head change-of-location predicates without a prefix, as illustrated through the following Czech example:

(58) *Czech; Filip 2003:78, apud Gehrke 2008:236*

- a. Skočil metr od okna.  
jumped metre.ACC from window.GEN  
'He jumped a metre away from the window.'
- b. Skočil metr k oknu.  
jumped metre.ACC to window.DAT  
'He jumped a metre to the window.'

If the analysis presented here for most of the examples in (50) is on the right track, they cannot be taken as counterexamples to the observation in (39), namely, that complex resultative constructions are always prefixed in Latin. The reason is that, under this analysis, the mentioned alleged counterexamples turn out to be weak resultative constructions, and, hence, simple resultative constructions (see Sections 1.1.2 and 1.1.1).<sup>166</sup>

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that *run* (and its cross-linguistic counterparts) may be construed as light verbs. This is the approach proposed by Den Dikken (2008), who proposes that *run* can be construed as a light verb of GO semantics and may receive the incorporation of a null directional preposition, *P<sub>dir</sub>*, which is present in the predicate and is the locus for the directional reading; on the other hand, *dance*, being lexically too rich, is not able to be construed as a light verb, and, hence, to admit the incorporation of *P<sub>dir</sub>*. If this light-verb analysis is preferred, the phonological matrix of *run* would not correspond to a freely-inserted root, but it would be the instantiation of *v* in an unaccusative environment with a Path projection and a locative Place projection. In connexion to this, if *run* is cross-linguistically a light verb and, hence, an *f*-morpheme, we expect the possibility, typical of *f*-morphemes (Marantz 1995) that it displays suppletion in some language. This is the case in Ancient Greek, where the root is /trek<sup>h</sup>/ in the Present stem and /dram/ in the Aorist stem.

<sup>165</sup> And consider also, in this light, Gehrke's (2008) division, drawing on Levin 1993, between *swim*-verbs (which need overt directional marking) and *put*-verbs (which do not need overt directional marking), which she claims to be general cross-linguistically —cf., for instance, a contrast between *dance* and *jump* in Hungarian, in Gehrke 2008:202.

<sup>166</sup> There are still some apparent counterexamples to the mentioned claim, repeated here as (i), (ii) and (iii), awaiting an explanation:

I shall tentatively assume, then, that the expression of complex resultative predicates in Latin involves the univertation of the verb and the result predicate (but see footnote 166).

## 2.2 Slavic complex resultative constructions

Let us turn now to Slavic. To start with, Slavic complex motion predicates are similar to Latin analogous predicates in that they typically feature a prefix encoding the final location of the motion path, as shown in (59):

### (59) Slavic complex directed motion predicates bear a prefix

#### a. Bulgarian; Padrosa-Trias & Markova 2008:204

Do-bjagah          do          bolnitsata.  
to-run.PST.1SG    to          hospital.the  
'I ran to the hospital.'

#### b. Czech; Filip 1997:87

Při-nesl                  ze                  sklepa                  uhlí.  
to-carry.PST.3SG    from.PREP    basement.GEN    coal  
'He brought (some) coal from the basement.'

#### c. Polish; Lindvall 2001, in Svenonius 2004b:217

Dzieci          w-skoczyły          do wody.  
children    in-jump.PST.3SG    to water  
'The children jumped into the water.'

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#### (i) Latin; Sil. 7, 187

Subito          vilis                  rubenti          fluxit                  mulctra                  mero.  
suddenly    worthless.NOM.F    red.ABL    flow.PFV.3SG    milk-pail.NOM    wine.ABL  
'On a sudden, the worthless milking-pail flowed with red wine.'

#### (ii) Latin; Cic. Att. 6, 2, 1

Se                  statim          ad te                  navigaturum                  esse.  
REFL.3SG.ACC    at\_once    at you.ACC    sail.INF.FUT.M.ACC    be.INF  
'That he was on the point of setting sail to join you.'

#### (iii) Latin; Cic. Fam. 16, 1, 2, 4

Si          statim          navigas,          nos                  Leucade                  consequere.  
if          at\_once    sail.2SG    us.ACC    Leucas.ABL    follow.IMP.2SG  
'If you sail off at once, you will overtake me at Leucas.'

With respect to the Ciceronian example in (iii), it is tempting to read *statim* not as 'on the spot' or 'at once' but as 'steadfastly'. This interpretation would be in conformity with an expectable atelic, activity reading of the unprefixed *navigas* (a reading in which the predicate is not a complex resultative) and would be perfectly natural in that reduced context. However, that translation has to be rejected, since, on the one hand, the *steadfastly* reading of *statim* is, according to its entry in Lewis & Short 1879, only available in pre-Classical authors (before Cicero, then), and, on the other hand, if the rest of the text (not available here) is considered, the only possible reading of *navigas* is a telic one focusing the beginning of the sailing event. However, it is also possible to provide, for (iii) and (ii), the same explanation as the one provided for *curro* 'run', if we take in consideration that sailing (*navigo*) was as standard a way of travelling in Antiquity as it is flying nowadays. It is also worth regarding that Italian *navigare* and French *naviguer* allow *be*-selection in the perfect, arguing for the possibility of a change-of-location construal with this root and, correspondingly, the absence of a prefix in Latin:

#### (iv) French and Italian; Google search

a. Le bateau Eugénie [...] est le premier bateau qui est navigué sur le lac Nasser.  
the boat Eugénie is the first boat that is sail.PTC.M.SG on the lake Nasser  
'The Eugénie is the first boat which has sailed on lake Nasser.'

b. La sua mente è navigata da Cannes alla Campania.  
the poss.3SG.F.SG mind is sail.PTCP.F.SG from Cannes to-the Campania  
'Her mind has sailed from Cannes to Campania.'

As for example (i), I don't have an explanation as of yet.

d. *Russian; Babko-Malaya 1999:51*

Ivan vy-kopal klad.  
 Ivan out-dig.PST.3SG treasure.ACC  
 'Ivan dug out the treasure.'

e. *Serbo-Croatian; Arsenijević 2006:207*

Jovan je od-gurao prikolicu od prskalice za vodu.  
 Jovan AUX from\_at-push.PST.3SG trailer from sprinkler for water  
 'Jovan pushed the car away from the sprinkler.'

Specifically within the realm of CDMCs, the role of the prefix in triggering the resultative telic interpretation of the predicate is evident, as the next Polish examples show. Observe, crucially, the difference between the directional but atelic reading of the (b), unprefixed, examples as opposed to the directional and telic interpretation of the (c), prefixed, examples:

(60) *Polish; Kopecka 2004:124*

- a. Anna biegła.  
 Anna.NOM run.PST  
 'Anne has run.'
- b. Anna biegła do szkoły.  
 Anna.NOM run.PST to school.GEN  
 'Anna has run towards the school.'
- c. Anna w-biegła do szkoły.  
 Anna.NOM in-run.PST to school.GEN  
 'Anna has run into the school.'

(61) *Polish; Kopecka 2004:124*

- a. Paweł płynął.  
 Paweł.NOM swim.PST  
 'Paweł has swum.'
- b. Paweł płynął do brzegu.  
 Paweł.NOM swim.PST to river\_bank.GEN  
 'Paweł has swum towards the river bank.'
- c. Paweł do-płynął do brzegu.  
 Paweł.NOM to-swim.PST to river\_bank.  
 'Paweł has swum to the river bank.'

A number of researchers have pointed out that the prefixation in this type of predicates must in fact be considered a general rule. For Russian, Rojina (2004) makes the statement of (62) and provides the example of (63):

(62) *Rojina 2004:29*

"[...] the prefix is inseparable in Russian and the movement <in her terms, movement of the prefix from its original position as head of some ParticleP onto the verb: VAM> is obligatory."

(63) *Russian; Rojina 2004:27*

\*(Vy-)brosit' kota iz okna.  
 out-throw.INF cat from window  
 'To throw the cat out of the window.'

The same situation is found in Bulgarian:

- (64) *Bulgarian; Angelina Markova (p. c.)*
- a. \*(S)-nesoh                      topkata ot      durvoto  
     down-carry.PST.1SG   ball.the   from tree.the  
     ‘I carried down the ball from the tree.’
  - b. \*(Iz)-kopah                      sukrovishte      (iz      dupkata)  
     out-dig.PST.1SG   treasure.the   out   hole.the  
     ‘I dug a treasure out (of the hole).’
  - c. \*(V)-karah                      kolata      (v garaja).  
     in-drive.PST.1SG   car.the   in garage.the  
     ‘I drove the car into the garage.’

And according to Svenonius (2004b) and Gehrke (2008), the prefixation requirement is general in Slavic, as stated in (65) through (67):

- (65) *Svenonius 2004b:225*  
 “Selected PPs often occur with prefixes (see Rojina 2004 for extensive discussion and examples), in fact they are often obligatory.”
- (66) *Gehrke 2008:203*  
 “[...] there seems to be some morphological requirement to express resultativity on the verb in these languages. Indicative of this approach is that these Slavic languages lack adjectival resultatives of the English type (e.g. *hammer the metal flat*) but generally have to use accomplishment/achievement verbs (that are additionally marked for resultativity by an internal prefix) and/or PPs in such constructions.”
- (67) *Gehrke 2008:203, footnote 14*  
 “In fact, it seems like resultativity is always expressed morphologically by an internal prefix on the verb.”

Before we continue, an important qualification has to be made. The prefixes shown until now are instances of so-called *internal prefixes*, which must be differentiated from *external prefixes*.<sup>167</sup> Adopting Arsenijević’s (2006:210f.) and Gehrke’s (2008:161f.) characterisation, the division is based, roughly, on the following properties. Morphologically, internal prefixes attach to stems, while external prefixes may appear prefixed to already prefixed verbs, that is, they can *stack* (see (68)); however, the phonological matrixes of internal and external prefixes are generally the same: most or all prefixes which appear as external may also appear as internal (see, for instance, internally prefixed *pro-biti* and externally prefixed *pro-kuvati* in (71)). Syntactically, internal prefixes may change the argument structural properties assumed as idiosyncratic for the verbal stem, changing the number of participants in the event, while external prefixes may not (see, for instance, Russian *pisat’* ‘write’, which may

<sup>167</sup> The division is first proposed, for Romance prefixes, by Di Sciullo (1997, 2005): external prefixes, such as French or Italian *re-* are adjoined *to* the VP and have a temporal meaning (iterative and reversible), while internal prefixes, such as Italian *a-* or *in-* are adjoined *within* the VP and bear directional and locational meanings. The division corresponds, roughly, to that made between *outer* and *inner prefixes* (Padrosa & Markova 2008) and *superlexical* and *lexical* prefixes (cf., for instance, Svenonius 2004b and the other articles in the same volume on Slavic prefixes). This last labelling is based on the fact that internal, but not external prefixes can change the “lexical” meaning of the verb to which they attach (see main text). On the other hand, it is important to point out that while Di Sciullo (1997) originally proposed that prefixes, whether internal and external, are always merged via adjunction, the *external/internal* division has entered work on Slavic languages not necessarily with that proviso.

drop its object when unprefixes or when externally prefixed, as in (69)b, but not when internally prefixed, as in (69)a). Semantically, both internal and external prefixes induce (outer-aspectual) perfectivity (compare the prefixed verbs, marked with a superscript *P* in (69) with unprefixes, imperfective *pisat'*), but only the former necessarily induce (inner-aspectual) telicity, according to Gehrke (2008:163) (see internally prefixed, telic *na-pisal*, in (70)a and externally prefixed, atelic *po-spal* in (70)b). Finally, internal prefixes may trigger a special meaning of the base verb (see (71)a), while external prefixes only introduce aspectual (quantificational) modifications of the whole event (see (71)b).<sup>168</sup>

(68) *Czech; Gehrke 2008:170*

- a. Po(EXT)-od(INT)-stoupit.  
a\_little-from-step.INF  
'To step aside a little.'
- b. \*Od(INT)-po(EXT)-stoupit.  
from-a\_little-step.INF

(69) *Russian; Gehrke 2008:166*

- a. Na-pisat'<sup>P</sup> \*(pis'mo).  
on-write.INF letter.ACC  
'To write (up) \*(a letter).'
- b. Po-pisat'<sup>P</sup> (pis'mo).  
po-write.INF letter.ACC  
'To write (a letter).'

(70) *Russian; Gehrke 2008:171*

- a. Ja na-pisal<sup>P</sup> pis'mo \*(za) dve minuty.  
I on-wrote letter.ACC in two minutes  
'I wrote a letter in/\*for two minutes.'
- b. On po-spal<sup>P</sup> (\*za) dve minuty.  
he po-slept in two minutes  
'He slept for/\*in two hours.'

(71) *Serbo-Croatian; Arsenijević 2006:211*

- a. biti u-bitu raz-bitu pro-bitu od-bitu do-bitu  
beat in-beat around-beat through-beat away-beat to-beat  
'beat', 'kill', 'break', 'make a hole in', 'bounce', 'get'
- b. kuvati na-kuvati iz-kuvati pro-kuvati pre-kuvati  
cook on-cook out-cook through-cook over-cook  
'cook', 'cook many', 'cook all/fully', 'cook a bit', 'overcook'

What most authors propose, basing on all the above facts, is that there is a structural difference between internal and external prefixes, the former originating somewhere within the vP/VP, and the latter being attached outside the vP/VP. Assuming this idea, it is evident that in the present discussion we are interested only in internal prefixes, since we are dealing, by assumption, with elements merged at Compl-Place position, within the vP, and being then interpreted as resultative predicates.

<sup>168</sup> See also Svenonius 2004b and Di Sciullo & Slabakova 2005. Arsenijević (2006:213f.) provides a unified analysis of internal and external prefixes, considering both resultative predicates, the formal taking nominal arguments and the latter taking eventive arguments. Žaucer (2009) casts doubt on the external/internal distinction through an analysis of some Slovenian prefixed verb types.

It has to be clear that, as was the case for Latin, we are dealing here with true complex resultative constructions, since the prefix induces telicity. This has been pointed out by Arsenijević (2006), Gehrke (2008), Ramchand (2004) or Svenonius (2004b), among many others before, and is illustrated in (72) for Russian through the test of delimiting/durative adverbials:

(72) *Russian; Gehrke 2008:185*

- a. On *pri-exal* v Moskvu \*(za) den'.  
     he to-drove.PST in Moscow.ACC in day  
     'He arrived in Moscow in/\*for a day.'
- b. On *ot-kryl* okno \*(za) dve minuty.  
     he from-cover.PST window.ACC in two minutes  
     'He opened the window in/\*for two minutes'

That Slavic predicates headed by verbs featuring goal or source prefixes are telic is argued for at large in Gehrke 2008. This author proposes that directional predicates are headed by internal prefixes, which are considered to originate as independent heads within the vP domain.<sup>169</sup> As pointed out above, internal prefixes, crucially, induce telicity, since they head a projection PredP, which permits a verbal predicate to contain a non-verbal one (notably, a PP) and thus to express an accomplishment.

A possible counterexample to the tight relation between internal prefixation and telicity is the fact that predicates containing a bounded path may license durative adverbials, as the example (73)b from Polish illustrates:

(73) *Polish; Wojciech Lewandowski (p. c.)*

- a. Jan w-biegl do pokoju w/\*przez 3 sekundy.  
     Jan in-run to room in for 3 seconds  
     'Jan ran into the room in three seconds.'
- b. Jan w-biegł do pokoju przez/ \*w 3 sekundy.  
     Jan in-run.SI to room for in 3 seconds  
     'Jan ran into the room for three seconds.'

In (73)b, in spite of the prefix *w-* and the consequent bounded reading of the path, the predicate allows the presence of a *for*-adverbial (*przez 3 sekundy*), a usual signal of atelicity. However: the durative adverbial PP *przez 3 sekundy* here does not signal atelicity, nor does it measure the duration of an event of the bird flying onto the roof, but the duration of a collection of several identical and, crucially, telic events: a Sequence of Similar Events Interpretation (see Chapter 2, Section 3.2.4.2). This effect is due to the fact that *wbiegał* is a *Secondary Imperfective* (SI).<sup>170</sup> The SI is a case of outer

<sup>169</sup> As we will see later, I agree with Gehrke (2008) that prefixes are originated somewhere within the vP, but I disagree with her in that I consider them the result of different processes targeting a root in Ground position and bringing it together with v.

<sup>170</sup> Gehrke (2008:154) comments —contra Filip 2000, 2003, who claims that temporal adverbial tests diagnose (im)perfectivity— that while perfectivity is completely orthogonal to the tests with temporal adverbials (that is, these tests unambiguously determine telicity and atelicity of the verb when it is perfective), “[w]ith imperfective verbs, there are further complications with this test for (a)telicity, since the imperfective aspect can express various meanings, which can be compatible with either adverbial, and since the particular temporal adverbials can also be sensitive to temporal (un)boundedness at a higher level than inner aspect.” She concludes that “if one controls for other factors in the sentence that can

aspect (see Ramchand 2004, Borer 2005, Gehrke 2008), and hence orthogonal to the telic/atelic distinction. It may be interpreted as a collection of events, in this case, of different telic events. Ramchand (2004:355), for instance, suggests that the secondary imperfective may introduce “a superevent consisting of habitual repetitions of e <e being the event introduced at the vP level: VAM>”. A similar contrast is observed in the following Serbo-Croatian examples extracted from Arsenijević 2006, where his English translations confirm the outer-aspect nature of the secondary imperfective:

(74) *Serbo-Croatian; Arsenijević 2006:201*

- a. Jovan je od-gur-ao kolica.  
Jovan AUX away-push-PTCP cart  
‘Jovan pushed the cart away.’
- b. Jovan je od-gur-av-ao kolica.  
Jovan AUX away-push-SI-PTCP cart  
‘Jovan was pushing the cart away.’

Arsenijević clarifies the two readings of the verb simultaneously featuring the spatial prefix and the SI suffix:

(75) *Arsenijević 2006:201*

“[...] it is also possible to translate (252c) <my (74)b: VAM> as ‘Jovan pushed the cart away’, but allowing only for the iterative reading of this translation. The lack of a singular telic reading for the S-C example makes this translation incomplete. The translation that is provided in the example, which uses the English present continuous form, has both the readings of the S-C sentence. The readings are a) that there is a singular eventuality of pushing the cart away in a progressive interpretation (i.e. only its initiating subevent is really entailed), and b) that there is an unbounded set of iterations of a full telic eventuality (bare plural reading).”

Importantly, in any of the two readings the telicity of the inner predicate (the predicate interpreted as “putting away a cart through pushing”) is preserved.<sup>171</sup>

Remaining agnostic about Ramchand’s claim that the Secondary Imperfective introduces an event or not, I will make the by now general assumption that it is merged outside the vP, as any instance of outer aspect.

In sum, there is evidence that Slavic may indeed share with Latin the morphological requirement that I assumed in (39).

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contribute a reading of (un)boundedness, this test can be used as an indication whether the predicate itself is telic or not.”

<sup>171</sup> Arsenijević (2006) demonstrates the imperfective character of these predicates through the so-called “imperfective paradox” test (Dowty 1979):

(i) *Serbo-Croatian; Arsenijević 2006:210*

Jovan je u-gur-av-ao<sup>I</sup> kolica u prodavnicu kada ga je ubio grom.  
Jovan AUX in-push-SI-PTCP cart in shop when him AUX kill.PST thunder  
‘Jovan was pushing the cart into the shop when the thunder killed him’

“The telic eventuality of John pushing the cart into the shop has not occurred: it was interrupted before completion.”

## 2.3 The unidirectional relation between telicity and (internal) prefixation

### 2.3.1 Telicity without internal prefixation

The empirical observation made in (39) seems to be adequate for Latin and Slavic. In particular, I claim, as schematised in (76), that any complex resultative construction in these languages has to be prefixed, even if provided with a resultative PP.

#### (76) Complex resultative predicates in Latin and Slavic

PREF-V (PP)

\*V PP/AP

In these constructions the verb embodies the event leading to the resulting state expressed by the prefix. Furthermore, these predicates have been shown to be telic, both in Latin and Slavic. Crucially, though, the relation between telicity and prefixation is not bidirectional: predicates headed by (internally) prefixed verbs are telic, but not all telic predicates contain a prefixed verb, as also pointed out by Gehrke (2008) and Arsenijević (2006). In other words, (internal) prefixation is a sufficient, but not necessary condition for telicity. Specifically, telic predicates not representing a complex resultative construction are not prefixed. We have already seen relevant examples of this, notably, the cases of telic directed motion events based on verbs such as Latin *curro* ‘run’ (57) or Czech *skočit* ‘jump’ (58), analysed as weak resultatives. Another notable case is the verb GIVE, telic both in Latin and Slavic:

#### (77) Latin (Caes. Gall. 4, 27) and Russian (Gehrke 2008:153)

- a. Partem statim dederunt, partem [...] paucis diebus  
 part.ACC.SG at\_once give.PFV.3PL part.ACC.SG few.ABL.PL day.ABL.PL  
 sese daturus dixerunt.  
 REFL.3SG.ACC give.INF.FUT.ACC.M.PL say.PFV.3PL  
 ‘These gave part of it at once, and said they would give the rest in a few days.’
- b. On dal ženščine knigu \*(za) dve minuty.  
 he gave woman.DAT book.ACC in two minutes  
 ‘He gave a/the woman a/the book in/\*for two minutes.’

I take GIVE to be the phonological realisation of *v*. In these predicates there is a DP sitting as Compl-Place which is interpreted as the goal of the giving event. The DP at Spec-Place, corresponding with the thing being given, raises to Spec-Path, where it is interpreted as a Measurer of the giving event. I illustrate below with an analysis of (77)b:<sup>172</sup>

#### (78) Russian; an analysis of (77)b

[<sub>VP</sub> On [<sub>V</sub> v (= *da-*) [<sub>PathP</sub> [<sub>DP</sub> knigu] [<sub>Path</sub> Path [<sub>PlaceP</sub> [<sub>DP</sub> ~~ženščine~~] [<sub>Place</sub> Place [<sub>DP</sub> ženščine]]]]]]]]

Since internal prefixes originate, by assumption, at Compl-Place, where they are interpreted as terminal Grounds (result states/locations), it is clear why they are out in *give*-predicates: in these predicates Compl-Place is occupied by the DP understood as Goal of the transfer. Thus, GIVE-predicates are causative counterparts of GO-predicates, which, interestingly, may appear without any internal prefix in Slavic:

<sup>172</sup> See Marantz 2003 for a similar analysis of *give*-predicates in English with a *to*-PP encoding the goal.



(79) *Slovenian; Žaucer 2005:279*

Juš je šel k reki.  
 Juš AUX went to river  
 ‘Juš went to the river.’

GO-predicates also involve the projection of a PlaceP relating two entities (DPs) sitting, respectively, at Spec-Place (a Figure) and Compl-Place (a Ground). The latter makes it impossible for a prefix to appear, since the prefix is also merged as a root at Compl-Place. In turn, GO is the realisation of *v* in these syntactic environments:

(80) *Slovenian; an analysis of (79)*

[<sub>vP</sub> *v* (= še-) [<sub>PathP</sub> [<sub>DP</sub> Juš] [<sub>Path'</sub> Path (= *k*) [<sub>PlaceP</sub> [~~DP Juš~~] [<sub>Place'</sub> Place [<sub>DP</sub> reki]]]]]]]

The above considerations on *give* and *go* do not imply that these verbs are unable to appear with prefixes: what is claimed here is that, in the standard interpretation of transfer and raw directed motion, respectively, *give* and *go* appear without prefixes, since Compl-Place position, where prefixes are assumed to originate, is already filled with material (to wit, a DP) interpreted as Ground. Certainly, in both Latin and Slavic there are numerous examples of prefixed *give* and *go*. In both cases I assume that it is the prefix what originates as Compl-Place and is interpreted, thereby, as Ground. I illustrate first with a prefixed *give*-verb in Russian, namely, *iz-dat'* ‘publish’ (literally, ‘give out’, exactly as Latin *e-do* ‘publish’):

(81) *Russian; Gehrke 2008:165*

Iz-dat' (\*komu) čto.  
 out-give.INF who.DAT what.ACC  
 ‘To publish something (\*to someone).’

The analysis of *iz-dat'*, under present assumptions, would be as shown below:

(82) *Russian; an analysis of (81)*

[<sub>vP</sub> PRO [<sub>v'</sub> *v* = (*da*) [<sub>PathP</sub> čto [<sub>Path'</sub> Path [<sub>PlaceP</sub> ~~čto~~] [<sub>Place'</sub> Place √IZ]]]]]]]

The crucial piece of supporting evidence for the analysis presented is the fact that *iz-dat'* does not allow the goal participant which appears with *dat'*, as shown in (81). The structure proposed derives this fact straightforwardly, since both the prefix and the goal participant are considered to be merged as Compl-Place: there is no place available for the goal in a predicate headed by *izdat'*. Finally, the resulting combination of the prefix and the verb bears an idiosyncratic meaning, ‘publish’, which I take to be conveniently registered in the Encyclopaedia, in the entry √IZ, and triggered in the environment depicted in (82), within the local domain represented by *vP*.

As for a prefixed counterpart of *go*, consider Latin *ab-eo* ‘go away’ as shown in (83) and analysed in (84):

(83) *Latin; Pl. Stich. 632*

Iam [...] ab-ierunt?  
 already away-go.PRF.3PL  
 ‘Have they left already?’

(84) *Latin; an analysis of (83)*

[<sub>VP</sub> v (= i) [<sub>PathP</sub> pro [<sub>Path'</sub> Path [<sub>PlaceP</sub> ~~pro~~ [<sub>Place'</sub> Place  $\sqrt{\text{AB}}$ ]]]]]

The prefix, as before, is born as a root at Compl-Place, indicating the final location of the motion event, in this case somewhere away from the relevant reference point introduced in the discourse (and coincident with the speaker).

In sum, these data can be taken as supportive of the view that telicity depends, at least in change-of-state predicates, on the projection of specific structure (PathP), and not on the presence of specific elements, the prefixes, which here are assumed to contribute only conceptual content, orthogonal to the telic/atelic distinction.

2.3.2 A contrast between Latin and Slavic. The role of viewpoint aspect.

Notwithstanding the unidirectional relation between prefixation and telicity argued for until now, it is only fair to acknowledge that telic predicates in Slavic languages almost always bear an internal prefix, except those headed by a few verbs such as Russian *dat'*.<sup>173</sup> In this respect they contrast greatly with Latin, where it is quite usual for an unprefixed verb to still head a telic predicate, as illustrated in the next examples with *capio* 'take', *facio* 'make', *neco* 'kill' and *scribo* 'write', which license the telic adverbial (*in*) *paucis diebus* 'in a few days':

(85) *Latin; Bell. Afr. 25, 2*

Cirtam=que      oppidum [...] paucis      diebus [...]      capit.  
Cirta.ACC=and    town.ACC      few.ABL.PL    day.ABL.PL    take.PRF.3SG  
'And he conquers the town of Cirta in a few days.'

(86) *Latin; Cic. Phil. 5, 23*

Paucis      diebus      exercitum    fecit.  
few.ABL.PL    day.ABL.PL    army.ACC    make.PRF.3SG  
'He created an army in a few days.'

<sup>173</sup> See Filip 2003:67 and Bohnmeyer & Swift 2004:271, footnote 12, for more examples of *dat'*-verbs, both in Russian and Czech. Bohnmeyer & Swift (2004:271) observe that these verbs are inherently telic and inherently perfective. See also Bohnmeyer & Swift 2004:271-272 for the contention that "[t]elic predicates [...] are mostly encoded by prefixed verbs [...]" and that "[t]he relationship between telicity and prefixation is quite systematic; even unprefixed verbs that one would expect to be telic on the basis of their English glosses are in fact atelic". I note however, that these authors do not make the internal/external difference —and, as we know, external prefixes do not necessarily induce telicity. There is controversy whether the simple imperfective forms of so-called incremental verbs like Russian *pisat'* 'write' or *čitat'* 'read' may allow a telic interpretation, depending on contextual factors (notably, when accompanied with an Incremental Theme). Berit Gehrke (2008:179, footnote 41, and in a personal communication) contends they may. See also Filip 1999:186. Crucially, however, the addition of the prefix cancels the atelic interpretation. I conjecture that this is parallel to the contrast between *write/write down*, *read/read through* or *eat/eat up* in English, where the particle-less counterpart can be atelic —see, for instance, Borer 2005b:162 on *drink* and 225 on *write* or *read*; see Filip 1999:194 for a parallelism between Slavic prefixes and Indo-European particles in terms of their basic locative value. On the contrary, Krifka (1992) and Borer (2005b) advocate for the view that simple imperfectives are atelic: "[p]rimary <my emphasis: VAM> imperfectives [...] are atelic (i.e., non-quantity) because they lack syntactic quantity structure." (Borer 2005b:161). Secondary imperfectives are expected to allow a telic reading if the base to which the SI morph attaches is telic. I am thankful to Berit Gehrke for making me aware of this non-trivial point about the possible telic value of unprefixed imperfective incremental verbs. Note, finally, that I am leaving out of the picture *nu*-suffixed semelfactives (see Chapter 2, Section 2.2.4), which Bohnmeyer & Swift (2004:271, footnote 12) claim to be both telic and perfective.

(87) *Latin; Plin. Nat. 17, 233, 3*

Gelatio [...] paucis diebus necat.  
 frost.NOM few.ABL.PL day.ABL.PL kill.3SG  
 ‘The frost kills them [the trees] in a few days.’

(88) *Latin; Fronto 3, 14, 1*

Tot [...] in tam paucis diebus epistulas  
 so\_many in so few.ABL.PL day.ABL.PL letter(F)ACC.PL  
scriptas.  
 write.PTCP.PFV.ACC.F.PL  
 ‘So many letters written in so few days.’

A specific analysis of these unprefixated change-of-state predicates in Latin will be carried out in Section 4.3. Now I would like to propose a solution for the above mentioned contrast between Latin and Slavic, in the spirit of Bohnemeyer & Swift’s (2004) hypothesis on default aspect. These authors, basing on facts from German, Inuktitut and Russian, argue that there are languages displaying “telicity-dependent aspectual reference, [...] the phenomenon that clauses or verbal projections not overtly marked for viewpoint aspect are assigned semantic viewpoint-aspectual operators on the basis of the telicity of their event predicates.” (Bohnemeyer & Swift 2004:266). In a nutshell, Bohnemeyer & Swift (2004) claim that in these languages lacking overt morphological marking for perfectivity a telic predicate is *by default* perfective. Capitalising on the fact that Slavic has no dedicated morphology for the perfective — although Bulgarian might be an exception: see footnote 175 — I propose that it has come to exploit different morphological means to express perfectivity, namely, internal prefixation, external prefixation and zero morphology in *dat*’-verbs. On the other hand, as Bohnemeyer & Swift (2004:273), following Klein (1995), point out, unprefixated stems, although being atelic, allow both a perfective and an imperfective interpretation. Finally, as we know, (internally) prefixed stems may be rendered imperfective through the Secondary Imperfective suffix:

(89) *Russian; based on Bohnemeyer & Swift 2004:274*

- a. pisa-la ‘was writing’: atelic, imperfective/perfective
- b. pere-pisa-la ‘wrote (down)’: telic, perfective
- c. pere-pis-yva-la ‘was writing down’: telic, imperfective (-yva = SI)

In this scenario the only way to *unambiguously* express a perfective event of writing, as in *I have written*, is through the prefix which, as we know, necessarily induces telicity.<sup>174</sup> I take the strong relation between telicity and prefixation in Slavic to be a side effect of the fact that internal prefixes secondarily and by default express perfectivity.

<sup>174</sup> See also Gehrke 2008:162 for the claim that internally prefixed predicates are telic and, by default, perfective. An external prefix also marks perfectivity, but these prefixes carry an additional, quantificational meaning of their own, such as ‘for a while’, ‘for a long time’, etc., as illustrated below with the external prefix *po*-:

(i) *Russian; Gehrke 2008:155*

Ja po-pisal<sup>P</sup> pis’mo.  
 I po-write.PST letter.ACC  
 ‘I wrote (at) the letter for a while.’

Observe, moreover, that the predicate in (i) is atelic, since external prefixation not necessarily triggers telicity. Thus, external prefixation can be said to be directly related to perfectivity, while internal prefixation is indirectly related to perfectivity.

Quite on the contrary, in Latin (im)perfectivity is marked through a paradigmatic system of dedicated inflectional morphology which is independent of the presence of the prefix. Thus, for instance, the prefixed verb *ex-eo* ‘go out’, presents a Present (=Imperfective) stem *ex-e-/ex-i-* and a Perfect (=Perfective) stem *ex-i(v)-* which helps build contrasts such as the following one:

a. Praesagibat                                  mi                                  animus [...],  
have\_a\_presentiment.IPFV.3SG        me.DAT              mind.NOM  
quom     ex-ibam                                  domo.  
when     out-go.IPFV.1SG   house.ABL  
'My mind was having a presentiment as I was leaving my house.'

b. Inde                                  huc                                  ex-ii,                                  crapulam  
thence                                  hither                                  out-go.PRF.1SG        intoxication.ACC  
dum                                  a-mouerem.  
until                                  away-move.IPFV.SBJV.1SG  
'Then I came out, to get rid of my intoxication'

<sup>175</sup> The actual implementation of the idea that internal prefixation, in Slavic, is exploited as a means to express perfectivity is not clear to me. It could be assumed that the internal prefix+verb combination licenses a perfective interpretation of the Asp head, which I take to be located between T and v. Likewise, an imperfective Asp is licensed either by a non-prefixed or non-*dat'* verb or directly by the SI suffix. Interestingly, telicising particles and result XPs in Hungarian can also be argued to secondarily express perfectivity. This is discussed, for instance, by Csirmaz (2008), who proposes that resultative particles, which telicise the event *per se*, are attracted to Spec-Asp by an EPP feature of Asp, yielding a converging derivation if Asp is endowed with a perfective feature. When Asp is imperfective, the telicising particle is incompatible with it and fails to raise. The movement is directly attested in Hungarian, where telic predicates endowed with a particle are perfective when the particle is in preverbal position and imperfective otherwise:

a. János haza ment.  
János home go.PST  
'János went home.' (Telic, perfective.)

b. János ment haza.  
János go.PST home  
'János was going home.' (Telic, imperfective.)

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then, the expression of perfectivity in Latin does not have to rely on anything but on dedicated morphology.<sup>176</sup>

## 2.4 Summary

Complex resultative constructions are expressed by a prefixed verb in both Latin and Slavic. These predicates have been shown to be telic in both languages. However, the relation between prefixation and telicity is unidirectional: there are telic predicates in Latin and Slavic which are not prefixed. This has been taken as evidence that telicity does not depend on specific elements (the prefixes), but on the projection of specific structure (PathP). The higher frequency of this type of predicates in Latin with respect to Slavic has been attributed, following the analysis in Bohnemeyer & Swift 2004, to the fact that internal prefixation in Slavic, which is the most common way to derive telicity, is secondarily exploited to express perfectivity, since this category of viewpoint aspect does not possess dedicated morphology in the Slavic languages.

## 3 The role of morphophonology in the analysis of resultative constructions

In this section I propose an analysis for complex resultative constructions cross-linguistically, focusing on the generation of AP resultative constructions, which I illustrate through English. I introduce the Split S-framedness Hypothesis as a way to tackle the cross-linguistic variation in the allowance of AP resultatives. Two independently needed factors shall be shown to conspire at the failure of Latin and Slavic to generate this type of complex resultatives: the morphological relation of *v* and Path in Latin and Slavic-like languages, where they are required to form one and the same word, and the obligatory marking of the adjective with agreement morphology. Later I introduce and illustrate a prediction of my analysis: the fact that atelic predicates need not be prefixed. Last, I will propose an analysis for directional PPs in prefixed resultative constructions in Latin and Slavic, resuming a discussion, for Latin, which I introduced in Chapter 3, Section 2.3.

Univerbation of *v* and Path in Latin (and Slavic) is achieved through *v*-to-Path Lowering, already illustrated in Chapter 2, Section 3.3.6. I illustrate it again in (92) through the PF-derivation of the complex prefixed resultative in (91):

- (91) *Latin; Plin. Nat. 10, 197*  
 [Serpentes]            [ova]            solida            hauriunt, [...] atque  
                  snake(M)NOM.PL    egg.ACC.PL    whole.ACC.PL    swallow.3PL    and  
                  putamina            ex-tussiunt.  
                  shell.ACC.PL    out-cough.3PL  
                  ‘Snakes swallow the eggs whole and expel the shells through cough.’

<sup>176</sup> Needless to say, the morphological expression of the (im)perfective is obtained through different morphophonological means, ranging from suffixal morphology (notably the suffix *-s*, as in *scrib-e-ba-m* ‘I was writing’ / *scrip-s-i* ‘I have written’), to vowel changes (as in *ag-e-ba-m* ‘I was leading’ / *eg-i* ‘I have lead’) or even suppletion (as in *fer-e-ba-m* ‘I was carrying’ / *tul-i* ‘I have carried’). What is important for my point, however, is that the expression of (im)perfectivity is completely independent from internal (and external) prefixation. Note, in any case, that the morphology for person and number is also different in the perfective and the imperfective tenses: compare, for instance, 1sg *-m* in *scrib-e-ba-m* with 1sg *-i* in *scrip-s-i*).

(92) *PF-derivation of (91)*

- a. Structure delivered by syntax  

$$[_{VP} \text{Serpentes} [_{v'} [_{v} v \sqrt{TUSS}] [_{PathP} \text{putamina} [_{Path'} Path [_{PlaceP} \text{putamina} [_{Place'} Place \sqrt{EX}}]]]]]]]$$
- b. v-to-Path Lowering  

$$[_{VP} \text{Serpentes} [_{v'} [_{PathP} \text{putamina} [_{Path'} [_{Path} Path [_{v} v \sqrt{TUSS}]]] [_{PlaceP} \text{putamina} [_{Place'} Place \sqrt{EX}}]]]]]]]$$
- c. Vocabulary Insertion  

$$[_{VP} \text{Serpentes} [_{v'} [_{PathP} \text{putamina} [_{Path'} [_{Path} \_\_ [_{v} \_i \text{tuss}]]] [_{PlaceP} \text{putamina} [_{Place'} \_\_ ex}]]]]]]]$$
- d. Conflation  

$$[_{VP} \text{Serpentes} [_{v'} [_{PathP} \text{putamina} [_{Path'} [_{Path} ex [_{v} \text{tuss-i tuss}]]] [_{PlaceP} \text{putamina} [_{Place'} ex ex}]]]]]]]$$
- e. Erasure of unpronounced links  

$$[_{VP} \text{Serpentes} [_{v'} [_{PathP} \text{putamina} [_{Path'} [_{Path} ex [_{v} \text{tuss-i tuss}]]] [_{PlaceP} \text{putamina} [_{Place'} ex ex}]]]]]]]$$

v-to-Path Lowering forms a complex head out of Path and v, which is itself complex as a consequence of the Manner root  $\sqrt{TUSS}$  adjoined to it. At Vocabulary Insertion Vocabulary Items are inserted, and the phonological matrixes of roots are retrieved. Thus, v is endowed with the defective matrix  $\_i$ , where *i* is the thematic vowel. No Vocabulary Item is inserted into Path. At Conflation this situation is repaired, and Path is endowed with the phonological matrix of root  $\sqrt{EX}$ . This is the phonological matrix which corresponds to Path by the mechanism described in Chapter 2, Section 3.3.3. In turn, the phonological matrix of v is repaired through that of root  $\sqrt{TUSS}$ , by the same mechanism. As a result, the phonological matrix of Compl-Place ends up prefixed onto the verb. Finally, unpronounced copies of the conflated matrixes are erased, leaving only the highest ones.

### 3.1 The morphophonological properties of Path. The Split S-framedness Hypothesis

In Chapter 3, Section 1.5.1 a general analysis was proposed for s-framed constructions where a PathP, codifying a change into a state or location, is taken as sister to the eventive head v, which is bundled together with a root providing the conceptual dimension of the event. The overall semantic import of the structure is that of a complex accomplishment: a change or transition into a new state/location brought about through some differentiated (activity) event specified by the root adjoined to v. The same basic analysis is put forth here for s-framed constructions based on adjectival predicates, as shown in (93)a for English *She hammered the metal flat*. I add the PF-derivation of this sentence in (93)b through (93)d:

(93) *PF-derivation of Sue hammered the metal flat*

- a. Structure delivered by syntax  

$$[_{VP} \text{Sue} [_{v'} [_{v} v \sqrt{HAMMER}] [_{PathP} \{\text{DP the metal}\}] [_{Path'} Path [_{PlaceP} \{\text{DP the metal}\}] [_{Place'} Place \sqrt{FLAT}}]]]]]$$
- b. Vocabulary Insertion  

$$[_{VP} \text{Sue} [_{v'} [_{v} \_\_ \text{hammer}] [_{PathP} \{\text{DP the metal}\}] [_{Path'} \_\_ [_{PlaceP} \{\text{DP the metal}\}] [_{Place'} \_\_ \text{flat}}]]]]]$$
- c. Conflation  

$$[_{VP} \text{Sue} [_{v'} [_{v} \text{hammer hammer}] [_{PathP} \{\text{DP the metal}\}] [_{Path'} \text{flat} [_{PlaceP} \{\text{DP the metal}\}] [_{Place'} \text{flat flat}}]]]]]$$

d. Erasure of unpronounced links

[<sub>VP</sub> Sue [<sub>v</sub> [<sub>v</sub> *hammer* ~~hammer~~] [<sub>PathP</sub> [<sub>DP</sub> ~~the metal~~] [<sub>Path'</sub> *flat* [<sub>PlaceP</sub> [<sub>DP</sub> ~~the metal~~] [<sub>Place'</sub> ~~flat~~ *flat*]]]]]]]

In English-like languages there is no PF operation affecting *v* and Path, at least before Vocabulary Insertion. Specifically, there is no Path-*v* Fusion, which would be blocked by the adjunction of a root to *v*, disallowing the complex resultative (see Chapter 3, Section 1.5.2). Importantly, also, there is no *v*-to-Path Lowering operation either, which would form *v* and Path into a complex node. By virtue of Vocabulary Insertion, the phonological matrixes of the roots  $\sqrt{\text{HAMMER}}$  and  $\sqrt{\text{FLAT}}$  are retrieved (see (93)b). In turn, Place, Path and *v* remain without a matrix (as represented in (93)b through the underscores) until the phase of Conflation (see (93)c), which provides them with the phonological matrixes of the mentioned roots. In particular, the phonological matrix of  $\sqrt{\text{HAMMER}}$  is assigned to *v*, since this root is directly merged with the eventive head, whereas Place and Path receive the phonological matrix of  $\sqrt{\text{FLAT}}$ , following the mechanism described in Chapter 2, Section 3.3.3. Finally, the unpronounced “copies” of the conflation operation are erased (see (93)d). The PF-derivation in (93) is the general situation for the s-framed languages which I will call *strong* s-framed languages: these languages, by virtue of their s-framedness, allow the verb and the Core Schema to be realised independently and, crucially, do not require them to be realised as the same word. By contrast, in *weak* s-framed languages like Latin or Slavic, the Path head and the *v* head must form a word—they must undergo univerbation. The difference aims at accounting for the lack of AP complex resultatives and PP complex resultatives headed by a simple (unprefixed) verb in weak s-framed languages: the univerbation of Path and Place is incompatible with a result predicate which is itself a word (an AP or a PP). I formulate this difference as a typological hypothesis on the morphophonological properties of the Path head, as stated in (94):

(94) *The Split S-framedness Hypothesis*

There are two types of s-framed languages: the ones which feature a morphologically independent Path –*strong* s-framed languages– and the ones which feature an affixal Path –*weak* s-framed languages.

Next I will show that the characterisation of an s-framed language as weak, in terms of the Split S-framedness Hypothesis, conspires with other independent morphological factors of the language to either allow or ban the formation of AP resultatives.<sup>177</sup>

### 3.2 *The lack of complex AP resultatives in Latin and Slavic*

I would like to hypothesise that Latin and Slavic, both weak s-framed languages, do not allow adjectival resultative constructions since the univerbation of *v* and Path is incompatible with the fact that predicative adjectives in both languages always bear agreement markers. This last fact is illustrated in (95) for Latin and Polish:

<sup>177</sup> The terms *strong* and *weak* are chosen to depict the fact that strong s-framed languages are s-framed languages in a strong sense, in that the Core Schema, expressed independently from the verb, may adopt any morphosyntactic form; on the contrary, languages like Latin and Slavic are s-framed languages in a weak sense, in that they pose morphological restrictions on the expression of the Core Schema, much as it also is expressed as an element phonologically independent from *v* in these languages. The terminology also aims at hinting at a diachronical development in the morphosyntactic expression of complex transition events from Proto-Indo-European down to Romance: strong s-framed Proto-Indo-European yielded weak s-framed Latin which yielded, in turn, *v*-framed Romance.

(95) *Agreement morphology on the predicative adjective in Latin and Slavic*

a. *Latin; Mart. 1-12, 4, 36, 1*

Nigr-a                      est      coma.  
 black-NOM.F.SG    is      hair(F)NOM.SG  
 ‘Your hair is black.’

b. *Polish; Polish informant*

Dziewczynka      jest      ładn-a.  
 girl(F)NOM.SG    is      cute-NOM.F.SG  
 ‘The girl is cute.’

I will restrict the analysis to Latin. Recall that the types of resultative constructions that we find in this language feature either a manner verb with a prefix (see (91) above) or a light verb with the prefix *re-* and a (non-prefixed) adjective (see (96)) —but see Section 3.3:

(96) *Latin; Plaut. Capt. 197*

Eam                      [servitutem]    [...]    lenem                      reddere.  
 that.ACC.F.SG    serfdom(F)ACC.SG    mild.ACC.F.SG    render.INF  
 ‘To make that serfdom mild.’

In both cases there is prefixation and the material prefixed onto the verb is morphologically simple. These two factors are at odds with predicates such as the next ones:

(97) *Latin; made-up ungrammatical examples*

- a. \*Ovidia              poculum              vacu-um                      bibit.  
          Ovidia.NOM    goblet(N)ACC.SG    empty.ACC.N.SG    drink.3SG
- b. \*Ovidia              poculum              vacu-um-bibit.  
          Ovidia.NOM    goblet.(N)ACC.SG    empty.ACC.N.SG-drink.3SG

In (97)a there is no prefixation, while in (97)b there is prefixation but the prefix is morphologically complex, in that it involves inflection (*-um*). Leaving Slavic aside, I will attempt an explanation of these facts for Latin in the theoretical terms assumed here. I suggest that the inflectional morphology on the (predicative) adjective constitutes a case of uninterpretable  $\phi$ -features and corresponds to a phase head defining a phase. Specifically, I will make the assumption that the mentioned features are in the Place head, so that PlaceP acts as a phase in these constructions. Phases being autonomous units for phonological computation, it is expectable that they should be opaque to conflation. In particular, the root of the adjective ( $\sqrt{\text{VACU}}$  in (97)), merged as Compl-Place, cannot escape through the phase boundary, and Path is left without a phonological specification. Note that the construction could be salvaged if Path received a phonological specification of its own. However, that can only be achieved if Path could be endowed, at the phase of Vocabulary Insertion, with a Vocabulary Item, namely *re-*, involved in (96). But that insertion is triggered only in a very specific environment, namely when Path is a prefix to a non-complex *v* (which is itself realised as a light verb):

(98) *re*  $\Leftrightarrow$  Path / [<sub>Path</sub> Path *v*]



Since in (97) *v* is complex (cf. [<sub>v</sub> *v* √BIB]) and is, therefore, not realised as a light verb, insertion of *re* is precluded, and Path is left without a phonological specification. As a result, both (97)a and (97)b are out: they exemplify a clash at PF due to the fact that Path is left without a phonological specification. Note that, specifically for (97)b, Path, much as it could appear as a prefix to *v* by virtue of *v*-to-Path Lowering, could not be endowed with the phonology of the adjective, on the grounds of the mentioned phase-boundary effect on conflation. The contextual specification of the Vocabulary Item in (98) has the power to preclude another pattern of complex AP resultatives which is not found in Latin:

(99) *Latin; made-up ungrammatical example*

*Ovidia	poculum	vacu-um	<u>re</u> -bibit.
Ovidia.NOM	goblet(N)ACC.SG	empty.ACC.N.SG	<i>re</i> -drink.3SG

In (99) the verb encodes manner (cf. [<sub>v</sub> *v* √BIB]), but Path cannot be realised as *re*-, since it does not meet the contextual condition imposed by (98). Path cannot receive the phonological specification of the adjective, for the reasons mentioned above. As a result, it remains without a phonological matrix after Conflation and the derivation crashes.

To sum up, unavailability of AP complex resultative constructions in Latin (and Slavic) depends on two factors: on the one hand, the status of Path as a prefix, which also accounts for the lack of complex resultative constructions headed by an unprefixing verb; on the other hand, the fact that adjectives in these languages are morphologically complex, in that they bear agreement markers. It remains to be seen, within the class of s-framed languages whether there can be prefixation of a resultative adjective when the adjective is not inflected. This is what we find in Icelandic (see Section 4.2.3).

### 3.3 Simple adjectival resultatives in Latin

As mentioned in Section 1.2 and in the previous section, Latin allows the formation of simple adjectival resultatives, that is, resultative constructions headed by a light verb of change-of-state semantics and hosting an AP which specifies the result state. Here I repeat the examples shown in Section 1.2:

(100) *Latin; Plaut. Capt. 197*

Eam	[servitutum]	[...]	lenem	<u>reddere</u> .
that.ACC.F.SG	serfdom(F)ACC.SG		mild.ACC.F.SG	render.INF

‘To make that serfdom mild.’

(101) *Latin; Cic. Phil. 6, 18*

Senatum	[...]	firmiorem [...]	<u>fecistis</u> .
senate(M)ACC.SG		firm.COMPAR.ACC.M.SG	make.PRF.2PL

(102) *Latin; Cic. Catil. 1, 16*

Simul	atque	ad-sedisti,	partem	istam	subselliorum
At once and		at-sit.PRF.2SG	part(F)ACC.SG	that.ACC.F.SG	seat.GEN.PL
nudam	atque	inanem	<u>reliquerunt</u> .		
nude.ACC.F.SG	and	empty.ACC.F.SG	leave.PRF.3PL		

‘At the moment you sat down among them, they left that part of the seats nude and empty.’

The crucial observation to understand these constructions is the fact that the heading verb is of light nature and, hence, amenable to an analysis in terms of a functional head. In no case does it encode a process understood as the Co-event, as is the case in complex AP resultatives of the English type. In the case of the resultatives headed by *reddo* or *relinquo*, as in (100) and (102), I assume, as I have shown in the previous section, that *re-* is a Vocabulary Item corresponding to Path when Path appears prefixed onto a non-complex *v* by virtue of *v*-to-Path Lowering. I illustrate with the analysis of (100):

(103) *A PF-derivation of (100)*

a. Structure delivered by syntax

$[_{VP} \text{ PRO } [_{v'} v [_{\text{PathP}} \text{servitutum}_{\phi} [_{\text{Path}'} \text{Path} [_{\text{PlaceP}} \text{servitutum}_{\phi} [_{\text{Place}'} \text{Place}_{\phi} \sqrt{\text{LEN}}]]]]]]$

b. *v*-to-Path Lowering

$[_{VP} \text{ PRO } [_{v'} [_{\text{PathP}} \text{servitutum}_{\phi} [_{\text{Path}'} [_{\text{Path}} \text{Path } v] [_{\text{PlaceP}} \text{servitutum}_{\phi} [_{\text{Place}'} \text{Place}_{\phi} \sqrt{\text{LEN}}]]]]]]$

c. Vocabulary Insertion

$[_{VP} \text{ PRO } [_{v'} [_{\text{PathP}} \text{servitutum}_{\phi} [_{\text{Path}'} [_{\text{Path}} \text{re } (d)d(it)] [_{\text{PlaceP}} \text{servitutum}_{\phi} [_{\text{Place}'} \text{-em} \sqrt{\text{LEN}}]]]]]]$

d. Conflation

$[_{VP} \text{ PRO } [_{v'} [_{\text{PathP}} \text{servitutum}_{\phi} [_{\text{Path}'} [_{\text{Path}} \text{re } (d)d(it)] [_{\text{PlaceP}} \text{servitutum}_{\phi} [_{\text{Place}'} \text{lenem} \sqrt{\text{LEN}}]]]]]]$

e. Erasure of unpronounced links

$[_{VP} \text{ PRO } [_{v'} [_{\text{PathP}} \text{servitutum}_{\phi} [_{\text{Path}'} [_{\text{Path}} \text{re } (d)d(it)] [_{\text{PlaceP}} \text{servitutum}_{\phi} [_{\text{Place}'} \text{lenem} \sqrt{\text{LEN}}]]]]]]$

When entering the PF-derivation, *v*-to-Path Lowering is triggered, and is followed by Vocabulary Insertion, whereby Path is realised as the prefix *re-* and *v* is realised as the light verb *do* ('give'). Observe that the Place head is endowed with a set of uninterpretable  $\phi$ -features which coincide in value with those of the DP sitting at Spec-Place (*servitutum*). These features receive, at Vocabulary Insertion, the defective specification of the suffix *-em*, based, on the one hand, on the value of the features (accusative, feminine, singular), and also on the root to which they will attach,  $\sqrt{\text{LEN}}$  (other adjectives present different suffixes for the same  $\phi$ -values). On the other hand, the phonological matrix of that root is also retrieved: *len*. At Conflation the defective phonological matrix *-em* is repaired through that of *len*. Finally, the copy of *len* sitting at Compl-Place is erased.

Note, crucially, that I am rejecting an analysis where the prefix *re-* originates as Compl-Place and the adjective is a mere adjunct to a possible result state codified by the prefix. That would mirror the analysis I will propose in Section 3.5 for prefixed predicates featuring a result-conveying PP. I choose not to follow that analysis on two grounds. On the one hand, in these simple resultatives the phonology of the prefix is always *re-* (*reddo*, *relinquo* —maybe *redigo*, also), making it highly suspicious of being the realisation of a functional head, and not of a root: it conveys a purely transitional interpretation.<sup>178</sup> On the other hand, and at the same time, the result state is really encoded by the adjective, since predicates headed by the same verbs but without the

<sup>178</sup> I do not want to imply that *re-* is always the realisation of Path. I believe that there is a homophonous root  $\sqrt{\text{RE}}$ , meaning 'back', which can be merged as Compl-Place and be interpreted as a Terminal Ground.

adjectives license a different interpretation, as illustrated by *relinquo* in the next example:

(104) *Latin; Ov. Met. 4, 91*

Tergo            velamina       lapsa                            re-liquit.  
back.ABL.SG   veil.ACC.PL   slip.PTCP.PFV.ACC.N.PL   back-leave.3SG  
'She leaves behind the veil which had slipped off her back.'

### 3.4 *Atelic predicates and prefixation*

The analysis proposed in this work, where prefixation in Latin and Slavic is taken to be an application of Lowering to *v* and Path, yields interesting predictions as to the shape of some atelic predicates which, by hypothesis, PathP is not projected as sister to *v*. Crucially, observe that the univertation of *v* and Path is to be understood in *structural* terms: *v* forms one word with the head of its sister PathP. Positing a *v*-to-Path Lowering operation aims at capturing this fact, since Lowering, as an operation previous to Vocabulary Insertion, is sensitive to structure, and not to linear adjacency. As a result, we expect no morphological relation to be effected between *v* and a Path head if the PathP which it heads is not a sister to *v*, that is, if it is an adjunct to *v*P, as shown in the next representation (where EA stands for *external argument*):

(105) *No v-to-Path Lowering possible when PathP is an adjunct to vP*

[<sub>vP</sub> [<sub>vP</sub> EA [<sub>v</sub> *v* *√*]] [<sub>PathP</sub> Path PlaceP]]

In (105) *v* can not lower to Path, since Path is not the head of its sister. Crucially, on the semantic side, a *v*P-external PathP cannot induce telicity, since it cannot act as a probe to raise a quantity DP to Spec-Path, where it would be interpreted as Measurer (see Chapter 2, Section 3.2.4.2). Therefore, we expect configurations such as (105), featuring an unergative structure with an adjoined PathP, to reflect both lack of prefixation and lack of telicity, much as the Path could encode directionality. Note, importantly, that prefixation is to be understood here as internal prefixation, that is, as the affixation onto the verb of phonological material coming from PathP. External prefixation is expected and attested in atelic predicates, since it involves *v*P-external material and, hence, does not signal the presence of a *v*P-internal PathP (see Section 2.2).

Direct attestation of the prediction just made is the fact that, according to Gehrke (2008), in Russian and Czech the only prepositions which do not have a prefixal correspondence are the ones representing an unbounded Path, that is, one incompatible with telicity: *k* 'toward', in Russian, and *k*, *vůči* 'toward', in Czech. Similarly, in Bulgarian, directional predicates with an unbounded path and an atelic reading feature an unprefixated verb (see (106)a) contrasting with directional predicates with a bounded path (see (106)b):

(106) *Bulgarian; Angelina Markova (p. c.)*

- a. Toj    pulzi    kum    vratata.  
he    crawls   towards door.the  
'He crawls towards the room.'
- b. Toj    do-pulzia    do vratata.  
he    to-crawled to door.the  
'He crawled up to the door.'

To ascertain whether Latin bears this prediction out I performed a search involving prefixed and unprefixed manner of motion verbs and expressions signalling atelicity.<sup>179</sup> In a subcorpus of 21 sentences containing each a motion verb, either prefixed or not, and an atelic adverbial expression, 10 sentences, shown in (107), feature an unprefixed verb; in all these sentences the durative expression (underlined) is understood as temporally bounding the otherwise unbounded (motion) activity expressed by the unprefixed verb (also underlined):

(107) *Latin examples with unprefixed manner of motion verbs and atelicity makers*

a. *Cels.* 6, 7

Tum diu ambulandum.  
 then for\_long walk.PTCP.FUT.PASS.NOM.N.SG  
 ‘Then one must walk for a long time.’

b. *Plin.* Epist. 9, 36, 5

Si diu iacui vel ambulavi, [...]   
 if for\_long lie.PRF.1SG or walk.PFV.1SG  
 non vehiculo, sed [...] equo gestor.  
 not carriage.ABL but horse.ABL move.PASS.1SG  
 ‘If I have lied in bed or walked for long I don’t move about in a carriage but on horseback.’

c. *Apul.* Flor. 21

Ambulant diutule.  
 walk.3PL for\_a\_while  
 ‘They walk for a while.’

d. *Ov.* Am. 1, 7, 49

Diu lacrimae fluxere per ora.  
 For\_long tear.PL flow.PRF.3PL through face.ACC  
 ‘Tears flowed down her face for long.’

<sup>179</sup> The components for the search are as follows:

(i) *Prefixed and unprefixed verbs* (“p-” represents any prefix):

(p-)ambulo ‘walk’, (p-)curro ‘run’, (p-)equito ‘ride’, (p-)fluo ‘flow’, (p-)gredior ‘walk, step’, (p-)labor ‘slip’, (p-)navigo ‘sail’, (p-)repo ‘crawl’, (p-)salio ‘jump’, (p-)volo ‘fly’.

(ii) *Atelicity-signalling expressions*

a. *Adverbs*

*diu* ‘for a long time’, *diutule* ‘for a little while’, *paulisper* ‘for a while’

b. *Prepositions*

*per* + quantified period of time ‘for’

c. *Accusative forms of nouns and adjectives encoding periods of time*

*dies* ‘day’, *hora* ‘hour’, *nox* ‘night’, *mensis* ‘month’, *annus* ‘year’, *diurnus* ‘of the day’, *diutinus* ‘lasting’, *diuturnus* ‘lasting’, *nocturnus* ‘of the night’, *menstruus* ‘which lasts a month’, *menstrualis* ‘which lasts a month’, *annuus* ‘which lasts a year’, *annalis* ‘of a year’, *annualis* ‘a year old’, *aestas* ‘summer’, *hiems* ‘winter’, *ver* ‘spring’, *autumnus* ‘autumn’, *mane* ‘morning’, *vesper* ‘evening’, *vesperus* ‘of the evening’, *calendae/kalendae* ‘calends’, *idus* ‘ides’, *nonas* ‘nones’, *lustrum* ‘lustrum’, *meridies* ‘noon’, *vigilia* ‘time of keeping watch by night’, *hibernus* ‘wintry’, *hibernus* ‘winter’, *saeculum/seculum/saeculum* ‘century’, *saecularis* ‘of a century’, *aestivus* ‘of the summer’, *aestivalis* ‘of the summer’, *vernus* ‘of the spring’, *vernalis* ‘of the spring’, *autumnus* ‘of the autumn’, *autumnalis* ‘of the autumn’, *horalis* ‘which lasts an hour’, *matutinus* ‘of the morning’, *postmeridianus* ‘of the afternoon’, *vespertinus* ‘of the evening’, *spatium* ‘time span’

d. *Adjectival suffixes indicating a period of time*

*-dius* ‘of X days’, *-ennius* ‘of a year’, *-noctius* ‘of X nights’, *-menstruus* ‘of X months’, *-menstris* ‘of X months’

- e. *Liv. 26, 23, 5*  
 Nuntiatum est [...] sanguinis riuos  
 report.PTCP.PFV.NOM.N.SG is blood.GEN river.ACC.PL  
per diem totum fluxisse.  
 through day.ACC whole.ACC flow.INF.PFV  
 ‘It was reported that rivers of blood had flown for a whole day.’
- f. *Sen. Nat. 6, 17, 3*  
 Ventus per multos dies fluxit.  
 wind.NOM.M.SG through many.ACC day.ACC.PL flow.PRF.3SG  
 ‘A stream of air flew for many days.’
- g. *Hyg. Fab. 16, 1*  
 Totumque diem nauigassent.  
 whole.ACC.SG=and day.ACC.SG sail.PLUPRF.SBJV.3PL  
 ‘That they had sailed the whole day.’
- h. *Ps. Quint. Decl. 12, 18*  
 Te iuvet diu navigare.  
 you.ACC please.3SG for\_long sail.INF  
 ‘You like sailing for a long time.’
- i. *Plin. Nat. 6, 101*  
 Diuque ita navigatum est.  
 for\_long=and thus sail.INF.PFV.PASS  
 ‘And they have sailed thus for a long time.’
- j. *Ov. Met. 8, 11*  
 Diuque inter utrumque volat dubiis  
 for\_long=and between either.ACC fly.3SG uncertain.ABL.PL  
 Victoria pennis.  
 Victory.NOM wing.ABL.PL  
 ‘And between both Victory flies for a long time with uncertain wings.’

The number of sentences featuring a prefixed manner-of-motion verb and a durative adverbial is 11, shown in (108) through (113). A particular set of sentences, coming all from the same work, involve static descriptions of the trajectory of rivers:

(108) *Latin; static description of rivers in present tense*

- a. *Mela 3, 5*  
 Baetis [...] diu sicut nascitur uno amne de-currit.  
 Baetis.NOM for\_long as be\_born.3SG one.ABL river\_bed.ABL down-run.3SG  
 ‘The Baetis flows for a long time on one bed only and just as it is at its origin.’
- b. *Mela 3, 42*  
 [Oxos] [...] aliquamdiu ad occasum ab oriente  
 Oxus.NOM for\_a\_while at west.ACC off east.ABL  
oc-currens iuxta Dahas primum in-flectitur.  
 against-run.PTCP.PRS.NOM.M.SG beside Dahas.ACC first in-bend.3SG  
 ‘The Oxus, flowing for a while from east to west, bends first at Dahas.’
- c. *Mela 2, 7*  
 [Hypanis] [...] diu qualis natus est de-fluit.  
 Hypanis.NOM for\_long how born.NOM.M.SG is down-flow.3SG  
 ‘The Hypanis flows down as it is in its spring for a long time.’

d *Mela, 3, 41*

Cyrus et Cambyses [...] [per] Hiberas et Hyrcanos  
 Cyrus and Cambyses through Hyberus.ACC.PL and Hircanus.ACC.PL  
diu [...] de-fluunt.  
 for\_long down-flow.3PL  
 ‘The Cyrus and the Cambyses flow down through the lands of the Iberians and Hyrcanians for a long time.’

In Chapter 3, Section 3.1.3.1 we already saw cases like these. I assume that these predicates display so-called *fictive motion* (Talmy 1999): they exploit the linguistic expression of motion but they are interpretable as involving no motion at all:

(109) *Talmy 1999:211*

This fence goes from the plateau to the valley.

The pragmatically unproblematic interpretation of (109) is one in which the fence is not understood as undergoing a spatial transition from the plateau to the valley; rather, it is understood to be as long as the space encompassed between the plateau and the valley. As a result, the addition of an *in*-adverbial to (109) sounds odd, since it forces the pragmatically problematic interpretation whereby the fence is an entity actually setting off from the plateau and arriving at the valley in a given amount of time:

(110) This fence goes from the plateau to the valley (<sup>#</sup>in an hour).

I understand that the Latin cases in (108) behave in the same way: the river, as a whole entity, is not entailed to undergo a spatial transition. This licenses the atelic reading signalled by the durative adverbials.

Another possible counterexample resulting from the search is (111):

(111) *Latin; Cat. Agr. 156, 4*

De-ambuletque horas IIII.  
 down-walk.SBJV.3SG=and hour.ACC.PL  
 ‘He is to walk about for four hours.’

Note, first, that *de-* does not contribute here any spatial meaning, so the predicate is not interpreted as ‘walk down’. Here I would like to suggest that *de-* is behaving as an external prefix licensing a quantification of the activity event, much as does *po-* in the next Russian example:

(112) *Russian; Gehrke 2008:171*

On po-spal<sup>P</sup> (\*za) dve minuty.  
 he po-slept in two minutes  
 ‘He slept for/\*in two hours.’

I note that García Hernández (1980:151) considers *deambulo* ‘walk about’ to be a bleached evolution of a former *deambulo* where *de-* had an intensifying meaning, recognisable in *deamo* ‘love passionately’ (cf. *amo* ‘love’), *defatigo* ‘exhaust’ (cf. *fatigo* ‘tire’), *deposco* ‘persistently ask for’ (cf. *posco* ‘ask for’). All these are optimal

candidates for an analysis in terms of external prefixation, since they bear an adverbial meaning and they do not induce argument structure changes.<sup>180</sup>

The availability of the rest of the examples must receive other explanations. First, for the uncontroversially directional motion predicates of (113)a and (113)b, I assume an atelic reading is possible due to the fact that the Figure (*pituita* ‘rheum’, *umor* ‘liquid’) is a mass, hence, non-quantity DP:

(113) *Latin; a mass noun as Measurer*

a. *Cels. 6, 6*

Tumore jam finito, diu lacrima  
 swelling.ABL already subside.PTCP.PFV.ABL for\_long flow\_of\_tear.NOM  
 cum pituita pro-fluit.  
 with rheum.ABL forth-flow.3SG  
 ‘Even after the swelling has subsided, there continues for some time a flow of tears mixed with rheum.’

b. *Plin. Nat. 16, 194, 3*

Larici et magis abieti suc-cisis umor  
 larch.DAT and more fir.DAT under-cut.DAT.PL liquid.NOM  
diu de-fluit.  
 for\_long down-flow.3SG  
 ‘From the larch and still more the fir, after they have been cut, liquid flows down for a long time.’

When the non-quantity DP Figure is raised to Spec-Path, it is unable to yield a telic reading (see Chapter 2, Section 3.2.4.2).

Example (114) also expresses a directional movement with a bounded path. However, I argue that the durative adverbial *paulisper* ‘for a while’, does not—in fact, cannot—measure the temporal extent of the motion event, but, on the contrary, the temporal extent of the resulting state, in this case the state of having descended from the chariots:

(114) *Latin; Gell. 20, 1, 21*

Quaeso [...] de-grediare paulisper curriculis  
 pray.1SG down-step.IMP.2SG for\_a\_little\_while chariot.ABL.PL  
 istis disputationum vestrarum academicis.  
 those.ABL argumentation.GEN.PL your.GEN.PL academic.ABL.PL  
 ‘Please descend for a while from those academic chariots of your argumentation.’

Finally, we find cases where the telic event encoded by the prefixed verb is interpreted as iterated due to the presence of the durative adverbial. Thus, in (115)a we are forced to understand that an event of sailing off into the sea (*enavigat*) is repeated identically for some successive days (*per aliquot dies continuos*); in the same way, the events of leaping at someone (*adsilient*) or flying around someone (*circumvolant*) of (115)b and (115)c, respectively are repeated “day and night” (*noctesque diesque, dies noctesque*):

<sup>180</sup> Brachet (1999, 2000), does not mention this value of *de-*.

(115) *Latin; Sequence of Identical Events Interpretation*

a. *Plin. Nat. 9, 180*

Eademque hora per aliquot dies continuos  
 same.ABL=and hour.ABL through some day.ACC.PL successive.ACC.PL  
 piscator e-navigat certo spatio escamque proicit.  
 fisher.NOM out-sail.3SG certain.ABL space.ABL bait=and forth-throw.3SG  
 ‘And at the same time for several successive days a fisher sets sail a pretty way  
 into the sea, and casts forth a bait.’

b. *Stat. Theb. 3, 69*

Te volantes quinquaginta animae circum  
 you.ACC fly.PTCP.PRS.NOM.PL fifty spirit.NOM.PL around  
noctesque diesque ad-silient.  
 night.ACC.PL=and day.ACC.PL=and at-leap.FUT.3PL  
 ‘The fifty flying spirits will leap at you day and night.’

c. *Quint. Decl. 299, 5*

“Dies” inquit “noctesque miseranda patris  
 day.ACC.PL said night.ACC.PL=and pitiable.NOM.F father.GEN  
umbra circum-volat”.  
 shadow(F)NOM around-fly.3SG  
 “‘Day and night’, he said, ‘does the father’s pitiable shadow fly around.’”

In conclusion, there are reasons to think that the prediction made at the beginning of this section is born out both for Slavic and Latin: atelic predicates expressing a directional but unbounded motion are not internally prefixed. They cannot be internally prefixed since the PathP is not a sister to *v* (and, therefore, it does not license a transition reading of the predicate) and, hence, Lowering, a structure-sensitive PF-operation, cannot operate on *v* and Path to yield the surface prefixation effect.

### 3.5 The role of PPs in prefixed predicates

I have proposed an analysis of prefixed predicates in Latin and Slavic where the prefix is the outcome of two factors: on the one hand, a root coming from PlaceP —merged either as Compl-Place or as an adjunct to Place; on the other hand, a Lowering operation which forms a complex head out of *v* and Path at PF. Since Path is phonologically specified, by the mechanism of conflation, with the phonological matrix of the mentioned root within PlaceP, the result is that the phonological specification of that root ends up as a prefix onto the verb. With this picture in mind, it is not evident how to account for the fact that, as has been shown in the past sections and in Chapter 3, Section 2.3, prefixed predicates often feature a PP which specifies the final location or state of the event. In Latin, for instance, this specification may be carried out through a PP headed by a preposition homophonous with the prefix (cf. (116)), or different (cf. (117)) from it, alternatively:

(116) *Latin; Caes. Gall. 5, 17, 2*

Repente ex omnibus partibus ad pabulatores ad-volaverunt.  
 suddenly out all.ABL.PL part.ABL.PL at forager.ACC.PL at-fly.PRF.3PL  
 ‘They flew upon the foragers suddenly from all quarters.’

(117) *Latin; Cic. Caecin. 13, 36*

Ne in aedis ac-cederes.  
 lest in house.ACC at-march.SBJV.IPFV.2SG  
 ‘Lest you should come into the house.’



If the prefix originates as a root in Compl-Place, the question arises what the original position of the PPs in (116) and (117) is. Observe that both the prefix and the PP can be argued to convey the final location/state of the event. So, for instance, (117) generates two entailments regarding the final location of the motion event: that it is somewhere in the vicinity of the speaker or of some discourse-prominent entity and that it is inside the house. The first entailment is licensed by the prefix *ad-*, while the second is licensed by the PP *in aedes*. Thus, both the prefix and the PP seem to express the final location. One possible first answer to the puzzle is to consider, for cases where the prefix and the preposition are homonymous (cf. (116)) that a single PP conveying final location originates as PlaceP:

(118) *A PF-analysis of (116)*

- a. Structure delivered by the syntax

[<sub>VP</sub> [<sub>V</sub> *v*  $\sqrt{\text{VOL}}$ ] [<sub>PathP</sub> ~~pre~~ [<sub>Path'</sub> Path [<sub>PlaceP</sub> ~~pre~~ [<sub>Place'</sub> [<sub>Place</sub> Place  $\sqrt{\text{AD}}$ ] *pabulatores*]]]]]]

- b. v-to-Path Lowering

[<sub>VP</sub> [<sub>PathP</sub> ~~pre~~ [<sub>Path'</sub> [<sub>Path</sub> Path [<sub>V</sub> *v*  $\sqrt{\text{VOL}}$ ]]] [<sub>PlaceP</sub> ~~pre~~ [<sub>Place'</sub> [<sub>Place</sub> Place  $\sqrt{\text{AD}}$ ] *pabulatores*]]]]]]

- c. Vocabulary Insertion

[<sub>VP</sub> [<sub>PathP</sub> ~~pre~~ [<sub>Path'</sub> [<sub>Path</sub> \_\_\_\_ [<sub>V</sub> *a vol*]]] [<sub>PlaceP</sub> ~~pre~~ [<sub>Place'</sub> [<sub>Place</sub> \_\_\_\_ *ad*] *pabulatores*]]]]]]

- d. Conflation

[<sub>VP</sub> [<sub>PathP</sub> ~~pre~~ [<sub>Path'</sub> [<sub>Path</sub> *ad* [<sub>V</sub> *vola vol*]]] [<sub>PlaceP</sub> ~~pre~~ [<sub>Place'</sub> [<sub>Place</sub> *ad ad*] *pabulatores*]]]]]]

- e. Erasure of unpronounced links

[<sub>VP</sub> [<sub>PathP</sub> ~~pre~~ [<sub>Path'</sub> [<sub>Path</sub> *ad* [<sub>V</sub> *vola* ~~vol~~]]] [<sub>PlaceP</sub> ~~pre~~ [<sub>Place'</sub> [<sub>Place</sub> ~~ad~~ *ad*] *pabulatores*]]]]]]

The PF-derivation above does not differ in anything from the ones we have seen until now, except for the fact that at the phase of erasure of unpronounced links two copies of the same phonological sequence, *ad*, are not erased. One of them is the highest one, which corresponds to the prefix. The other spared copy can either be the lowest one, as represented in (118)e, or the middle one: there is no way to know. In Acedo-Matellán 2003, 2006 a syntactic analysis of predicates like (116) is developed: the prefix originates as a preposition and is prefixed then onto the verb. Crucially, both copies of the preposition are pronounced. There are several non-trivial problems this kind of analysis has to face. On the one hand, it cannot account for the derivation of cases like (117), where the preposition and the prefix do not coincide. If the preposition and the prefix are taken to be copies of the same object, it is not clear why they should possess different phonological and semantic properties. On the other hand, it leaves as unexplained the fact that PPs specifying final location in prefixed predicates are omissible without the fundamental transition interpretation of the predicate being altered:

(119) *Latin; Cic. Verr. 2, 5, 16, 2*

Subito ipse ac-currit.

suddenly self.NOM at-run.3SG

‘Suddenly he himself arrives in haste.’

(120) *Latin; Ov. Met. 4, 91*

Tergo                      velamina              lapsa                      re-liquit.  
back.ABL.SG              veil.ACC.PL              slip.PTCP.PFV.ACC.N.PL              back-leave.3SG  
'She leaves behind the veil which had slipped off her back.'

(121) *Latin; Cato, Agr. 61, 1*

Tenuissimas                      radices                      ex-arabit.  
slender.SUPERL.ACC.F.PL              root.ACC.PL              out-plough.FUT.3SG  
'He will plough out the most slender roots.'

For these reasons I would like to propose to treat these PPs specifying final location as adjuncts to PlaceP: in this position they are interpreted as modifying the final location already referenced by the root which shall end up being the prefix. I exemplify with the analysis of (117), where I box the adjunct *in aedis*:

(122) *An analysis of (117)*

[<sub>VP</sub> [<sub>V</sub> V  $\sqrt{\text{CED}}$ ] [<sub>PathP</sub> ~~pro~~ [<sub>Path'</sub> Path [<sub>PlaceP</sub> [<sub>PlaceP</sub> [<sub>Place</sub> Place  $\sqrt{\text{IN}}$ ] aedis]] [<sub>PlaceP</sub> ~~pro~~ [<sub>Place'</sub> Place  $\sqrt{\text{AD}}$ ]]]]]]]

In (122) the root  $\sqrt{\text{AD}}$ , which is merged as Compl-Place, is interpreted as the final location of the motion event: somewhere near the speaker (default interpretation) or some prominent discourse participant. That location is identified with —i.e., further specified by— the adjunct PlaceP *in aedis*. The analysis derives the fact that the PPs are omissible in prefixed predicates, since they are not properly a part of the argument structure configuration. Alongside, it explains away the cases of prefixed predicates featuring a PP headed by a preposition which is not homophonous with the prefix, as shown in (117). Moreover, the analysis of PPs as low adjuncts in prefixed predicates is in conformity with the fact that, as was shown in Chapter 3, Section 2.7.1, prefixed predicates may appear with more than one PP conveying final location:<sup>181</sup>

<sup>181</sup> Although I will not go into an analysis of the same facts in Slavic, I do want to point out that PPs in prefixed predicates are omissible. This illustrated by the next Bulgarian, Serbo-Croatian, Czech and Russian examples (Arsenijević's (2006) example simply does not feature any goal PP):

- (i) *Bulgarian; Angelina Markova (p. c.)*  
S-lizam              (ot      durvoto).  
down-come      from tree.the  
'To climb down (the tree).'
- (ii) *Serbo-Croatian; Arsenijević 2006:201*  
Jovan je              od-gur-ao              kolica.  
Jovan AUX      away-push-PART cart  
'Jovan pushed the cart away.'
- (iii) *Czech; Filip 2003:84*  
Při-jet              (k      nám).  
to-go.INF      to us  
'To arrive (to us).' (By some means of transportation.)
- (iv) *Russian; Rojina 2004:78*
  - a. Lodka vy-plyla              za              holm.  
boat out-swam              behind hill  
'The boat drifted behind the hill.'
  - b. Lodka              vy-plyla.  
boat              out-swam  
'The boat drifted out.'

Spencer & Zaretskaya (1998:29) arrive at the same conclusion with respect to the status of the PP in Russian predicates of directed motion featuring both a prefixed verb and a spatial PP, although they assume a lexicalist theory of prefixation: "The prefixed manner-of-motion verb can express telic directed motion independently, without necessarily requiring a locative adjunct. This suggests that the directional

(123) *Latin; Liv. 23, 24, 5, apud Pinkster 1972:94*

Dictator      Teanum      in      hiberna      ad      exercitum  
dictator.NOM   Teanum.ACC   in      winter\_quarter.ACC.PL   at      army.ACC  
red-it.  
back-go.3SG

‘The dictator returned to the army in the winter quarters at [lit.: *to*] Teanum.’

### 3.6 Summary

In this section I have provided an analysis for complex adjectival resultatives in the s-framed languages that admit them (English) and an account for why they are impossible in other s-framed languages, like Latin. While the former languages, which I have called strong s-framed languages, possess a morphologically independent Path head, the latter, weak s-framed languages, feature a Path specified as a prefix. This specification requires Path and *v* to form a single word for the derivation to converge at PF. In Latin (and Slavic), its condition as weak s-framed language conspires with the fact that this language features obligatory agreement morphology on the (predicative) adjective. These two morphological facts are incompatible. In particular, the agreement morphology on the adjective has been claimed to be a set of uninterpretable  $\phi$ -features on Place. This fact converts PlaceP into a phonologically opaque phase, so that the phonological matrix of Compl-Place cannot specify the Path head. In simple adjectival resultative constructions Path is phonologically salvaged through insertion of *re-*, which is specified to be inserted into a Path prefixed onto a non-complex *v*. I have also explored a prediction made by my analysis, namely, that a correlation is expected between in predicates expressing directional motion between lack of prefixation and unboundedness. This correlation obtains both in Slavic and Latin. Last, I have discussed the role of result-conveying PPs in prefixed predicates, and I have proposed that they are adjuncts to PlaceP, the prefix being merged at Compl-Place.

## 4 Typology and empirical coverage

In this section I explore the empirical coverage of the Split S-framedness Hypothesis introduced in Section 3.1, both for strong and weak s-framed languages. Icelandic will be shown to provide data underpinning the assumption that the morphological characterisation of Path and the inflectional morphology on the resultative adjective are the factors at stake in triggering the split within the s-framed class of languages. I consider also v-framed languages, which fall outside of the scope of the hypothesis, and which pattern with weak s-framed languages in disallowing AP resultatives.

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adjunct fulfils a kind of doubling function, adding further specification to the meaning already imparted by the prefix. Hence, the prefix is the obligatory marker of directionality and telicity, while the adjunct is just that, an adjunct. In our terms the prefix realizes the core predication in a lexical resultative.” Gehrke (2008), on the other hand, proposes an analysis for Russian and Czech PPs in prefixed predicates where the PP sits in an argumental position and is sister to a Pred(ication) head, which is realised by a prefix. PredP is subsequently taken as sister to V, where it “mediates between the verbal predicate and the secondary predicate and glues them together into one complex predicate with a resultative meaning” (Gehrke 2008:138). A gain of this analysis is the derivation of the appearance of accusative in DPs embedded within goal PPs, which she proposes to treat as a structural case encoding the subject-predicate relation between Figure and Ground, a relation mediated by Pred. Structural accusative would not be available to PPs not establishing this relation with the Figure, i.e., being outside PredP. However, as far as goal PPs in prefixed predicates are omissible, as just pointed out, Gehrke’s analysis does not derive that fact. Remember, also, from Chapter 3, Section 2.7.1, that Gehrke’s (2008) analysis of the accusative in directional PPs cannot be carried over to Latin, since in this language accusative-marked PPs do not necessarily express a bounded path.

As stated in the Split S-framedness Hypothesis of (94), in Section 3.1, there are two basic types of s-framed languages: those where Path is morphophonologically independent —strong s-framed languages, and those where Path is an affix and must then lean onto another head to be PF-licensed —weak s-framed languages. If v-framed languages are taken into account, a three-way typology emerges based on the phonological dependence of Path with respect to the verb. On one extreme are strong s-framed languages, where the Path is morphophonologically independent from the verb, both being expressed as different morphemes and words. These languages allow the generation of PP, particle and AP resultatives. Next to these languages are weak s-framed languages, in which the Path and the verb are different morphemes but one phonological word. This allows resultatives based on affixal particles but precludes the formation of PP resultatives and of AP resultatives if the predicative adjective is inflected. On the other extreme of the typology are v-framed languages, where the verb and the Path are one and the same morpheme. This impedes the generation of complex resultative constructions altogether.

#### 4.1 Weak s-framed languages: Ancient Greek

Ancient Greek shows the hallmarks of s-framedness: encodement of the Core Schema as an element different from the verbal morpheme and the possibility of expressing a manner Co-event within the verb, as illustrated through the next CDMCs:<sup>182</sup>

(124) *Ancient Greek; Thuc. 4, 25 and 2, 79*

- a. Tô:n                      andrô:n                      apo-kolumbe:sânto:n.  
the.GEN.M.PL   man(M)GEN.PL   away-swim.PTCP.AOR.GEN.M.SG  
'The men having swum away.'
- b. [Hoì]                      hippê:s [...]                      pros-ippeúontes.  
the.NOM.M.PL   rider(M)NOM.PL   forth-ride.PTCP.PRS.NOM.M.PL  
'The riders, riding up to them...'

This language allows for resultative constructions based on prefixes, in the same way as Latin and Slavic. The next examples, in particular, are cases of UOCs, since the occurrences of the unprefixated verbs *orkhéomai* 'dance' and *kubeúo* 'play dice' are intransitive:<sup>183</sup>

(125) *Ancient Greek; apud Meillet & Vendryès 1968:200*

- a. *Htd. 6, 129*  
\*(Ap-)orkhé:saó [...]                      tòn                      gámon.  
away-dance.AOR.MID.2SG   the.ACC.M.SG   wedding(M)ACC.SG  
'You have danced your wedding away.' (I.e., "You have ruined your wedding by dancing".)
- b. *Lys. 14, 27*  
\*(Kata-)kubéúsas                      tà                      ónta.  
down-gamble.PTCP.AOR.NOM.M.SG   the.ACC.N.PL   possession(N)ACC.PL  
'Having gambled away his possessions.'

There is evidence of obligatory prefixation of the Path onto the verb in Ancient Greek. Horrocks & Stavrou (2003: 322-323) and Horrocks (2004:185-186) contend that a

<sup>182</sup> The references of the Greek examples in (124) and (125) are those provided by Liddell & Scott (1940).

<sup>183</sup> See more examples in Lavidas 2009:72f.

predicate headed by a manner of motion verb is always interpreted as directional and implying a goal if the verb appears with a complement goal PP, a prefix, or both. However, Horrocks & Stavrou (2007) point out, against this position, that a resultative interpretation of predicates of that kind, illustrated in (126), might be only apparent:

(126) *Ancient Greek; apud Horrocks & Stavrou 2007:613*

a. *Thucydides 7, 1*

Es Himéran prô:ton pleúsantes.  
(In)to Himera.ACC first sail.PTCP.AOR.NOM.M.PL  
'Having sailed first to Himera.'

b. *Thucydides 7, 1*

Par-épleusan es Lókrous.  
beside-sailed.AOR.3PL (in)to Locri.ACC.  
'They sailed along (the coast) to Locri.'

c. *Thucydides 4, 26*

Kata-pléontes [...] es tà pròs tò  
Down-sail.PTCP.PRS.NOM.M.PL (in)to the.ACC.N.PL facing the.ACC.N  
pélagos tê:s né:sou.  
open\_sea.ACC the.GEN island.GEN  
'Sailing down to the parts of the island facing the open sea.'

In particular, Horrocks & Stavrou (2007:613) claim that "[...] there remains the further possibility that these PPs are actually to be understood as adjuncts [...] used with verbs that retain their agentive manner-of-motion meaning, [...] (i.e. (para/kata)-pleo e(i)s X = 'go-sailing/go-on-a-sail (along/down) [to X]'). In support of this alternative analysis involving pseudo-unaccusativization, an exhaustive search for verbs meaning 'walk', 'run', 'swim' and 'sail' in the very large corpus of classical Greek literature contained in the electronic database of the Thesaurus Linguae Graecae (<http://www.tlg.uci.edu>) revealed no examples which also contained a time-within-which adverbial." Unfortunately, Horrocks & Stavrou (2007) do not specify whether the search they performed included the prefixed counterparts of "verbs meaning 'walk', 'run', 'swim' and 'sail'". Geoffrey Horrocks, in a personal communication, informs me that, in fact, the search was carried out taking into account only *unprefixed* verbs. Under my assumptions, and hypothesising Ancient Greek to be a weak s-framed language, the results of Horrocks & Stavrou's (2007) search are unsurprising: unprefixed verbs in weak s-framed languages cannot support telic complex resultative constructions, even if accompanied with an alleged goal PP.<sup>184</sup>

However, prefixed predicates are telic in Ancient Greek, even in the absence of directional PPs, in conformity with present assumptions about weak s-framed languages. Thus, in performing a search of 26 prefixed motion verbs in a subcorpus of

<sup>184</sup> In contrast with what I take them to be for Latin or Slavic, Horrocks and Stavrou do not consider prefixes in Ancient Greek as resultative predicates, but just as directional particles: "[Ancient Greek] allowed the prefixation of directional particles to basically agentive verbs of manner of movement, thereby visibly 'directionalizing' the movement involved. Such compound verbs could naturally be used with goal PPs exactly like their uncompounded counterparts [...]" (Horrocks & Stavrou 2007:613). Lavidas (2009:73), on the other hand, acknowledges that the prefixes in Ancient Greek can mark "the completion of the action denoted by the verb" and that "the role of the prefixes is concerned more with the aktionsart (lexical aspect) than with transitivity". That prefixes are to some extent orthogonal to transitivity is also derived in my account, since they have been shown to appear in both transitive (change-of-state) and unaccusative predicates.

the *Thesaurus Linguae Graecae* (Pantelia 2009), a non-trivial amount of unambiguously telic examples are found:<sup>185</sup>

(127) *Ancient Greek; telic manner-of-motion predicates with a prefixed verb*

- a. *Thucydides*, *Historiae*, 4, 43, 2, 2  
 Kéra:i                      tôn                      Athe:naío:n  
 wing(N)DAT.SG          the.GEN.M.PL      Athenian(M)GEN.PL  
euthùs                      apo-bebe:kóti.  
 right\_away              away-step.PTCP.PFV.DAT.N.SG  
 ‘The wing of the Athenians, which had just disembarked.’
- b. *Xenophon*, *Hellenica*, 1, 4, 18, 1  
 Alkibiáde:s [...]              ap-ébaine                      mèn              ouk euthús.  
 Alcibiades.NOM.SG      away-step.IPFV.3SG PART      not      right\_away  
 ‘Alcibiades didn’t disembark right away.’
- c. *Thucydides*, *Historiae*, 7, 40, 1, 4  
Euthùs                      ek-bántes                      autoû  
 right\_away              out-step.PTCP.NOM.M.PL      it.GEN.SG  
 áriston                      epoioûnto.  
 luncheon(N)ACC.SG      make.IPFV.MID.3PL  
 ‘Right after disembarking, they prepared themselves luncheon.’
- d. *Thucydides*, *Historiae*, 2, 49, 3, 2  
Enou      pollô:i                      khróno:i                      kat-ébainen                      es  
 in not      much.DAT.M.SG      time(M)DAT.SG      down-step.IPFV.3SG      in  
 tà                      sté:the:                      ho                      pónos.  
 the.ACC.N.PL      chest(N)ACC.PL      the.NOM.M.SG      pain(M)NOM.SG  
 ‘In brief time the pain descended into the chest.’
- e. *Thucydides*, *Historiae*, 4, 106, 1, 1  
 Tòn                      dè                      mè:                      ethélonta  
 the.ACC.M.SG      PART      not      want.PTCP.PRS.ACC.M.SG  
ap-iénai [...]              pénte              he:merô:n.  
 away-go.INF              five              day(F)GEN.PL  
 ‘That those that didn’t want to (should) leave in five days.’
- f. *Xenophon*, *Hellenica*, 7, 5, 18, 2  
Olígo:n                      mèn              he:merô:n                      anágke:                      ésoito              ap-iénai.  
 few.GEN.F.PL      PART      day(F)GEN.PL      need(F)NOM.SG      be.OPT.3SG away-go.INF  
 ‘That there was need that he should leave in a few days.’

<sup>185</sup> Verbs searched for: *apo-baino*: ‘walk, step away’, *ek-baino*: ‘walk, step out’, *em-baino*: ‘walk, step out’, *kata-baino*: ‘walk, step down’, *án-eimi*: ‘go up’, *áp-eimi*: ‘go away’, *eis-eimi*: ‘go in’, *kát-eimi*: ‘go down’, *ap-hippeúo*: ‘ride away’, *kat-hippeúo*: ‘ride down, over’, *ana-kolumbáo*: ‘come up after diving’, *apo-kolumbáo*: ‘dive and swim away’, *eis-kolumbáo*: ‘swim into’, *ek-kolumbáo*: ‘swim ashore, plunge into the sea from’, *kata-kolumbáo*: ‘dive down’, *ana-pléo*: ‘sail upwards, go up-stream, rise to the surface’, *apo-pléo*: ‘sail away’, *eis-pléo*: ‘sail into a harbour’, *ek-pléo*: ‘sail out’, *kata-pléo*: ‘sail down, back’, *ana-trékho*: ‘run back’, *apo-trékho*: ‘run off, away’, *eis-trékho*: ‘run in’, *ek-trékho*: ‘run out’, *en-trékho*: ‘run in, enter’, *kata-trékho*: ‘run down’. The subcorpus of authors was composed by 23 non-late (pre-Christian) authors (and corpora): Aeschylus, Alcidas, Anonymi medici, Antiphon, Pseudo-Apollodorus, Aristophanes, Aristotle and the Corpus Aristotelicum, Bacchylides, Chariton, Demosthenes, Epicurus, Euclid, Euripides, Hesiod, Homer, Isocrates, Lysias, Plato, Plutarch, Sophocles, Thucydides, Vettius Valens, Xenophon, and the Scholia in Aeschylum. The references of examples provided here are the ones provided by the *Thesaurus Linguae Graecae* (Pantelia 2009). The transliterations of all the Ancient Greek examples of this section are my own. I am grateful to Geoffrey Horrocks for suggesting the kind of adverbial or case marked DP I should use as the telicity-signalling expression in Greek.

- g. *Plutarchus*, *Agesilaus*, 15, 5, 6  
Euthùs            ap-épleusen.  
 right\_away    away-sail.AOR.3SG  
 ‘He sailed away immediately.’
- h. *Thucydides*, *Historiae*, 4, 107, 2, 2  
 Ho            dè    pròs    mèn    tè:n            E:ióna    katá    te  
 the.NOM.M.SG PART facing PART the.ACC.F.SG Eion.ACC down and  
 tòn            potamòn [...] áphno:            kata-pleúsas.  
 the.ACC.M.SG river(M)ACC.SG immediately down-sail.PTCP.AOR.NOM.M.SG  
 ‘He sailed down the river immediately, towards Eion.’
- i. *Thucydides*, *Historiae*, 3, 4, 1, 1  
 Kai    hoi                    Athe:naíoi                    ou    pollô:i  
 and the.NOM.M.PL Athenian(M)NOM.SG not much.DAT.N.SG  
hústeron            kata-pleúsantes.  
 later.ACC.N.SG down-sail.PTCP.AOR.NOM.M.PL  
 ‘The Athenians having sailed up to there not much later.’
- j. *Thucydides*, *Historiae*, 4, 25, 9, 6  
Ek-dramóntes                    áphno:    ek    tê:s            póleo:s.  
 out-run.PTCP.PRS.NOM.M.PL suddenly out the.GEN.F.SG city(F)GEN.SG  
 ‘Running out from the city all of a sudden.’
- k. *Xenophon*, *Hellenica*, 2, 4, 33  
 hoi            mèn    psiloì                    euthùs            ek-dramóntes  
 the.NOM.M.PL part light(M)NOM.PL right\_away out-run.PTCP.AOR.NOM.M.PL  
 e:kóntizon.  
 hurl\_javelins.IPFV.3PL  
 ‘The light troops, running out all of a sudden, started hurling javelins.’

Note, importantly, that in the above examples the directional PP or the DP is optional — see (127)h and (127)j for cases of the former and (127)c for a case of the latter. If in Ancient Greek, as the data seem to suggest, complex resultatives feature a prefix representing Path, it should count as a weak s-framed language, within present assumptions. Since the predicative adjectives in Ancient Greek are always inflected for agreement, as shown below, the prediction emerges that this language will not allow complex adjectival resultative constructions.

- (128) *Ancient Greek; Pseudo-Apollodorus*, *Bibliotheca* (sub nomine Apollodori), 1, 44, 6  
Toûto            dè            hypermégeth-és                    estin.  
 that.NOM.N.SG PART exceedingly\_difficult-NOM.N.SG be.3SG  
 ‘That is exceedingly difficult.’

As far as my (limited) competence in Ancient Greek tells me, those constructions are not found in Ancient Greek. This is also hinted at by Horrocks (2004:193); but, most importantly, it is claimed as an empirical fact by Horrocks & Stavrou (2007:621), who conducted a search “for predicate adjectives in the Thesaurus Linguae Graecae electronic database of ancient Greek literature (<http://www.tlg.uci.edu>) [which] produced no examples of result-state readings, and only depictive ones”.

Ancient Greek thus turns out to be a weak s-framed language, since, being s-framed (recall the UOCs in (125) above), it does not seem to accept a morphologically

independent Path, as suggested by an analysis of CDMCs in this language. As a result, Ancient Greek is correctly predicted not to license adjectival resultative constructions.

## 4.2 Strong s-framed languages

### 4.2.1 German and Dutch

In Dutch and German we find particle verb constructions easily amenable to the same analysis as the one proposed here for Latin and Slavic prefixed predicates. First, these particles can be shown to be also interpreted as resultative, that is, as specifying a state or location resulting from a particular event (encoded by the verb). Thus, for instance, in (129) the German particles *ein*, *aus*, *auf*, *ab*, *hinein* and *zurück* describe the final location of the subject (*Peter* and *Hans* in (129)a and *der Taucher* in (129)b) or the object (*die Flasche* in (129)c):

#### (129) German particles

##### a. Zeller 2001b:85

Weil Peter ein-steigt und Hans aus.  
because Peter in-climbs and Hans out  
'Because Peter gets in and Hans gets out.'

##### b. Lüdeling 2001:21

Dass der Taucher auf-taucht.  
that the diver up-dives  
'That the diver surfaces.'

##### c. Lüdeling 2001:29

Der Prinz stellt die Flasche ab/hinein/zurück.  
the prince puts the bottle away/in/back

Similarly, the Dutch particles *in* 'in' and *af* 'off' describe the final location of the truck and of the hat in (130)a, and (130)b, respectively, and *in* describes a more abstract location or state (the state of being available) for the petition in (130)c.

#### (130) Dutch particles

##### a. Van Riemsdijk 1978:92

Omdat Jan de vrachtwagen in reed.  
because Jan the truck in drove  
'Because John drove the truck in.'<sup>186</sup>

##### b. Broekhuis 2002:30

Jan zet zijn hoed af.  
Jan puts his hat off  
'Jan takes his hat off.'

##### c. Gehrke 2008:27

Zij diende een aanvraag in.  
she handed a petition in  
'She filed a petition.'

<sup>186</sup> Van Riemsdijk (1978:92) notes that *in* can be understood as a particle (as in the translation provided above) and a postposition, in the latter case giving rise to an intransitive predicate whose the translation would read 'Because Jan drove into the truck'. For the sake of comparison with Latin and Slavic prefixes we are interested in the former reading.



There are less evident instances of particles bearing a resultative interpretation. McIntyre (2003) makes a case for this claim through an analysis of the German particle *ein*, which indicates a final “state of readiness for the activity expressed by the verb” (McIntyre 2003:124):

(131) *German; McIntyre 2003:124*

- a. sich ein-spielen  
REFL in-play.INF  
‘get warmed up (in sport/music)’
- b. sich ein-arbeiten  
REFL in-work.INF  
‘work one’s way into something’
- c. sich ein-singen  
REFL in-sing.INF  
‘get warmed up in singing’

McIntyre criticises the position that *ein* in these predicates is a mere inchoative marker whereby *einspielen*, for instance, should be rendered ‘begin playing’: these predicates present an interpretation analogous to adjectival resultative constructions such as the following one:

(132) *German; McIntyre 2003:124*

- sich warm spielen.  
REFL warm play.INF  
‘get warmed up (in sport).’

Second, German and Dutch particles are well capable of licensing unselected objects. In (133) the particles *ab* and *an* permit intransitive *arbeiten* ‘work’ and *husten* ‘cough’ to appear with an accusative object:

(133) *German; Zeller 2001b:155-156*

- a. Peter arbeitet seine Schulden \*(ab).  
Peter works his debts off  
‘Peter works off his debts.’
- b. Peter hustete ihr eine dicke Erkältung \*(an).  
Peter coughed her a thick cold on  
‘She caught a strong cold from Peter’s coughing.’

Dutch particles also display the power of introducing an argument, as illustrate *af* and *toe* in the next examples:

(134) *Dutch; Booij 1990:53*

- a. lopen / de straten \*(af-)lopen  
walk.INF the streets off-walk.INF  
‘walk’ / ‘tramp the streets’
- b. juichen / iemand \*(toe-)juichen  
cheer.INF somebody to-cheer.INF  
‘cheer’ / ‘cheer someone up’

Finally, German and Dutch particles may induce telicity in the predicate where they appear (see, for German, Rousseau 1995), suggesting, within the framework adopted here, the projection of PathP. For instance, the atelic process portrayed by *schmort* in (135)a is turned into an accomplishment (where the result state of the referent of the object is that of being partially or lightly affected by the action —see McIntyre 2002) in (135)b by virtue of the particle *an*:

(135) *German; Stiebels & Wunderlich 1994:958*

- a. Er    schmort den    Braten.  
   he   braises the    roast  
      ‘He braises the roast.’
- b. Er    schmort den    Braten an.  
   he   braises the    roast   PART  
      ‘He braises the roast to a certain degree.’

Analogously, Levin & Rappaport Hovav (1995:161-162) report that Dutch atelic *bloeien* ‘bloom’ (see (136)a) turns into a telic change-of-state predicate with the addition of *op* ‘up’ (see (136)b):

(136) *Dutch; Levin & Rappaport Hovav 1995:161-162*

- a. Deze bloem heeft het hele jaar gebloeid.  
   this flower has the whole year bloomed  
      ‘This flower bloomed for the whole year.’
- b. Het boompje is helemaal op-gebloeid  
   the little\_tree is completely up-bloomed  
   toen ik het regelmatig mest gaf.  
   when I it regularly fertiliser gave  
      ‘The little tree completely flourished when I regularly gave it fertiliser.’

Observe, importantly, that the addition of the particle *op* also provokes a change in auxiliary selection from *hebben* ‘have’ in (136)a to *zijn* ‘be’ in (136)b, constituting a further proof of a change in argument structure properties for the predicate (specifically, a proof for the projection of a PlaceP where the particle is first merged as Compl-Place —see Chapter 2, Section 3.2.2 on the relationship between BE-selection and PlaceP).

As can already be gathered from the examples above, particles in these languages may appear attached onto the verb or separated from it. The following minimal pair in German illustrates both possibilities:

(137) *German; Zeller 2001b:55*

- a. Weil    Peter in den    Bus ein-steigt.  
   because Peter in the.ACC bus in-climbs  
      ‘Because Peter gets on the bus.’
- b. Peter steigt    in den    Bus ein.  
   Peter climbs in the.ACC bus ein  
      ‘Peter gets on the bus.’

According to Zeller (2001b) or Lüdeling (2001), in subordinate clauses like (137)a the particle appears adjacent to the verb, which sits in its original final position; in matrix clauses, however, the verb undergoes movement to a “second” position (the well-known

phenomenon of V2 —see Haider & Prinzhorn 1986, Weerman 1989, Vikner 1995, among others) stranding the particle. Dutch particles are also separable from the verb through stranding under V2 movement:

(138) *Dutch; Booij 2003:20*

- a. ...Hans zijn moeder op-belde.  
Hans his mother up-called
- b. Hans belde zijn moeder op.  
Hans called his mother up
- c. ...de fietser neer-stortte.  
the cyclist down-fell
- d. De fietser stortte neer.  
the cyclist fell down

A second proof of the morphological independence of the particle is the fact that it may be fronted under topicalisation:

(139) *German; Zeller 2001b:89*

- Zu hat er die Tür gemacht.  
to has he the door made  
'He locked the door.'

(140) *Dutch; Bennis 1991:1*

- a. Op gaat de zon in het oosten.  
up goes the sun in the east  
'The sun rises in the east.'
- b. Uit voert Angola veel koffie.  
out takes Angola much coffee  
'Angola exports a lot of coffee.'

In the light of these facts, we must conclude that, assuming that these particles appear within a PathP structure, the Path cannot bear the status of a prefix in German or Dutch. Accordingly, it comes as no surprise, under the assumptions made here, that these languages allow AP resultatives:

(141) *German; Kratzer 2004:1*

- a. Die Teekanne leer trinken.  
the teapot empty drink.INF  
'To drink the teapot empty.'
- b. Die Tulpen platt giessen.  
the tulips flat water.INF  
'To water the tulips flat.'
- c. Er hat seine Familie magenkrank gekocht.  
he has his family stomach\_sick cooked  
'He cooked his family stomach sick.'

(142) *Dutch; Hoekstra 1988:115-116*

- a. Hij liep zijn schoenen scheef.  
he walked his shoes worn\_on\_one\_side
- b. Hij schaatste het ijs kapot.  
he skated the ice cracked

- c. De boorhamer dreunde mij doof.  
the jackhammer pounded me deaf

It is of course well known that both Dutch and German do feature sets of so-called inseparable prefixes, which must appear adjacent to the verb in all circumstances. As a result, in V2 environments the prefix, unlike the particle, cannot strand, as illustrated through German *be-*:

(143) *German; Zeller 2001b:56*

- a. Weil Peter den Berg be-steigt.  
because Peter the.ACC mountain be-climbs  
'Because Peter climbs the mountain.'  
b. Peter {be-steigt den Berg/ \*steigt den Berg be.}  
Peter be-climbs the.ACC mountain climbs the.ACC mountain *be*

Prefixes, as particles, suggest the projection of a PathP, since, according to Stiebels (1996) and Lüdeling (2001:136) they can also induce telicity; they can also induce changes in argument structure properties. Thus, in the following example the prefixed verb *vergärtnern* 'spend away in gardening' is a transitive, telic accomplishment, contrasting with atelic intransitive *gärtnern* 'gardening':

(144) *German; Stiebels 1998:286*

- Er ver-gärtner-te sein gesamtes Vermögen.  
he ver-garden-PST his.ACC whole.ACC fortune.ACC  
'In gardening, he used up all his fortune.'

Accordingly, I will assume that at least some prefixes, like particles, also originate as roots in Compl-Place position.<sup>187</sup> Prefixes, unlike particles, are endowed with a morphological requirement to get prefixed onto the verb (and see the proposal for English *out-* below). I am claiming, crucially, that it is the root that is endowed with this requirement, and not the functional head Path.

#### 4.2.2 English

As for Dutch and German, I will assume that English particles also signal the projection of a PathP structure, and that the particle originates as a root in Compl-Place position.<sup>188</sup> With that in mind, we can quite safely claim that Path is not obligatorily prefixed onto the verb in this language, as shown by the next examples:

(145) *Svenonius 1996:4*

- a. The doorman threw the drunks out.  
b. The firefighters hoisted the equipment up.  
c. The police chased the demonstrators off.

<sup>187</sup> See Hoekstra & Mulder's 1990:18-21 and Mulder 1992:179-180 for seminal analyses of Dutch prefixes as predicates of a small clause, and Mateu 2008b for an analysis of *vergärtnern*, and other complex denominal verbs in German, where the prefix originates as the head of a small clause projection.

<sup>188</sup> Small-clause analyses of English particles, analogous to the present one, have been proposed by Stowell (1981), Kayne (1985), Hoekstra (1988), Den Dikken (1995), Svenonius (1996) or Hale & Keyser (2002), among others.

This state of affairs is in accordance, under present assumptions, with the well-known allowance of adjectival resultatives in this language:

(146) *Carrier & Randall 1992:184-185*

- a. She pounded the dough flat as a pancake.
- b. They ran their sneakers ragged.
- c. The maid scrubbed the pot shiny.
- d. The chef cooked the kitchen walls black.
- e. The tourists walked their feet sore.

There is a productive prefixation mechanism in English which presumably involves the projection of a PathP: *out*-prefixation, exemplified in (147):

(147) *Irube 1984*

- a. Mary outspends John.
- b. The Brownies outguessed the Girl Scouts in the contest.
- c. Outfielders must outhrow infielders.

*Out* must be initially projected within the vP, since it licenses otherwise unselected objects, as in the examples of (147). Alongside, examples such as (147)a suggest that *out*-prefixed verbs head resultative predicates, which is evidence that Path is projected.<sup>189</sup> If *out*-predicates are instances of complex resultative predicates with a Path projection, and taking into account the fact that this prefixation is obligatory, my proposal that Path in English is not affixal is in doubt. My guess here is that this obligatorily prefixed *out* could be a root different from but homonymous to the *out* which appears in other verb-particle combinations, such as the one in (148):<sup>190</sup>

(148) (\*Out-)put (out) the fire (out).

There is evidence that we are dealing with two *outs* here. On the one hand, the semantics are clearly different (see footnote 189), and, most notably, the prefixed *out* never delivers an idiomatic meaning, such as the one we find in (148). On the other hand, the phonologies are also different, since, much as being segmentally identical, the *out* in (147) is a prefix, and the one in (148) cannot be prefixed. I propose then, that *out*-prefixation depends on the idiosyncratic properties of this *out* root, and not on the properties of Path in English, which, as discussed, is not prefixed.<sup>191</sup>

<sup>189</sup> Marantz (2009) argues that *out*-predicates are resultative predicates where the internal argument is understood as being exceeded by the external argument along some dimension specified by the root of the verb. Thus, for instance, in *John outran the bus* the bus is exceeded by John in running. The caused final state is, then, that of being exceeded. While I endorse this as the correct interpretation of *out*-predicates, I part ways in how Marantz, under rather different assumptions, implements it syntactically: while I take *out*, inserted as Compl-Place, to be predicated of the internal argument, Marantz proposes that *out* is an adjunct, modifying the caused state computed from the causing verb.

<sup>190</sup> I thank Rok Žaucer for pointing out that *out*-prefixation is a problem for the assumption that English has a non-affixal Path, and for suggesting that there might be two different *outs*.

<sup>191</sup> There are other possible cases of prefixation in English involving predicates built on a PathP. Marantz (2003), for instance, proposes that in Latinate verbs like *construct* and *destroy* *con-* and *de-* act as predicates of the internal argument and end up prefixed onto the verb. In this way, Marantz explains the diverging behaviour of verbs of this type with respect to monomorphemic verbs like *build*. For instance, while *build* can be prefixed with *out-* and admits heading the so-called *one's way* construction, *construct* cannot, presumably because the predicative prefix *con-* is to be inserted in the same structural slot where *out-* or the PP in the *one's way* construction are to be inserted:

#### 4.2.3 Icelandic

In Icelandic resultative constructions based on particles or PPs do not feature prefixed verbs, as illustrated by particles *upp* ‘up’ and *niður* ‘down’ in the next examples:

(149) *Icelandic; Den Dikken 1995:171*

- a. Ég gaf (\*upp) Maríu (upp) símanúmerið mitt (\*upp).  
I gave up Maríu up phone\_number my up  
‘I gave Mary my phone number.’
- b. Í gær hafa þeir sent (\*upp) strákunum (<sup>?</sup>upp) peningana (upp).  
yesterday have they sent up boy.the.PL up money.the up.  
‘Yesterday the boys spent up the money.’
- c. Ég hef rétt (\*niður) Jóni (<sup>?</sup>niður) hammarinn (niður).  
I have passed down John down hammer down  
‘I have passed John the hammer.’

Moreover, resultatives may be licensed singly by a PP, without the aid of either particle or prefix:

(150) *Icelandic; Whelpton 2006:2*

- Báturinn flýtur undir brúna.  
boat.the floats under bridge.the.ACC  
‘The boat is going under the bridge floating.’

We expect, accordingly, that adjectival resultatives are allowed in Icelandic. And, as shown by Whelpton (2006, 2007), although they seem to be less productive than in English, they are certainly not impossible:

(151) *Icelandic; Whelpton 2006:10-17*

- a. Járnsmiðurinn barði málminn flatan.  
blacksmith.the pounded metal(M)the.ACC.SG flat.ACC.M.SG  
‘The blacksmith pounded the metal flat.’
- b. Ég kýldi hann kaldann.  
I punched him.ACC.SG cold.ACC.M.SG  
‘I punched him out cold.’

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(i) *Marantz 2003:4*

- a. John out-built/\*constructed Mary.
- b. John built/\*constructed his way to the top.

Harley (2006) applies the same analysis to Latinate verbs in general (like *compose*, *dissect*, *exhibit*, *incise*, etc.; but also polymorphemic non-latinate verbs like *broadcast*), accounting for the failure of these complex verbs to combine with particles, with resultative predicates or to head double object constructions:

(ii) *Harley 2006:23-24*

- a. Write it up. / \*Compose it up. / \*Arrange it up.
- b. Walk yourself tired. / \*Perambulate yourself tired.
- c. Bill sent his regards to Sue. / Bill sent Sue his regards.
- d. Bill conveyed his regards to Sue. / \*Bill conveyed Sue his regards.

As for prefix *re-* (*rewrite*, *reopen*, *reconsider*, etc.), which induces the presupposition that the state codified by the predicate had previously existed, I will assume that it is an adjunct merged lower than *v*, modifying maybe PlaceP, where final states are codified. See Marchand 1969, Keyser & Roeper 1992, Lehrer 1995, Lieber 2004 and Marantz 2009 for discussion on the syntax and semantics of *re-*.

For all these cases of prefixes I have to assume that it is a phonological feature of the root ( $\sqrt{\text{CON}}$ ,  $\sqrt{\text{DE}}$ ,  $\sqrt{\text{RE}}$ , etc.) what determines the prefixation.

- c. Að nudda þá slétta.  
to rub them.ACC.M.PL smooth.ACC.M.PL  
'To rub them smooth.'
- d. [Þá] slengdi illi andinn honum flötum.  
then slung evil spirit.the him.DAT.M.SG flat.DAT.M.SG  
'Then the evil spirit slung him down flat.'
- e. Þeir dældu hana fulla af lyfjum.  
they pumped her.ACC.F.SG full.ACC.F.SG of drugs  
'They pumped her full of drugs.'
- f. Dóra æpti sig hás-a.  
Dóra screamed herself.ACC.SG hoarse.ACC.F.S  
'Dóra screamed herself hoarse.'
- g. [Hann] reif hurðina opna.  
he tore door(F)the.ACC.SG open.ACC.F.SG  
'He tore the door open.'
- h. Hann skrúbbaði pönnurnar hreinar.  
he scrubbed pot(F)the.ACC.PL clean.ACC.F.PL  
'He scrubbed the pots clean.'
- i. Þvo mig hreinan.  
wash me.ACC.M.SG clean.ACC.M.SG  
'Wash me clean.'

However, what is most interesting about Icelandic within the present discussion is that it presents two types of adjectival resultative constructions: those where the adjective is morphologically independent from the verb, as in the examples of (151) above, and those where it is prefixed to the verb, as shown in the next examples

(152) *Icelandic, Whelpton 2006:28 (a) and 2007:4 (b-f)*

- a. Hann hvít-bæsti rammann.  
he white-stained frame.the  
'He stained the frame white.'
- b. Svart-litaður.  
black-coloured.NOM.M.SG
- c. Þunn-sneiddu sveppirnir.  
thin-cut.NOM.M.PL mushroom(M)the.NOM.PL  
'Thin-cut mushrooms.'
- d. Fín-muldu piparkornin.  
fine-ground.NOM.N.PL peppercorn(N)the.NOM.PL  
'Fine-ground peppercorns.'
- e. Hrein-skrúbbaðu pönnurnar.  
clean-scrubbed.NOM.F.PL pot(F)the.NOM.PL  
'Clean-scrubbed pots.'
- f. Mjúk-brædda súkkulaði.  
soft-melted.NOM.N.SG chocolate(N)NOM.SG  
'Soft melted chocolate.'

Crucially, the data in (152) show a correlation between prefixation of the adjective and lack of agreement morphology, while the data (151) show that when the adjective is inflected it is not prefixed. This could be interpreted in the following way: the adjective in Icelandic (complex) resultative constructions is allowed to bear agreement

morphology. If it does, it cannot get attached onto the verb, but this does not yield a deviant output, since the Path is not specified as affixal in this language. When it does not bear agreement morphology, however, it may be prefixed onto the verb, since it is not morphologically complex.<sup>192</sup> Thus, Icelandic subsumes two logical types of strong s-framed languages: those where the adjective is inflected and those where it is not inflected. As expected, it is only in the latter where adjectival resultatives of the English type are permitted. In this sense, Icelandic lends support to the hypothesis that the allowance of this type of resultative constructions depends, first, on the morphological features of Path and, second, on the requirement that predicative adjectives bear agreement morphology.

#### 4.2.4 Finno-Ugric

Outside Indo-European (at least) two Finno-Ugric languages are found that pattern with Germanic in being strong s-framed languages: Finnish and Hungarian.

In Finnish the verb does not seem to require the appearance of a Path-signalling affix in resultative constructions based on PPs or particles; in the following examples I underline both the verb and the element encoding the Core Schema:<sup>193</sup>

(153) *Finnish; Fong 2001a and Kolehmainen 2005:170*

a. Toini tanssi huonee-seen. / huonee-sta.

Toini danced room-ILL room-ELA

‘Toini danced into/out of the room.’

b. Uolevi asui täällä, mutta hän muutti pois.

Uolevi live.PST here but he move.PST away

‘Uolevi has lived here, but he has moved away.’

(154) *Finnish; Kolehmainen 2005:171*

Nyt sinä ammut yli!

now you shit over

‘Now you exaggerate!’

(155) *Finnish; Kolehmainen 2005:172*

Pekka laukoi pallot maaliin, Matti ampui yli.

Pekka fired ball.ACC.PL goal.ILL, Matti shot over

‘Pekka shot the balls into the goal, Matti, on the contrary, shot them away over it.’

Unsurprisingly, Finnish allows the formation of complex resultatives based on adjectival predicates:

<sup>192</sup> Both Dutch and German feature particle verb constructions where the particle is an adjective and appears adjacent to the verb in verb final environments. I illustrate with Dutch:

(i) *Dutch; Booij 2003:20*

a. ...Jan het huis schoon-makte.

Jan the house clean-made

b. Janmaakte het huis schoon.

Janmade the house clean

However, since in these languages the adjective is only inflected when used attributively, and not predicatively (consider, for instance, Ger. *Das weiss-e Buch*, ‘The.NOM.N.SG white-NOM.N.SG book(N)NOM.SG’ vs. *Das Buch ist weiss(\*e)*), the formal dissociation shown by Icelandic adjectival resultatives does not obtain.

<sup>193</sup> There are some cases of prefixation in Finnish, but Kolehmainen (2005:111) states that “prefixation in verbs is not a productive mechanism for building words” (my translation: VAM).



(156) *Finnish; Levinson 2010:144*

- a. Mari        joi        teekannu-n    tyhjä-ksi.  
Mari.NOM drank    teapot-ACC    empty-TRANSL  
'Mari drank the teapot empty.'
- b. Mari        hakkasi        metalli-n    litteä-ksi.  
Mari.NOM hammered    metal-ACC    flat-TRANSL  
'Mari hammered the metal flat.'
- c. Mari        nauroi        itsensä    käheä-ksi.  
Mari.NOM laughed    herself    hoarse-TRANSL  
'Mari laughed herself hoarse.'
- d. Joki        jäätyi    kiinteä-ksi.  
river.NOM froze    solid-TRANSL  
'The river froze solid.'
- e. Tuuli        jäädytti        joe-n    kiinteä-ksi.  
wind.NOM freeze-CAUS    river-ACC    solid-TRANSL  
'The wind froze the river solid.'

As for Hungarian, this language possesses a set of particle-like elements which are readily amenable to an analysis in terms of resultative particles analogous to the ones we have described for other languages.<sup>194</sup> That these elements are good candidates to be considered realisations or signals of Path(P) is the fact that they describe the final state of a motion event (see (157)), affect the telicity of the predicate (see the diagnostics with temporal modifiers in (158)) and may introduce unselected objects (see (159)).<sup>195</sup>

(157) *Hungarian; Horvath 1978, apud Julien 2002:190, and Hegedűs 2006:224*

- a. János    ki-ment.  
János    out-went  
'János went out.'
- b. János    át-jött.  
János    over-came  
'János came over.'

(158) *Hungarian; É. Kiss 2002:62-63*

- a. János    hétfőre        \*(el)    olvasta a    regényt.  
János    by\_Monday    PART read.PST the    novel  
'János read the novel by monday.'
- b. János    egész    este    (\*el)    olvasta a    regényt.  
János    whole    evening    PART read    the    novel  
'János read the novel the whole evening.'

<sup>194</sup> Perrot (1995:109) provides the following list of particles "from ancient stock": *be* 'in', *ki* 'out', *el* 'away', *fel* 'up', *le* 'down', *meg* 'back' (also a completeness reading similar to that of German and Dutch *be-* or Latin *co(m)-*: see Chapter 3, Section 3.4.3.3). Other elements show a behaviour similar to these particles. See Perrot 1995:108f. and É. Kiss 2002:67f. See É. Kiss 2008a for the claim and discussion that Hungarian particles are resultative predicates.

<sup>195</sup> Final locations in motion predicates with bounded paths may also be conveyed by PPs (headed, as is the case in Hungarian, by postpositions):

(i) *Hungarian; Ackerman 1992:79*

A        paraszt    futott a    szobá-ban.  
the    peasant    ran    the room-in  
'The peasant ran into the room.'

See also Hegedűs 2006.

(159) *Hungarian; Bende-Farkas 2000*

A kutya \*(fel-)ugatta a szomszédokat  
 the dog up-bark.PST the neighbour.ACC.PL  
 ‘The dog barked the neighbours awake.’

Hungarian particles are not obligatorily affixed to the verb. It is true that, as shown by É. Kiss (2002:56), when there is no logical operator in the sentence the particle must form one and the same phonological word with the verb:

(160) *Hungarian; É. Kiss 2002:56*

János [<sub>ω</sub> fel olvasta] a verseit.  
 János up read.PST the poems  
 ‘János read out his poems.’

However, there is a variety of syntactic conditions that may disrupt the morphophonological connection between the particle and the verb: the presence of negation (see (161)a), contrastive topicalisation of the particle (see (161)b) or even movement into a matrix clause (see (161)c and (161)d):<sup>196</sup>

(161) *Hungarian; É. Kiss 2002:57-58*

- a. Péter nem olvasta őket fel.  
 Péter NEG read.PST them up  
 ‘Péter did not read them out.’
- b. Fel csak János olvasta a verseit.  
 out only János read.PST the poems  
 ‘Out loud only John read his poems.’
- c. János fel szeretné olvasni a verseit.  
 János up would\_like read.INF the poems  
 ‘János would like to read out the poems.’
- d. János fel szeretném, hogy olvassa a verseit.  
 János up would\_like.1SG that read.SBJV.3SG the poems  
 ‘I would like that János read out his poems.’

In spite of these facts, É. Kiss (2002:57) considers the particle to be originated within the VP, a fact which is in no contradiction with the hypothesis that it originates within a PathP, as assumed here. On this assumption, examples (161)a to (161)c prove that Hungarian does not feature any morphological requirement on Path to get prefixed to the verb.<sup>197</sup> Hence, we expect adjectival resultative constructions to be possible in Hungarian, which they are:

<sup>196</sup> See also Puskás 2000:85f., where it is claimed “that verbal particles are not only separable but that in fact they are separate entities”.

<sup>197</sup> É. Kiss (2002, 2008a) argues, in fact, that the movement of the particle is not head movement, but phrasal movement, as it may undergo topicalisation (see (161)b above) and focalisation, and, moreover, it can stand alone as a fragment in elliptical constructions, something impossible for an affix:

(i) *Hungarian; É. Kiss 2002:59*

—Fel olvasta János a verseit?  
 up read.pst János the poems  
 ‘Did János read out the poems?’  
 —Fel.  
 up  
 ‘He did.’

(162) *Hungarian*

a. *Snyder 2001:337*

A munkás lapos-ra kalapácsolta a fémét.  
the worker flat-TRANSL hammer.PST the metal  
'The worker hammered the metal flat.'

b. *Bende-Farkas 2000:4*

Mari beteg-re ette magát.  
Mari sick-onto eat.PST.3SG self.ACC  
'Mari ate herself sick.'

c. *Csirmaz 2008:110*

János tisztá-ra mosta a ruhát.  
János clean-onto washed the dress  
'János washed the dress clean.'

Observe, finally, that both in Finnish and in Hungarian the adjective heading the resultative predicate is marked with a special case (translative *-ksi* in Finnish (see (156)) and sublative *-ra/-re* in Hungarian in (162)). Thus, for instance, in Finnish, depictive secondary predication, unlike resultative secondary predication, requires the essive case:

(163) *Finnish; Fong 1997*

a. Rakennus paloi vakuuttamattoma-na.  
building burned uninsured-ESS  
'The building burnt down uninsured.'

b. Keitto nautitaan kuuma-na.  
soup enjoy.PASS.PRS hot-ESS  
'The soup is to be enjoyed hot.'

This morphological fact fits nicely with the analysis put forth here, where the resultative adjective, encoding final state, is embedded within a PathP: the translative case of Hungarian and Finnish would correspond to the Vocabulary Item for the Path head.<sup>198</sup> I illustrate with the PF-derivation of the Finnish complex AP of (156)a:

(164) *PF-derivation of (156)a*

a. Structure delivered by syntax

[<sub>VP</sub> Mari [<sub>v'</sub> [<sub>v</sub> v  $\sqrt{\text{JO}}$ ] [<sub>PathP</sub> teekannun [<sub>Path'</sub> Path [<sub>PlaceP</sub> teekannun [<sub>Place'</sub> Place  $\sqrt{\text{TYHJÄ}}$ ]]]]]]]

b. Vocabulary Insertion

[<sub>VP</sub> Mari [<sub>v'</sub> [<sub>v</sub> \_\_\_\_ jo] [<sub>PathP</sub> teekannun [<sub>Path'</sub> \_\_\_\_ksi [<sub>PlaceP</sub> teekannun [<sub>Place'</sub> \_\_\_\_tyhjä]]]]]]]

c. Conflation

[<sub>VP</sub> Mari [<sub>v'</sub> [<sub>v</sub> jo jo] [<sub>PathP</sub> teekannun [<sub>Path'</sub> tyhjäksi [<sub>PlaceP</sub> teekannun [<sub>Place'</sub> tyhjätyhjä]]]]]]]

d. Erasure of unpronounced links

[<sub>VP</sub> Mari [<sub>v'</sub> [<sub>v</sub> jo jo] [<sub>PathP</sub> teekannun [<sub>Path'</sub> tyhjäksi [<sub>PlaceP</sub> teekannun [<sub>Place'</sub> tyhjätyhjä]]]]]]]

From the point of view adopted here, if the particle is phrasal-moved, it is PathP what's moved. For more discussion on particle/prefix movement in Hungarian, see Farkas & Sadock 1989.

<sup>198</sup> See also Marácz 1991 for Hungarian and Levinson 2010 for Finnish.

At Vocabulary Insertion the Vocabulary Item *-ksi*, a defective phonological matrix, is inserted into the Path head. Subsequently this matrix is repaired with the phonological matrix which, by virtue of conflation, corresponds to Path, namely, that of  $\sqrt{\text{TYHJÄ}}$ , sitting at Compl-Place.

#### 4.3 *V-framed languages. V-framed constructions in s-framed languages*

As for v-framed languages, we already know that complex resultative predicates are not allowed in these languages, regardless whether they are based on an AP or a PP:

(165) *Catalan; Mateu 2002:164*

- a. \*El noi va ballar a dins  
     the boy PRF.3SG dance.INF at inside  
     de l'habitació. (Directional reading.)  
     of the=room
- b. \*El gos va bordar els pollastres desperts.  
     the dog PRF.3SG bark.INF the chickens awake

In Chapter 3, Section 1.5.2, I proposed that in v-framed languages there is an operation of Fusion affecting v and Path. This operation, in turn, is incompatible with v being a complex head, in particular, with it being associated with a Manner root. This is why complex events involving a PathP are not allowed in v-framed languages (see Chapter 3, Section 1.5.2 for more details). On the contrary, nothing in s-framed languages impedes the generation of non-complex events of change, both in strong s-framed languages (cf. (166)) and weak s-framed languages (cf. (167)):<sup>199</sup>

(166) The sun has melted the snow in a few hours.

(167) *Latin; Plin. Nat. 17, 233, 3*

- Gelatio [...] paucis diebus necat.  
     frost.NOM few.ABL.PL day.ABL.PL kill.3SG  
     ‘The frost kills them [the trees] in a few days.’

As for strong s-framed languages, if Place, Path and v remain phonologically unspecified after Vocabulary Insertion, they are automatically specified with the phonological matrix which corresponds to them by the mechanism of conflation, namely, that of the root sitting at Compl-Place ( $\sqrt{\text{MELT}}$  in (166)); afterwards, at the phase of Erasure of unpronounced links, all copies except for the highest one —namely, that in v— are erased. In weak s-framed languages I have assumed that a Lowering operation brings v down to Path at PF, whereby these two heads come to form a new complex head. The same conflation mechanism is at work: inserting the phonological matrix of the root sitting at Compl-Place (in the case of (167),  $\sqrt{\text{NEC}}$ ), into Path, v and Place. Of these three copies, only one is not erased, and the same result obtains. See Chapter 2, Section 3.3.6 for a full PF derivation of simple change-of-state predicate in Latin.

<sup>199</sup> See also Mateu 2010 for the claim that the incorporation mechanism is cross-linguistically less marked than the conflation mechanism. *Incorporation* has to be interpreted, in the present terms, as the conflation of the phonological material within the PlaceP into v, while *conflation* has to be interpreted as the conflation of phonological material from a Manner root into v (cf. Haugen 2009 for this use of both terms).

#### 4.4 Summary

The Path head can be argued to be marked as fusing or non-fusing, and, within this category, as affixal or not. This morphological specification, when combined with the overt inflectional properties of the adjective in each language, produces a fine-grained typology which captures the cross-linguistic variation in the expression of complex resultative predicates in a way more precise than that of Talmy's (2000). It is schematised in (168):

(168)

			OVERT INFLECTIONAL MORPHOLOGY ON PREDICATIVE APS	
			YES	NO
MORPHOLOGICAL PROPERTIES OF PATH	NON-FUSING	NON-AFFIXAL	Strong s-framed languages: complex resultatives based on particles, PPs or APs. Icelandic.	Strong s-framed languages: complex resultatives based on particles, PPs or APs. English, Dutch, German, Hungarian, Finnish.
		AFFIXAL	Weak s-framed languages: complex resultatives based only on adpositional prefixes. Latin, Slavic and Ancient Greek.	Weak s-framed languages: complex resultatives based on adpositional or adjectival prefixes: Icelandic.
	FUSING		V-framed languages: no complex resultative constructions. Romance, Modern Greek, Basque, Hebrew, Japanese, Korean.	

Note that Icelandic, while being primarily classified as a strong s-framed language, behaves as a weak s-framed language with respect to its adjectival resultative constructions based on affixal adjectives. I leave for future research investigating whether there are in fact languages, as is predicted, that behave uniformly in that fashion: those languages, with an affixal Path and no inflection on the predicative adjective, should not feature non-affixal particles, although they could feature resultatives based on affixed adjectives.<sup>200</sup>

<sup>200</sup> I observe last that from a diachronic point of view, the morphological specifications of Path fall into a phased sequence if, as discussed in Acedo-Matellán & Mateu (2008), Path starts out as an independent element, then it optionally attaches onto the verb, afterwards the affixation is obligatory, and last, it becomes phonologically undistinguishable from the verb. An interesting prediction is that early Indo-European (as Vedic or Hittite), in featuring a -conflating, unspecified Path, should license complex AP resultatives. That is, however, left for future research. Eythórsson (2002) also traces the development of verbal prefixes from separable particles and ultimately from independent phrases in Indo-European. However, much as he discusses the “univerbation” process leading to Slavic, Latin or Germanic prefixes, he does not consider a further phase where the prefix and the verbal root fuse into one morpheme (in my view, the state of v-framed languages).

## 5 Previous approaches and possible counterexamples

In this section I summarise and revise some of the few works which have, to different extents, dealt with the crosslinguistically uneven availability of complex resultatives based on APs and those based on PPs/particles. Alongside, I confront some of the empirical problems that their data pose for my own account, and try to propose a way out.

### 5.1 Snyder 1995, 2001, Beck & Snyder 2001a

Snyder (1995, 2001) has proposed that a necessary —but, crucially, not sufficient— condition for a language to admit complex predicates like particle verb constructions, (adjectival) resultative constructions or double object constructions is the availability of productive endocentric root compounding, regulated by the *compounding parameter*:

- (169) Compounding parameter: The grammar {disallows\*, allows} formation of endocentric compounds during the syntactic derivation. [\*unmarked value]” (Snyder 2001:335)

Thus, languages like English, positively marked for this parameter, may generate all the above complex predicates because they can also productively generate non-idiosyncratically interpreted compounds like *banana box*. On the contrary, languages like Catalan, negatively marked for the compounding parameter (consider for instance the ungrammaticality of \**plàtan caixa*/\**caixa plàtan* ‘banana box/box banana’) cannot form complex predicates either. Basing on the idea developed by Neeleman & Weerman (1993) and Neeleman (1994) for Dutch and by LeRoux (1988) for Afrikaans that in these languages verb particle predicates and adjectival resultatives must be analysed as compounds of the verb and the particle or adjective, Snyder proposes that all complex predicates, for him a natural class, must be treated as compounds. The proposal is then underpinned by data from a wide range of languages, where a correlation is shown to obtain between availability of productive root compounding and of complex predicates.<sup>201</sup> In turn, Beck & Snyder (2001a) extend this analysis to CDMCs, implying a correlation between the availability of CDMCs and adjectival resultative constructions.

Several authors have pointed out the empirical problems of Snyder’s (1995, 2001) and Beck & Snyder’s (2001a) proposal.<sup>202</sup> In particular, a cross-linguistically attested double dissociation between compounding and complex predicate formation can be shown to thwart the predictions of the analysis, since there exist, on the one hand, languages like Basque or Modern Greek allowing productive root compounding and simultaneously disallowing complex predicates, and, on the other hand, languages like Slavic or Latin which do not productively generate root compounds but which admit at least a set of complex predicates, like CDMCs or UOCs. Other problems include the virtual

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<sup>201</sup> Snyder (1995, 2001, 2002) furthermore argues that data from language acquisition, in fitting with the typological data he has retrieved, reinforce his proposal: as shown by Snyder (2002), children first produce complex predicates slightly later than they first produce root compounds. This is interpreted by Snyder as proving that the compounding mechanism underlies, but is *not singly* responsible for, the generation of complex predicates.

<sup>202</sup> See Horrocks & Stavrou 2003, Son 2007, Den Dikken 2008, Son & Svenonius 2008 or Padrosa-Trias 2010. On the other hand, analyses of complex predicates such as McIntyre’s (2004) or Zubizarreta & Oh’s (2007) are based on Snyder’s (1995, 2001) hypothesis.

unavailability of overt VV compounds in Germanic, a group of languages well-known for their allowance of complex predicates.

More importantly for the discussion to which the current chapter is devoted, there does not exist a compulsory correlation of complex predicates based on particles or PPs and those based on adjectives, as we have seen in the case of Latin, Slavic and Ancient Greek, and as argued by Son (2007) for Korean, Japanese, Hebrew, Czech and Javanese (see Section 5.5).

## 5.2 *Horrocks & Stavrou 2003, 2007 and Horrocks 2004*

Horrocks & Stavrou (2003, 2007) and Horrocks (2004) put forth an account of the (un)availability of complex resultative constructions (as understood here) in terms of the presence/absence of a grammaticalised opposition of perfective and imperfective in viewpoint aspect. In particular, they observe that languages which allow complex predicates do not possess a grammaticalised opposition of these two aspectual interpretations (English) while languages that disallow them (Ancient and Modern Greek, Romance) do possess such a grammaticalised opposition. Their analysis is based on the idea that, much as viewpoint aspect and inner aspect are independent dimensions of aspectuality, the interpretation of a perfective or an imperfective form of a verb depends in part on its inner aspect. In particular, perfective forms always describe complete eventive wholes with initial and final bounds. However, the perfective form of an atelic verb conveys arbitrary bounds and no reference to the internal contour of the event; the perfective form of a telic verb presents a final temporal bound which coincides with the telos inherent in the lexical semantics of the verb. As regards imperfective forms, they imply viewing the event without bounds; but whereas imperfective atelic verbs convey an event unfolding continuously or randomly, imperfective telic verbs entail an incrementality towards a goal which crucially, is not implied to be attained. Consequently, for Horrocks & Stavrou (2007) inner aspect has to be determined before grammatical aspect, in order to compute an overall aspectual value for the verb. But, since, in languages like Ancient or Modern Greek either the perfective or imperfective form or stem—in the many cases of suppletion—has to be chosen before inserting the verb into the tree (given that quite often one form is not predictable from the other), it follows that the inner aspectual value must have also been determined before that insertion, and cannot interact with the syntactic environment of the predicate. This is the reason why in languages where that morphological/lexical choice is forced, the semantics of a non-terminative verbal lexeme cannot interact with syntactic material, such as a goal PP or a resultative adjective, to be rendered terminative. On the contrary, in languages lacking such grammaticalised perfective/imperfective opposition the overall aspectual value of the verb is not fixed when it is inserted in the tree and can therefore interact with the syntax in constructions such as adjectival resultative constructions and CDMCs.

I detect two incompatibilities between these accounts and my own. The first one concerns the existence of languages with a grammaticalised opposition between perfective and imperfective which do license, however, complex resultative constructions, pace Horrocks & Stavrou (2003, 2007) and Horrocks (2004): Latin, Slavic and Ancient Greek. The fact that in these language those complex resultative constructions are always based on prefixed particles does not make them less complex

resultative constructions, with a resulting state/location encoded by the prefix and an activity leading to it encoded by the verb.<sup>203</sup>

The second problem is restricted to the accounts in Horrocks & Stavrou 2003 and Horrocks 2004, and not to that in Horrocks & Stavrou 2007. In these analyses a dissociation is made between the availability of adjectival resultative constructions and that of CDMCs. While the availability of the former depends, as we have seen, on the absence of a grammaticalised perfective/imperfective opposition, the availability of the latter is subject to the fact that the language in question possess the formal means to unambiguously express goals (that is, telic Paths) in PPs.<sup>204</sup> In particular, Ancient Greek and English are shown to be able to express bounded Paths with dedicated prepositions (English *to*, Ancient Greek *eis*) and, in the case of Ancient Greek, (accusative) case. Thus, in Ancient Greek predicates headed by a manner of motion verb and accompanied by a goal-encoding PP, the verbs are claimed to be reclassified as unaccusatives through a change in their lexical representation. That reclassification can be carried out either through the addition of a “directional” prefix —forming, as Horrocks & Stavrou (2007:323) claim, “a different lexical item”— and/or the addition of the *complement* goal PP. This reconversion is, crucially, not available in the case of APs, since “adjectives are naturally stative, and so cannot in Greek force a directional/transitional reading for what is basically a simple-activity verb” (Horrocks 2004:193). But there is an inconsistency here in allowing a language such as Ancient Greek, with a grammaticalised imperfective/perfective opposition, to have goal PPs interact with the already determined aspectual value of the verb yielding telic CDMCs. On the other hand, why should PPs in Ancient Greek be able to unaccusativise an unergative verb and APs not, when, crucially, in English both PPs and APs are? Clearly, an appeal to the presence/absence of the grammaticalised division of aspects is unavailable, unless the dubious claim is made that adjectives can be directional/eventive in English but not in Ancient Greek. By contrast, and as we have already seen in Section 4.1, Horrocks & Stavrou (2007) propose that the availability of CDMCs is also subject to the absence of a grammaticalised imperfective/perfective opposition. However, although a unified explanation is reached by Horrocks & Stavrou (2007), a problem remains, already pointed out above: the parallelism between English-type resultative constructions and Latin, Ancient Greek or Slavic prefixed resultative constructions is not accounted for.

### 5.3 Kratzer 2004

Kratzer (2004) presents an analysis of adjectival resultative constructions in terms of a small clause formed by the object of the construction and the adjectival predicate.<sup>205</sup> Above the adjective an affixal null head of causative semantics, CAUSE, is merged, accounting for the causative interpretation typical of these constructions. The adjective incorporates into CAUSE to satisfy its affixal needs, and this complex is subsequently merged onto the lexical upper verb in order to create a complex predicate and, hence, to circumvent the lack of a selection relation between that lexical verb and the subtree

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<sup>203</sup> See also Spencer & Zaretskaya 1998 for an early comparison between complex resultatives in English and analogous constructions based on prefixes in Russian.

<sup>204</sup> An analysis based on the lexical availability of particular prepositions is also the one adopted by Folli & Ramchand (2001, 2005), Son (2007) and Son & Svenonius (2008).

<sup>205</sup> Unfortunately, the final version of Kratzer 2004, published in 2005, has not been available to me, so I will base on the paper published in the Semantic Archive and also downloadable from Angelika Kratzer's page.



below. Her analysis of German *Die Teekanne leer trinken* ‘Drink the teapot empty’, is shown in (170) below:

- (170) *German; Kratzer 2004:37 (adapted)*  
 [[[Die Teekanne ~~leer~~] ~~leer-CAUSE~~] leer-CAUSE-trinken]

Crucially for our position in this chapter, Kratzer also appeals to inflectional morphology on the predicative adjective as a factor regulating the licensing of adjectival resultatives. However, her use of this factor is different from ours: she contends that languages where the predicative adjective obligatorily bears inflectional morphology cannot license adjectival resultatives, since for an adjective to function as resultative the null CAUSE morpheme must be affixed onto it, a factor which precludes further affixation of the inflectional morphology.<sup>206</sup> However, she herself already notes that Norwegian might be a counterexample to the claim that the resultative adjective cannot be inflected:

- (171) *Norwegian; Åfarli 1985:footnote 8, apud Kratzer 2004:45*
- a. Vi vaska golvet rein-~~t~~/ \*rein.  
 we washed floor.the.N.SG clean-N.SG/ clean  
 ‘We washed the floor clean.’
  - b. Vi vaska rein(-~~t~~) golvet.  
 We washed clean floor.the.N.SG  
 ‘We washed the floor clean.’
  - c. Golvet er rein-vaska/\*reint-vaska.  
 floor.the.N.SG is clean-washed.  
 ‘The floor is washed clean.’

In the above example the adjective must bear inflection (see (171)a) if it is not adjacent to the verb. It optionally bears inflection when adjacent to a finite verb (see (171)b) and it cannot bear it when compounded (left-attached) with a participle (see (171)c). Kratzer observes that when the adjective is overtly incorporated into the verb, as in (171)b and (171)c, the inflection disappears, and when it is —under her assumptions— covertly incorporated, as in (171)a, inflection is compulsory.<sup>207</sup> She takes the data as suggesting that agreement morphology in (a) and (b) is a PF phenomenon, orthogonal to the incorporation of the adjective into CAUSE.

As was shown in Section 4.2.3 and already observed by Whelpton (2007) in his evaluation of Kratzer’s (2004) proposal from the Icelandic perspective, Icelandic resultatives are also built on obligatorily inflected adjectives when the adjective is not prefixed to the verb. Furthermore, recall from Section 4.3.4 that resultative adjectives in Finnish and Hungarian, although not bearing agreement inflection, must be endowed with a special case, which is translative in Finnish and sublativ in Hungarian. This

<sup>206</sup> Kratzer adopts Hay’s (2000; see also Hay 2003) contention that derivational affixes that can be easily parsed out should never occur closer to the root than those that are less easily parsed out. CAUSE, being null and hence, ranking lowest in the parsability scale, should always affix prior to any other (overt) affix is added, least of all if the affix is inflectional, as agreement affixes are. But this condition can never be met when the adjective already bears inflection before raising to CAUSE.

<sup>207</sup> I recall that the adjective is argued to incorporate into an upper null CAUSE head. In (171)a it remains overtly *in situ*, after the object; in (171)b and (171)c it overtly incorporates, but the linearisation with respect to the verb is different due to the presence of voice features in (171)b versus their absence in (171)c. See Kratzer 2004: footnote 27 for a fully detailed explanation.

would also be a problem for Kratzer's proposal in the same way as is inflectional morphology in the Scandinavian languages, unless the translative and sublative suffixes were actually realisations of her CAUSE morpheme. However, Finnish translative, which is not a spatial case (Levinson 2010) appears in non-causative BECOME events, as shown in the next example:

(172) *Finnish, Fong 2001a:2-3*

Toini tuli sairaa-ksi.  
 Toni.NOM became ill-TRANSL  
 'Toini became ill.'

Last, and also importantly to present concerns, Kratzer claims that adjectival resultatives have to be studied as a phenomenon independent from similar constructions involving a particle, or, as in German, a separable prefix:

(173) *Kratzer 2004:3*

"Resultatives built from verbs and adjectives must also be distinguished from directional particle constructions, which have a causative interpretation, but do not involve adjectives. [...] Inclusion of directionals in discussions of resultatives has obscured important generalizations that emerge clearly once we restrict our enterprise to resultatives built from adjectives."

Illustration for the above claim is provided in a side discussion on the hybrid behaviour of English *open*, where Kratzer points out to two differences between particles and adjectives: particles may undergo shift while AP results may not (see (174)), and a particle-verb complex may appear separated from its object by another verb, while that does not happen in the case of an AP resultative (see (175)):

(174) *Kratzer 2004:21*

- a. We threw (out) the documents (out).
- b. They painted ( ?green) the barn green.

(175) *Kratzer 2004:21*

- a. We threw out and shredded the documents.
- b. ?They painted green and sold the barn.

She contends that these facts can be explained if we assume that "[...] particles can, but adjectives cannot that easily form PF-visible compounds with verbs." (Kratzer 2004: 21). Observe that this possible explanation is perfectly compatible with the fact that, *syntactically and semantically*, adjectival resultative constructions and verb particle constructions boil down to the same phenomenon. Thus, it has to be claimed that "inclusions of directionals in discussions of resultatives" has sometimes brought to light important generalisations. This is particularly striking in the work by Mateu (2001a, 2001b, 2002) and Mateu & Rigau (2002), who provide a unified explanation for both types of constructions in s-framed languages, and, simultaneously, an account of their non-existence in Romance. More strikingly still, Kratzer's dissociation of adjectival resultative constructions and verb particle construction fails to explain why in (certain) v-framed languages a certain class of both adjectival resultative constructions and a certain class of verb particle constructions are allowed, namely those classes where the adjective/particle conveys a mere specification of the result state encoded by the verb (see (176)b and (177)b); by contrast, equivalent constructions where this condition is

not met are out in the same languages (see (176)a and (177)a) —see also Sections 1.1.2 and 2.1:<sup>208</sup>

(176) *Italian; Napoli 1992, apud Washio 1997:26*

- a. \*Gianni ha martellato il metallo piatto.  
 Gianni has hammered the.M.SG metal(M)SG flat.M.SG
- b. Gli operai hanno caricato il camion pieno.  
 the workers have loaded the.M.SG truck(M)SG full.M.SG  
 ‘The workers have loaded the truck full.’

(177) *Italian; Mateu & Rigau 2010:259*

- a. \*Gianni è danzato via.  
 Gianni is dance.PTCP.PFV.M.SG away  
 ‘Gianni danced away.’
- b. Gianni è corso via.  
 Gianni is run.PTCP.PFV.M.SG away  
 ‘Gianni ran away.’

#### 5.4 Svenonius 2004b

Svenonius (2004b) proposes an analysis for the fact that Germanic allows AP and PP/particle resultatives, while Slavic only allows the latter type. He assumes a vP structure for resultative constructions along the lines of Ramchand 2003, as shown in (178):

(178) *Ramchand’s (2003) analysis of the resultative VP (adopted in Svenonius 2004b)*  
 [<sub>VP</sub> V [<sub>RP</sub> R [<sub>XP</sub> Figure [<sub>X’</sub> X Ground]]]]

The main feature of (178) is the head R conveying resultative semantics. What Svenonius proposes is that in Germanic languages R corresponds to a null morpheme which may take an AP, PP or particle as complement, while in Slavic, R is never null, but is always instantiated as the prefix. Svenonius does not make it explicit, but I assume that R, being always realised as one of the prefixes, has its selection properties restricted, in this case to PPs. This would be why Slavic does not allow AP resultative constructions. I see at least three problems with this account. First, if the prefix is born as R it is not easy to see how it may be interpreted as a final location or a resulting state, as I have tried to show before and is discussed by Žaucer (2002, 2009), Arsenijević (2006) or Gehrke (2008). Rather, it seems that the prefix should be first merged as an adposition heading the phrase which is complement to R, or maybe as the Ground itself. Second, it comes as a surprise why R, being a functional head, may be instantiated in a variety of ways, namely the set of prefixes, which are phonologically and semantically distinct from each other. Rather, it seems, functional elements should always have their phonology and their semantics restricted and predictable, as happens with the Germanic null R. The third potential objection has to do with one prediction made by Svenonius’s analysis. Svenonius fails to link the obligatory prefixation of R in Slavic with the fact that these languages do not allow AP resultatives. As a result, in principle, nothing impedes the existence of languages with an R which selects only PPs, as does Slavic R, but which is not prefixed onto the verb. Those languages would present the grammaticality pattern illustrated in (179):

<sup>208</sup> See also Horrocks & Stavrou 2007:635–636 for a revision of Kratzer 2004, fundamentally on the basis of compounding in Modern and Ancient Greek.

- (179) *Complex resultative predicates in a language with a non-affixal, PP-selecting R*  
 Sue danced into the room (complex resultative construction based on PPs)  
 Sue ran in (complex resultative construction based on (non-affixal) particles)  
 \*Sue beat the metal flat (complex resultative construction based on APs)

If that pattern is not empirically attested, which to my knowledge is not (but see Section 5.5.2), Svenonius's analysis fails to predict it.

### 5.5 *Son 2007 and Son & Svenonius 2008*

The last two works I would like to revise pose direct counterexamples to the predictions made by the present account of adjectival resultatives and PP/particle resultatives, although they claim that there is no obligatory correlation between the availability of both types of constructions. Son (2007) and Son & Svenonius (2008) strongly argue for an anti-macroparametric account of the Talmian typology on the grounds of the alleged fact that the cross-linguistic variation involved in that typology is greater and more complex than is commonly acknowledged. Accordingly, they claim that a microparametric account based on a scrutiny of the lexical features of the items involved (mostly adpositions) should be adopted instead. In particular for present concerns, they present a series of languages to demonstrate a dissociation between the licensing of PP resultatives (notably, CDMCs) and that of adjectival resultative constructions. Thus, according to Son (2007) and Son & Svenonius (2008), Japanese and Korean allow adjectival resultative constructions while disallowing CDMCs, whereas the licensing pattern in Hebrew and Javanese is inverse. I examine their claims for some of these languages in turn, showing in which way they jeopardise my account and hinting at a possible way out.<sup>209</sup>

#### 5.5.1 Korean: presence of complex adjectival resultatives, absence of CDMCs

According to Son & Svenonius (2008) Japanese and Korean, in spite of disallowing complex directed motion constructions, allow for complex adjectival resultative constructions. In (180) there are relevant examples from Korean:

(180) *Korean; Son & Svenonius 2008:388 and 391*

- a. \*Mary-ka      cip-ey      {ttwi/kel}-ess-ta.  
    Mary-NOM   house-LOC   run/walk-PST-DECL  
    'Mary ran/walk to the house.'
- b. Inho-ka      kkangthong-ul      napcakha-key twutulki-ess-ta.  
    Inho-NOM   can-ACC           flat-key           pound-PST-DECL  
    'Inho pounded the can flat.'

The data in (180) seem to go directly against the analysis I have proposed, which predicts that if a language generates AP resultatives, it will also generate PP resultatives, since the basic structure is the same and it is only the derivation of AP resultatives which can be bled by independent features of the language: obligatory prefixation of Path and obligatory inflectional morphology on predicative adjectives. The analysis would not be endangered, though, if the AP resultative in (180)b were

<sup>209</sup> Czech is shown by Son (2007) to allow CDMCs and to disallow adjectival resultatives. I will not examine this language, however, since my account also predicts this result for Czech and Slavic in general (see Section 3).

shown not to be a complex AP resultative of the Germanic type, as the ones I have examined. Here I would like to appeal to Shim and Den Dikken's (2007) work on resultatives in Korean and English. An in-depth presentation of their position being impossible here, I will limit myself to focus on their observation that the *key*-suffixed AP typical of these constructions in Korean, and which is to be found also in (180)b, behaves as an adjunct to VP, and, therefore, does not qualify as a true secondary predicate of the resultative type, which are most probably inside the vP. Shim & Den Dikken (2007) use the diagnostics illustrated in (181) to prove the adjunct-status of *key*-APs as opposed to the inner-vP status of result APs in English. First, Korean *key*-APs may be stranded under VP-replacement by the verbal proform *kuleh*, as shown in (181)a; second, *key*-APs may be iterated (see (181)b). Thus, *key*-APs behave alike result APs in English resultatives:

(181) *Korean; Shim & Den Dikken 2007:8 and 10*

- a. Jim-i        meli-lul    nolah-key    yemsaykha-ko  
      Jim-NOM   hair-ACC   yellow-key   dye-CONJ  
      Susana-nun   ppalkah-key   kuleh-ess-ta.  
      Susana-TOP   red-key        *kuleh*-PST-DECL  
      Cf. English \*'Jim dyed his hair yellow, and Susana did so red.'
- b. Jim-i        patak-ul    hayah-key   panccaki-key   chilha-ess-ta.  
      Jim-NOM   floor-ACC   white-key   twinkle-key   paint-PST-DECL  
      Cf. English \*'Jim painted the floor white shiny.'

This evidence shows that the *key*-AP does not qualify as a true resultative secondary predicate sitting inside the vP, and hence, that the constructions claimed by Son & Svenonius (2008) as complex AP resultatives in fact are not. This state of affairs is compatible with Korean being a v-framed language, as already stated by Talmy (2000: 49).

#### 5.5.2 Hebrew and Javanese: presence of CDMCs, absence of complex adjectival resultatives

Hebrew and Javanese are presented by Son (2007) and Son & Svenonius (2008), respectively, as languages allowing CDMCs and disallowing adjectival resultatives. At first sight, this scenario is not problematic for my present account, since also Latin and Slavic have been correctly predicted to behave in that way. However, Hebrew and Javanese, unlike Latin and Slavic, show no signs of a morphological dependence of the verb and the element expressing the Core Schema. If they do allow CDMCs and their Path is not affixal, they should behave as strong s-framed languages, like Germanic, allowing adjectival resultatives, contrary to data presented by Son (2007) and Son & Svenonius (2008).

Beginning with Hebrew, Son (2007) reports the following scenario:

(182) *Hebrew; Son 2007:138*

- a. \*Hu kara et    ha-xavila    ptuxa.  
      he tore ACC the-package open  
      'He tore the package open.'
- b. \*Hu cava et    ha-kir    adom.  
      he painted ACC the-wall red  
      'He painted the wall red.'

(183) *Hebrew; Son 2007:139*

- a. David {rac/zaxal} {la-xeder/ el ha-xeder}.  
 David ran/crawled DAT.DEF-room/ ALL the-room  
 ‘David ran/crawled to the room.’
- b. Ha-bakbuk caf {la-me’ara/ el ha-me’ara}.  
 the-bottle floated DAT.DEF-cave/ ALL the-cave  
 ‘The bottle floated (in)to the cave.’

As for the predicates in (183), Son (2007) does not provide explicit aspectual tests to show that they are telic, that is, that they qualify as true CDMCs in the sense described in Chapter 3, Section 3.1.1, and neither do Son & Svenonius (2008), although they too consider Hebrew to license CDMCs. As it turns out, Horrocks & Stavrou (2007:609) note that “Beck and Snyder (2001b) show that an *in*-PP modifier is not allowed in such cases” (that is, in cases of predicates headed by a manner of motion verb and accompanied by an alleged bounded Path PP). Note that the counterexample involves only an *el*-PP, not a *le*-DP:

(184) *Hebrew; Beck & Snyder 2001b, apud Horrocks & Stavrou 2007:609*

- \*Dan halax el ha-kfar tox Sa’a.  
 Dan walked to the-village in hour  
 ‘Dan walked to the village in an hour.’

My Hebrew informants report that the entailment of an attainment of a final location is much stronger with the dative mark *le* (cf. *la* in (183), which is *le* plus definiteness) than with *el*. Interestingly, one of them, Noam Faust, who happens to be competent in Spanish, spontaneously translated Hebrew *el* as Spanish *hasta*, ‘until, up to’ —and note that Son 2007:140 claims, explicitly, that *el* corresponds “to English ‘to’”. Crucially, as pointed out by Real Puigdollers (2010), *until*-markers are not exactly conveyors of a spatial Path, so their co-appearance with a manner verb does not yield a CDMC. See footnote 108 for arguments against treating *until*-markers as path prepositions and the directed motion predicates in which they appear as CDMCs.

The counterexample of (184) is, within my account, in full conformity with the fact that Hebrew appears to possess the hallmarks of v-framedness, rather than those of s-framedness: Berman & Neeman (1994:303f) report that the normal expression of paths of motion in this language is of verbal nature, that is, that Hebrew, much like Catalan or Modern Greek, features a set of basic monomorphemic verbs encoding directional motion.<sup>210</sup>

(185) *Hebrew; Berman & Neeman 1994:303*

<u>Root</u>	<u>Intransitive form</u>	<u>Causative form</u>
k-n-s	nixnas ‘enter’	hixnis ‘introduce’
y-c-ʔ	yaca ‘exit’	hoci ‘take out’
y-r-d	yarad ‘descend’	horid ‘take down’
‘-l-y	ala ‘ascend’	he’ela ‘take up’
n-p-l	nafal ‘fall’	hipil ‘drop’

<sup>210</sup> For Hebrew as a v-framed language see also Slobin 2005.

The same authors observe that motion verbs in Hebrew do not “have the equivalent of motion verbs like idiomatic ‘run into’, ‘run around’, ‘run up’. The Hebrew counterparts of such expressions have no etymological relation to the verb *rac* ‘run’ or to each other” (Berman & Neeman 1994:304). Thus, typically s-framed paradigms of complex predicates sharing the same verb and differing only in a particle or prefix seem to be absent from Hebrew. Note, importantly, that the v-framed status of Hebrew would not be at odds with the construction in (183)a, since it features verbs which can be construed as change-of-state verbs in Romance (notably, Italian), as has been shown in Section 2.1. Indeed, we already know that Italian *correre* admits to be construed in such a way; the Italian counterpart of Hebrew *zaxal* ‘crawled’, *è gattonato*, is also allowed in directed motion constructions:

(186) *Italian; Folli & Ramchand 2005:96*

Il bambino di Gianni è gattonato a casa.  
 the child of Gianni is crawl.PTCP.PFV.M.SG at home.  
 ‘Gianni’s child crawled home.’

However, when the construction in (183)a is used with the root *r-k-d* ‘dance’ most of my informants find the construction very odd or straightforwardly ungrammatical:

(187) *Hebrew informants*

\*<sup>/??</sup>David rakad la-xeder  
 David danced DAT.DEF-room  
 ‘David danced to the room.’

This is what we expect under the conjecture that Hebrew is in fact more similar to v-framed Italian than to s-framed English. Thus, Folli & Ramchand (2005:97) report that the Italian correspondence (*danzare*) is not possible in a goal construction. The same obtains in other Romance languages:

(188) *Catalan*

\*En Joan ha ballat a l’habitació. (Directional.)  
 the Joan has danced at the=room

(189) *Spanish*

\*Juan ha bailado a la habitación. (Directional.)  
 Juan has danced at the room

As for example (183)b, Asaf Bachrach, in a personal communication, informs that it sounds strange when accompanied by a *le*-DP (not by an *el*-PP). Moreover, the next example in Son 2007:140—which I have enlarged with an *in*-adverbial to ascertain its telicity—was judged by most of my informants as ungrammatical, and Noam Faust pointed out that he needed an *el* before *mitaxat* to render it possible:

(190) *My Hebrew informants on an enlarged example apud Son 2007:140*

\*Ha-bakbuk caf mitaxat le-gesher tox shloshim shniyot.  
 the-bottle floated under DAT-bridge in thirty seconds  
 ‘The bottle floated under the bridge in thirty seconds.’

This fact is in accordance with the hypothesis that Hebrew in fact behaves like v-framed Italian, where *galleggiare* ‘float’ is also strange in a directed motion construction,

presumably because the root  $\sqrt{\text{GALLEGGI}}$  is difficult to coerce into a change-of-state reading—in my terms, it does not fit well as a Terminal Ground, in Compl-Place:

(191) *Italian; Folli & Ramchand 2005:97*

\*La barca è galleggiata sotto il ponte.  
 the boat(F) is float.PTCP.PFV.F.SG under the bridge.  
 ‘The boat floated under the bridge.’

To sum up, if the qualifications just made on Son’s (2007) data are on the right track, Hebrew would behave like v-framed Romance, and not like s-framed Germanic: it displays a wide range of path-verbs (cf. (185)), it may mimic CDMCs with what probably boils down to an *until*-marker (*el*), and, finally, it features directed motion constructions where the root of the verb is not really inserted as a Manner component adjoined to *v*, but, rather, is inserted as Compl-Place and must thereby be interpreted as a Terminal Ground. This, of course, is pragmatically not up to every root, as exemplified with *caf* ‘float’ in (190) and with *rakad* ‘dance’ in (187). In conclusion, if Hebrew really turns out to be a v-framed language, its disallowance of adjectival resultative constructions is, within the current framework, both expected and attested (see (182) above).

According to Son & Svenonius (2008), Javanese (and Indonesian) does not allow AP resultatives (see (192)a), but does apparently allow CDMCs where the manner-of-motion verb does not bear any affix conveying the final location of movement (see (192)b):

(192) *Javanese; Son & Svenonius 2008:390*

- a. Mary nyacah daging \*(sampek) ajur.  
 Mary beat meat until flat  
 ‘Mary beat the meat until it became flat.’
- b. Tika fmlaku/mlayu/mbrangkangg ning ngisor jembatan.  
 Tika walk/run/crawl LOC bottom bridge  
 ‘Tika walked/ran/crawled under the bridge.’ (Both locative and directional readings.)

The problem these data represent is the same as the one discussed above about Hebrew: if Javanese is a v-framed language, (192)b is expected, but not (192)a. On the other hand, if it is an s-framed language it is not clear why (192)a should be out, since there does not seem to be any morphological requirement for the result-conveying element to be attached onto the verb, as happens in Latin and Slavic. As is also the case with Hebrew, Javanese could turn out to be a v-framed language, despite appearances. In particular, two of the manner-of-motion verbs in (192)b, *mlayu* ‘ran’ and *mbrangkangg* ‘crawled’ belong to the *run*-class, that is, to the class of verbs that can head change-of-state predicates.

## 5.6 Summary

I have revised five different accounts of the generation of complex resultative constructions based on APs, PPs and particles, focusing on the explanations they provide for the uneven categorisation of resultative phrases in the languages that allow them. Snyder’s (1995, 2001) and Beck & Snyder’s (2001a) influential accounts have been shown to make the wrong predictions for Latin and Slavic, which do not permit



the generation of productive root compounding but do feature at least a set of what Snyder calls *complex predicates* (CDMCs and UOCs). Horrocks & Stavrou's (2003, 2007) and Horrocks's (2004) proposal that morphologically/aspectually marked grammatical aspect hinders the formation of complex resultatives have been put into question, precisely through Latin, Slavic and Ancient Greek data. Moreover, I have pointed out that Horrocks & Stavrou's (2003) and Horrocks' (2004) accounts clash with mine with respect to Ancient Greek, in that they consider goal PPs to be able to license CDMCs without prefixes, taking those PPs to be complements. On the contrary, Horrocks & Stavrou (2007), although considering these PPs to be adjuncts, neglect prefixes as licensors of CDMCs. Ancient Greek is considered by them not to license complex resultative constructions altogether, contrary to what I have claimed in Section 4.2. Kratzer's (2004) theory, where the resultative adjective is argued to be combined with a null causative affix with non-trivial morphological (linearising) restrictions, has been shown to be problematic for languages such as Finnish or Hungarian, where the resultative adjective in resultative constructions bears an obligatory suffix also appearing in non-causative *become* sentences. Svenonius (2004b) is one of the few authors who directly observes how some languages which permit complex resultatives based on particle/prefixes disallow them when based on APs. Adopting Ramchand's (2003) syntactic structuring of the event, he stipulates that the functional head R responsible for resultativity may select for adjectives in some languages but not in others. Besides the *ad hoc* character of the proposal, it has been pointed out that, within the present perspective, a functional head does not seem to be an idoneous place to host a resultative predicate, which conveys a piece of conceptual content. Finally, Son (2007) and Son & Svenonius (2008) present direct counterexamples for the current proposal. First, languages like Korean (and Japanese) appear to license adjectival resultatives without licensing CDMCs; however, adopting the analysis put forth by Shim & Den Dikken (2007), the alleged complex resultative constructions of Korean presented by Son & Svenonius (2008) have been shown to be spurious. Second, Hebrew and Javanese should allow complex adjectival resultatives, since, according to Son (2007) and Son & Svenonius (2008), respectively, these languages feature productive formation of CDMCs without any trace of prefixation of the Path onto the verb. However, at least for Hebrew alleged CDMCs, Beck & Snyder (2001b), apud Horrocks & Stavrou (2007), provide evidence that they are atelic and that the PPs on which they are based are adjuncts. This is consistent with the fact that, as has been here illustrated, Hebrew possesses a set of basic path-verbs, qualifying as a v-framed language and, as evidenced by my own data, does not allow all manner-of-motion verbs in directed motion constructions; Hebrew patterns, in fact, with v-framed Italian. Finally, I have shown that there is partial evidence that Javanese, which disallows adjectival resultative constructions, could also turn out to be a v-framed language. If that were the case, it would not be surprising that it disallows complex adjectival resultative constructions.

## 6 Overall summary

In this chapter I have located Latin within the wider cross-linguistic scenario with respect to the way it syntactically builds complex events of change. Departing from the results arrived at in Chapter 3, that is, that Latin qualifies as an s-framed language in Talmy's sense, I have shown that, nevertheless, it differs from other s-framed languages, like the Germanic languages, in disallowing typically s-framed constructions based on AP resultative predicates. Since neither Talmy's typology nor the subsequent revisions thereof predict such a scenario, I have tried to seek out a possible explanation for this behaviour. My first step has been to observe that Latin patterns in this sense

with the group of Slavic languages, also acknowledged for their s-framed status, and I have focused on an additional feature that characterises both: the fact —arrived at for Latin through corpus searches—that complex resultative constructions are always built on prefixed verbs. Assuming both facts to be due to the same underlying cause, I have proposed that in these languages, the Path is required to get prefixed onto the verb. This requirement is compatible with adpositions, which are morphologically simple and may appear as prefixes. However, if the result predicate is encoded as an adjective and that adjective inflects for agreement, prefixation is precluded, since it would apply to an inflected word. This is why adjectival resultative constructions are banned in Latin and Slavic, languages which inflect the predicative adjective for agreement. Thus, a typology has emerged, more fine-grained than that put forth by Talmy or some of the authors who have followed him, and based on strictly morphophonological facts: the morphological characterisation of Path and the presence/absence of inflectional morphology on the predicative adjective. The typology encompasses strong s-framed languages, where complex resultative constructions are based on all categories, weak s-framed constructions, where those complex resultative constructions are based on affixal predicates, and, finally, v-framed languages, where complex resultative constructions are not allowed, due to the fact that in these languages Path is conflated into v, hence, not permitting an independent root to be adjoined to it. The typology has been illustrated with different languages: Ancient Greek (weak s-framed), German, Dutch, Finnish, English, Icelandic and Hungarian (strong s-framed) and Catalan (v-framed). Icelandic, interestingly lends further support to the view that the agreement inflection on the predicative adjective plays a role in the licensing of adjectival resultatives since in this language the resultative adjective may appear as a prefix only if it does not bear inflection. Finally, I have critically revised previous accounts which focus on the issue of the category of the resultative predicate, and I have tried to solve some of the puzzles they involve for my own account.

## Chapter 5

### Conclusions and prospects

In this final chapter I make a compact summary of the proposals and findings of the dissertation and point out also at its challenges and the ways they could be addressed in future research.

#### 1 Proposals and findings

The dissertation puts forth a neo-constructionist theory of argument structure and the lexicon-syntax interface. Lexical items are of two basic types: functional items, able to build structure, and roots, endowed with encyclopaedic meaning and unable to create structure. The latter are stripped of all grammatical codings, even category. Syntax handles these elements to produce argument structure configurations, where arguments are either complements or specifiers. In relation to this perspective on argument structure, I took care, in Chapter 2, Section 1.2.1, to point out the theoretical problems in the l/s-syntax distinction of Hale and Keyser's theory of argument structure. I also showed, in Chapter 2, Section 1.3, the superiority of a neo-constructionist approach to argument structure with respect to a constructionist approach, where constructions themselves are lexical items.

I proposed that roots could appear as complements, but not as specifiers: in Chapter 2, Section 3.3.3 I suggested that they are precluded from specifier position due to the fact that this position does not allow them to conflate into a phonologically defective head. Otherwise, roots and DPs have been proposed to receive an argumental interpretation depending on their position in the configuration. In particular, roots were argued (Chapter 2, Section 3.2.3) not to pertain to classes in an ontology, but to acquire an argumental interpretation through their merging in the structure. Roots may also appear as adjuncts to functional heads, both the eventive *v* head and the adpositional Place head. The difference between prepositions and particles was analysed in this way: prepositions are PlacePs where a root specifying the spatial relation is an adjunct to Place and particles are PlacePs where the root sits at Compl-Place.

I have argued for a theory of argument structure which integrates the inner aspectual interpretation of predicates. In particular, the functional head Path, interpreted as a transition, is responsible for a transition interpretation of the predicate (Chapter 2, Section 3.2.4.2). When PathP is taken as complement to *v*, Path raises the nearest DP in its c-command to Spec-Path, and this DP generates a telic interpretation if it is a quantity DP, in the sense of Borer 2005b (see Chapter 2, Section 2.2.2). Notably, Path may raise either the Figure DP (sitting at Spec-Place) or the Ground DP (sitting at Compl-Place), if there is no Figure DP. In Chapter 3, Section 3.2.2.1 I showed the empirical adequacy of this separation of the aspectual and the argumental interpretation through the analysis of constructions lacking a Figure DP.

On the morphophonological side, I have opted for an early insertion of roots in the structure (Chapter 2, Section 3.3.2), basing on semantic considerations (the interpretation of roots is non-deterministic, so the choice of root has to be decided before the derivation splits into the PF and LF branches) as well as phonological

considerations (the phonology of roots is also non-deterministic, and does not show competition effects, or suppletion). A series of PF-operations account for the lack of isomorphism between syntax and morphology. To these operations, proposed within the DP framework, I have added conflation as understood in Hale & Keyser 2002:60f. and Harley 2004: conflation is the phonological interpretation of a syntactic node based on the phonological matrix of its sister node. The assignment of phonological matrixes by conflation is *decided* before PF, since conflation is a concomitant of Merge, although it is *implemented* at PF, after Vocabulary Insertion. Conflation, thus, applies as a default, repairing strategy in case a given functional node has received a defective phonological matrix at Vocabulary Insertion, or no matrix at all. This mechanism has been illustrated through the dissertation in the derivation of predicates encoding a transition, in different languages. I have claimed (Chapter 2, Section 3.3.3) that a principled theory of the PF-derivation, where operations are triggered by morphophonological properties of functional items, can account for lexicalisation patterns, whereas a licensing theory of the lexical interpretation of the configurations yielded by syntax—as in Ramchand’s 2008 or Starke’s 2009 framework—cannot. In particular, the s-/v-framed distinction has been claimed, following Mateu (2002) and Mateu & Rigau (2002), to emerge from the fact that in v-framed languages v and Path must end up forming one single node, in particular by an application of Fusion (see Chapter 2, Section 3.3.5); on the contrary, in s-framed languages v and Path remain separate nodes. This explains why in v-framed languages a root is precluded from associating, by adjunction, with v in Path-predicates: Fusion, which is required to apply to v and Path in these languages, can only apply to two *single* nodes. Thus, the non-existence of complex resultative constructions in v-framed languages receives an explanation (Chapter 3, Section 1.5.2).

Chapter 3 is devoted to show that Latin belongs to the class of s-framed languages, through the analysis of a variety of constructions in this language. The Core Schema has been shown to be encoded mainly as a verbal prefix, the verb being permitted to encode a Co-event. This has allowed to provide a unified (and novel) account of CDMCs, UOCs, CEOCs, the LA and Pseudoreversative constructions (these last ones have not been dealt with in the Latin tradition, as far as I know). Several points can be highlighted from this chapter. It has been shown through a battery of tests that CDMCs are to be unaccusative predicates, featuring a Figure DP as (surface) subject. The central part of the chapter is devoted to the study of UOCs, through which I have endeavoured to show the adequacy of the neo-constructionist approach to argument structure phenomena. Thus, I have shown that the syntactic analysis of prefixed verbs straightforwardly derives the semantic and syntactic differences between unprefixed verbs and prefixed verbs—notably, the unselectedness effects concerning the object (in the latter), the case properties and the inner-aspectual interpretation (Section 3.2.1). I have also shown that only such a syntactic approach derives without stipulations the scopal relations between prefix and verb, as evidenced by *ab*-verbs of denial (Section 3.2.1.4). UOCs present a variety lacking a Figure DP (Section 3.2.2). I have argued that in these cases the object of the construction corresponds to the Ground (Compl-Place). Since both the Figure and the Ground can be shown to affect situation aspect, if the account is on the right track, it provides evidence for a dissociation of the argumental and aspectual interpretation of arguments. The analysis revolves around the idea that Path is activated as a probe when PathP is sister to v: Path searches within its c-command domain for the nearest DP. When Spec-Place is missing, it picks Compl-Place and brings it to Spec-Path. Thus, in Figure UOCs the Figure is the only DP which may affect the (a)telicity of the predicate, and in Ground UOCs it is the Ground DP

which affects (a)telicity. I have also proposed (Section 3.3) that CEOCs can be accounted for as Ground UOCs. This would derive the fact that they do not seem to be possible in v-framed languages. With respect to the LA, I have proposed, as a basic account, that both alternants are derived independently from each other. However, I adduce Latin data where the COS alternant, instantiated as a predicate endowed with a spatial prefix, can be argued to be also a Ground UOC. Another variant of COS which has been proposed is that prefixed with *com-*, a prefix which induces a complete affectedness interpretation and that can be equalled with other particles and prefixes in Indo-European languages. Finally, I have shown that Pseudoreversatives — constructions where the result implied by the verb is overridden by that implied by the prefix or particle— strongly corroborate the plausibility of an analysis where the verbal root is a mere adjunct to the v head, the true predicate being the root of the particle/prefix.

In Chapter 4 I have considered Latin in relation to other languages. Focus has been put on the issue of complex adjectival resultative constructions. I have made the empirical claim that Latin disallows this type of constructions (Section 1.2), and, also, that it disallows all types of complex resultative constructions if they are not based on a prefixed verb (Section 2.1). I have suggested that there is a non-trivial relation between both facts, and, drawing on findings from the literature, I have called attention upon the fact that a similar correlation is found in Slavic (Sections 1.3 and 2.2). I have then proposed the Split S-framedness Hypothesis, which establishes two types of s-framed languages: those where the Path head is not affixal, and those where it is affixal. I have argued that in Latin and Slavic a further morphological requirement, namely the agreement inflection of the predicative adjective, conspires with their status as weak s-framed languages to ban the generation of complex resultative predicate based on AP result predicates. The univertation of v and Path cannot apply if the result predicate is an inflected word. I have made an exploration of the empirical predictions of the Split S-framedness Hypothesis. I highlight three empirical findings. The first involves Icelandic (Section 4.2.3), a language displaying two types of complex AP constructions: those where the adjective is inflected for agreement and those where it is not inflected for agreement. Unsurprisingly, the former do not involve prefixation of the adjective, while the latter do. This supports the idea that inflection of the adjective is related to the disallowance of prefixation. Second, in Section 4.1, I claimed, after conducting a relevant search at the *Thesaurus Linguae Graecae* (Pantelia 2009), that in Ancient Greek prefixed verbs of manner of motion behave like those in Latin: they are telic and they express transitions, heading complex resultative constructions. This result pairs up nicely with the fact that, according to Horrocks & Stavrou (2007:621), Ancient Greek does not allow complex AP resultatives. Third, in Section 5.5.2, I addressed a potential problem for the correlations predicted by the Split S-framed Hypothesis: the case of Hebrew, which, according to Son (2007) and Son & Svenonius (2008) features CDMCs based on unprefixing verbs but does not allow complex AP resultatives, contrary to my expectations. I provided evidence that Hebrew CDMCs might be mimicking actual CDMCs without being so. On the one hand, as shown by Berman & Neeman (1994), Hebrew possesses a full range of Path-verbs, like Romance, which makes it suspect of being in fact a v-framed language. On the other hand, my data show that Hebrew displays restrictions on the class of manner verbs which may head CDMCs. I took this as evidence that the alleged CDMCs in Hebrew are weak resultative constructions of the Romance kind seen in Section 2.1.

## 2 Challenges and prospects

I conclude this chapter and the dissertation with a consideration of some of the challenges this work faces. I focus on three issues: the relation between prefixation and some cases of alleged complex resultative constructions (Section 2.1), the status of atelic copular prefixed predicates in Latin (Section 2.2) and the status of *facio*-resultatives in Latin and that of unprefixated light verb predicates in Latin and Slavic (Section 2.3). I suggest possible avenues for future research with respect to each case.

### 2.1 CEOCs, COL alternants and prefixation

Two facts apparently militate against the claim made in Chapter 4, Section 2.1, that complex resultative constructions are always prefixed in Latin. On the one hand, CEOCs, dealt with in Chapter 3, Section 3.3, and analysed as complex resultative constructions, do not feature prefixes. Moreover, under the present assumptions, they could not be prefixed, since they involve no root within PlaceP which could provide the Path head with a phonological matrix (see (2)):

- (1) *Latin; Cic. Fin. 2, 5, 17*

Qui            alteri            misceat            mulsum.  
 who.NOM    another.DAT    mix.SBJV.3SG    honeyed\_wine.ACC  
 ‘He who makes honeyed wine for another one.’

- (2) [<sub>VP</sub> Qui [<sub>v</sub> [<sub>v</sub>  $\sqrt{\text{MISCE}}$ ] [<sub>PathP</sub> [<sub>DP</sub> mulsum] [<sub>Path</sub> Path [<sub>PlaceP</sub> Place [<sub>DP</sub> ~~mulsum~~]]]]]

In (2) the DP *mulsum* cannot provide its phonological matrix to Path, presumably for the same reason as inflected adjectives cannot: both DPs and APs act as phonologically opaque units as far as conflation is concerned—see the discussion on APs in Chapter 4, Section 3.2. How is Path then licensed in (1)? If v-to-Path Lowering applies to the structure in (2) it yields a configuration where Path gets prefixed to v. At Vocabulary Insertion, Path cannot be endowed with the Vocabulary Item *re*, characteristic of simple AP resultatives, since the conditions for *re*-insertion are not met: v is complex (see Chapter 4, Section 3.2). On the other hand, Path cannot be licensed, at Conflation, with the phonological matrix of *mulsum*, since, as said, *mulsum* is a DP, and not a bare root, and acts as a phonologically opaque unit. A possible way out would be to consider that CEOCs are not transition predicates involving a PathP, but complex creation predicates where the DP is directly merged as Compl-v and thereby interpreted as an Incremental Theme, and not as a Terminal Ground. This is the analysis proposed by Mateu (2003), as discussed in Chapter 3, Section 3.3. However, that move predicts, within the present framework, that CEOCs are possible in v-framed languages, contrary to fact.

I consider, second, unprefixated COL alternants of the LA in Latin, dealt with in Chapter 3, Section 3.4.2: if the examples shown there turn out to be telic, which at this time I have no evidence of, it is not clear why they are not prefixed, under the assumption that they truly correspond to complex resultative constructions. Thus, although the LA usually involves prefixation, as pointed out by Hofmann & Szantyr (1972) and illustrated in Chapter 3, Section 3.4.3, more research needs to be done on the aspectual properties of cases of unprefixated COL alternants. I speculate here that some of the examples of unprefixated COL alternants might be in fact plain change-of-state predicates. I base on the evidence of the following example:

- (3) *Latin; Varro, Ling. 5, 36*  
 Asses [...] in aliqua cella stipabant.  
 coin.ACC.PL in some.ABL.F.SG room(F)ABL.SG cram.IPFV.3PL  
 ‘They used to cram the coins in some room.’

Note that in this example the PP allegedly corresponding to PathP embeds a DP in the ablative, and is hence amenable to an analysis as vP-external adjunct (see Chapter 3, Section 2.7.1). However, if *in aliqua cella* is in fact a vP-external adjunct, *stipabant* does not correspond to a root merged as a Manner adjunct to v, but to a root merged as Compl-Place and being interpreted as Ground:

- (4) *An alternative analysis of (3)*  
 [<sub>vP</sub> pro [<sub>v</sub> v [<sub>PathP</sub> Asses [<sub>Path</sub> Path [<sub>PlaceP</sub> ~~Asses~~ [<sub>Place</sub> Place  $\sqrt{\text{STIP}}$ ]]]]]

If the analysis of (3) as in (4) is on the right track, it is expected that it should not be prefixed, since there is actually no source for the prefix.

## 2.2 Atelicity and prefixation in Latin sum-predicates

In Chapter 3, Section 2.1, I showed that prefixed *sum* ‘be’ may head static, atelic predicates in Latin:

- (5) *Latin; Ter. Phorm. 298*  
 Argentum de-erat.  
 silver.NOM away-be.IPFV  
 ‘Money was lacking.’  
 (6) *Latin; Plaut. Cas. 882*  
 Senex ab-est.  
 old\_man.NOM off-is  
 ‘The old man is missing.’

Under the view that (internal) prefixation in Latin is due to v-to-Path Lowering, this fact remains unexplained, since predicates like (5) and (6), in not entailing a transition, arguably do not feature a Path projection. Note that the facts in (5) and (6), however, in not featuring a PathP, do not contradict the hypothesis that v lowers to Path in Latin, which only predicts telic directional predicates to be prefixed.<sup>211</sup> In this sense, it is interesting that static predicates can readily appear unprefixed; see (7)a in contrast with (7)b, with no apparent different in meaning:

- (7) *Latin; Liv. 10, 24, 4 and Plaut. Rud. 1313*  
 a. Fuit certe contentio in senatu.  
 be.PRF.3SG certainly struggle.NOM.SG in senate.ABL  
 ‘There was in fact a struggle in the senate.’  
 b. Nummi octingenti aurei  
 coin.NOM.PL eight\_hundred.NOM.PL golden.NOM.PL  
in marsuppio in-fuerunt.  
 in purse.ABL be.PRF.3PL  
 ‘Eight hundred golden coins were there in a purse.’

<sup>211</sup> To be precise, it predicts so if the Figure DP is quantity (see Chapter 2, Section 3.2.4.2).

The fact in (7)a hinders the possibility of posing obligatory prefixation of the Place head, suggesting that prefixation in case of static *sum*-predicates is optional. However, there are some problems with this take. First, simple prepositions do not behave as Germanic-like unprefixated particles: if they do not appear with a DP they have to attach to the verb:

(8) *Latin ungrammatical made-up example (unprefixated counterpart of (5))*

\*Argentum erat de.  
 silver.NOM be.IPFV.3SG away  
 ‘Money was lacking.’ (Intended.)

The ungrammaticality of (8) is unexpected if it does not feature a PathP: *de* should be the result of conflating the phonological matrix of the root  $\sqrt{\text{DE}}$ , sitting in Compl-Place position, into the null head Place. Since no univerbation requirement involves *v* and Place (I have not posited a *v*-to-Place Lowering operation), *de* is expected to remain *in situ*, at least optionally, contrary to fact.

Second, not all prepositions permit alternations such as the one in (7): at least the preposition *ab* ‘off, away’ fails to remain unprefixated with the verb *sum*, even taking a DP as complement (cf. *urbe* in (9)a):<sup>212</sup>

(9) *Latin; ungrammatical made-up example and Cic. Verr. 4, 39*

- a. \*Ab/ urbe sum.  
 away city.ABL be.1SG  
 ‘I’m away from the city.’ (Intended.)
- b. Ab-esse a domo paulisper maluit.  
 away-be.INF away home.ABL for\_a\_while prefer.PRF.3SG  
 ‘He preferred to be away from home for a while.’

I can only speculate here that maybe some cases of prefixed *sum*-verbs do correspond to structures featuring a PathP projection. Evidence that Path morphology may be involved in copular predicates comes from Finnish. According to Fong (2001b), copular sentences involving the Finnish counterpart of *remain* (*jäädä*: Fong 1997:54) feature

<sup>212</sup> *Ab*-PPs are possible in unprefixated *sum*-predicates, but with particular restrictions: according with the entry for *ab* in Lewis & Short 1879 they are licensed if the *ab*-PP is degree-modified with an adverb like *procul* ‘far’ or *prope* ‘near’, or a measure phrase. Thus, for instance, in the next examples, the *ab*-PPs *a conspectu imperii* and *ab eo* are licensed, respectively, by *procul* and *milia passuum XVIII*:

(i) *Cic. Leg. Agr. 2, 87*

Haec, quae procul erant a conspectu imperii.  
 this.NOM.N.PL which.NOM.N.PL far be.IPFV.3PL away sight.ABL empire.GEN  
 ‘Those [towns], which were far from the reach of sight of the empire.’

(ii) *Bell. Afr. 68, 1*

Oppidum [...] erat ab [...] [Caesare] longe milia passuum XVIII.  
 citadel.NOM be.IPFV.3SG away Caesar.ABL far thousand pace.GEN.PL  
 ‘The citadel was located eighteen thousand paces from Caesar’s camp.’

*Ab*-PPs can also “denote the side or direction from which an object is viewed in its local relations.” (Lewis & Short 1879: s. v. *ab*):

(iii) *Caes. Gall. 7, 83, 2*

Erat a septentrionibus collis.  
 be.IPFV.3SG away north.ABL hill.NOM  
 ‘There was a hill on the north.’

Note that the *ab*-PP in (iii) is not interpreted as ‘away from the north’.



nominal predicates endowed with the translative case (the suffix *-ksi*) which, as was shown in Chapter 4, Section 4.2.4, also attaches to result predicates in resultative secondary predication (as opposed to depictive secondary predication):

(10) *Finnish; Fong 2001b:4*

Toukka                      jä-i                      touka-ksi.  
 caterpillar.NOM      remain-PST.3SG    caterpillar-TRANSL  
 ‘The caterpillar remained a caterpillar.’

If *-ksi* is the defective phonological matrix of Path in Finnish resultative predicates, as I suggested in Chapter 4, Section 4.2.4, the predicate in (10), much as being arguably atelic, should feature a PathP. However, it is not clear whether such an analysis can explain all the cases of prefixed *sum*-predicates in Latin. Thus, as shown in (7)b, the prefixed verb *insum* is not interpreted as ‘remain in somewhere’, but bears the same interpretation as a predicate headed by unprefix *sum* and an *in*-PP (see (7)a).

### 2.3 *Facio-resultatives, light verbs and the prefixation requirement*

In Chapter 4, Section 1.2, I showed that Latin allows AP resultatives headed by verbs which do not convey a complex event (notably, a Co-event). Most of these verbs feature the prefix *re-*: *re-linguo*, *re-ddo* (and maybe *re-digo*). However the unprefix verb *facio* also licenses AP resultatives:

(11) *Latin; Cic. Phil. 6, 18*

Senatum [...]              firmiorem [...]              fecistis.  
 senate(M)ACC.SG      firm.COMPAR.ACC.M.SG    make.PRF.2PL  
 ‘You made the Senate stronger.’

These predicates pose a problem for the theory put forth in Chapter 4, Sections 3.2 and 3.3. In particular, it is not clear how the Path head is licensed: it cannot remain *in situ*, licensed by a null phonological matrix, since I have claimed that in Latin there is obligatory v-to-Path Lowering, and Path is not null in this language. Rather, Path is either licensed as the prefix *re-*, in simple resultatives of the *relinguo* type, or it is licensed through conflation of the phonological matrix of a root merged within PlaceP. On the other hand, in *facio*-resultatives, it is the adjective what yields the resultative interpretation: *facio* is interpreted, in the absence of the resultative adjective, as a creation verb (‘make’). This fact prevents me to propose an analysis of *facio*-resultatives in which *facio* originates at Compl-Place, and its phonological matrix makes its way up into v, the adjective being merged as a (vP-internal) adjunct specifying the result state:

(12) *An analysis of (11) as a change-of-state predicate*

[<sub>vP</sub> (VOS) [<sub>v</sub> V [<sub>PathP</sub> Senatum [<sub>Path</sub> Path [<sub>PlaceP</sub> firmiorem [<sub>PlaceP</sub> ~~Senatum~~ [<sub>Place</sub> Place  
 √FAC]]]]]]]]

Of course such an analysis explains the lack of prefix, but is not tenable on semantic grounds. In the light of these difficulties, I can only suggest that *facio* might be an optional phonological realisation of the [<sub>Path</sub> Path v] complex head when PlaceP is an AP.

A similar problem arises with the treatment of light verbs such as GIVE and GO in Latin and Slavic. Recall that in Chapter 4, Section 2.3.1, I proposed to treat the Latin and Slavic GIVE and GO as predicates where the light verb is phonologically realised through a Vocabulary Item at Vocabulary Insertion. I illustrate with the analysis of Russian *dat* ‘give’:

(13) *Russian; Gehrke 2008:153*

On dal ženščine knigu \*(za) dve minuty.  
 he gave woman.DAT book.ACC in two minutes  
 ‘He gave the woman the book in/\*for two minutes.’

(14) *Russian; an analysis of (13)*

[<sub>VP</sub> On [<sub>v</sub> v (= *dal*) [<sub>PathP</sub> [<sub>DP</sub> knigu] [<sub>Path</sub> Path [<sub>PlaceP</sub> [<sub>DP</sub> ~~knigu~~] [<sub>Place</sub> Place [<sub>DP</sub> ženščine]]]]]]]]

The analysis aimed at explaining precisely why these predicates do not feature prefixation: there is no source for the prefix, since PlaceP contains two DPs (*knigu* and *ženščine*), and there is, thus, no root available for conflation into the Path head. However, the analysis does not explain how the Path head is licensed. Here a plausible way to go is to consider, again, that these light verbs in fact realise, not Path alone, but the [<sub>Path</sub> Path v] complex created after v-to-Path Lowering. The choice of the Vocabulary Item depends, as was argued for in Chapter 4, Section 2.3.1 on properties of the configuration: *da-*, for instance, is inserted into the [<sub>Path</sub> Path v] complex in transitive structures where PlaceP features two DPs and Place is not specified by any root manner-adjoined to it:

(15) *da-* ⇔ [<sub>Path</sub> Path v] / [<sub>VP</sub> EA [<sub>v</sub> [<sub>PathP</sub> [<sub>Path</sub> Path v] [<sub>PlaceP</sub> DP [<sub>Place</sub> Place DP]]]]]

## Appendix to Chapter 4: Latin telic predicates with prefixed manner-of-motion verbs

In this appendix I collect the totality of the Latin telic predicates featuring a prefixed manner of motion verb which results from the search referred to in Chapter 4, Section 2.1 (see footnote 161). I provide just a translation for every example, without glosses. However, I underline each prefixed verb and the telicity-signalling expression. See footnote 161 for the criteria established for the search.

### 1 Telic predicates headed by prefixed *curro* ‘run’

- (1) *Ter. Ad. 526*  
Nunc ubi me illi non uidebit, iam huc re-curret, sat scio.  
‘As soon as he does not seem me there, he will run back at once, I know well.’
- (2) *Ter. Phorm. 862*  
Vbi in gynaeceum ire occipio, puer ad me ad-currit Mida.  
‘As soon as I set off for the gynaeceum, the slave Midas runs up to me.’
- (3) *Lucr. 4, 781*  
Anne [...] simul ac volumus nobis oc-currit imago [...]?  
‘Is it so, that images come to us as soon as we want?’
- (4) *Liv. 6, 8, 2*  
Quod ubi videre ipsum Camillum, [...] vadentem in hostes, pro-currunt pariter omnes.  
‘As soon as they see Camillus marching against the enemies, all of them run forth in like fashion.’
- (5) *Liv. 9, 36, 12*  
Etruscorum cohortes repente [...] Romanis oc-currunt.  
‘The Etruscan cohorts suddenly run against the Romans.’
- (6) *Liv. 21, 43, 5*  
Hic vincendum aut moriendum, milites, est, ubi primum hosti oc-curristis.  
‘Here it is either win or die, soldiers, as soon as you run against the enemies.’
- (7) *Liv. 26, 4, 7*  
Pedestris [...] repente in hostium equites in-currit.  
‘The foot-soldier suddenly runs against the riders of the enemies.’
- (8) *Liv. 27, 12, 7*  
Marcellus [...] ubi primum in agris pabuli copia fuit, ad Canusium Hannibali oc-currit.  
‘Marcellus, as soon as there was plenty of food on the fields, hurried against Hannibal at Canusium.’
- (9) *Liv. 29, 9, 5*  
Repente milites [...] ex omnibus locis [...] con-currerunt.  
‘Suddenly the soldiers ran together from all places.’
- (10) *Liv. 31, 18, 6*  
Tanta enim rabies multitudinem inuasit ut [...] repente omnes ad caedem coniugum liberorumque dis-currerent.  
‘Such a frenzy invaded the crowds that all of a sudden everybody hurried away to kill their wives and children.’

- (11) *Liv. 34, 37, 1*  
Subito ad arma dis-currerunt.  
 ‘Suddenly they ran away in different direction for the weapons.’
- (12) *Liv. 40, 31, 1*  
 L. Acilium [...] iubet [...] ubi clamorem audisset, de-currere ad castra eorum.  
 ‘He orders L. Acilius to run down to their camp as soon as he hears the call.’
- (13) *Liv. 45, 1, 7*  
Repente [...] populus in medium de-currit.  
 ‘Suddenly the people ran down into the middle.’
- (14) *Sall. Iug. 106, 2*  
Repente Maurus [...] ad Sullam ad-currit.  
 ‘Suddenly Maurus runs up to Sullam.’
- (15) *Caes. Civ. 1, 69, 3*  
Statim castris exeundum atque oc-currendum putaret.  
 ‘He thought that they had to go out of the camp and run to find them at once.’
- (16) *Caes. Gall. 1, 52, 3*  
 Hostes repente celeriterque pro-currerunt.  
 ‘The soldiers ran forth suddenly and rapidly.’
- (17) *Caes. Gall. 7, 26, 3*  
 Matres familiae repente in publicum pro-currerunt.  
 ‘Suddenly the mothers ran forth into the streets.’
- (18) *Bell. Afr. 14, 2*  
Subito [...] pedites [...] pro-currunt.  
 ‘All of a sudden the foot-soldiers run forth.’
- (19) *Cic. Verr. Actio secunda, 4, 95*  
Repente Agrigentini con-currunt.  
 ‘Suddenly the Agrigentini appear in haste.’
- (20) *Cic. Verr. Actio secunda, 5, 16*  
Subito ipse ac-currit.  
 ‘Suddenly he himself appears in haste.’
- (21) *Cic. Verr. Actio secunda 5, 106*  
Statim ac-currunt.  
 ‘They appear in haste at once.’
- (22) *Cic. De orat. 2, 130*  
 Habere certos locos, qui [...] ad causam explicandam statim oc-currant.  
 ‘To have certain topics at hand which come to mind at once to help develop the subject.’
- (23) *Cic. De orat. 2, 132*  
Statim oc-currit naturali quadam prudentia [...] quid faciat causam.  
 ‘With a little common sense it occurs to us at once what the main point of the subject is.’
- (24) *Cic. Div. 2, 138*  
 Istae imagines ita nobis dicto audientes sunt, ut, simul atque velimus, ac-currant?  
 ‘Are those images so docile that come to us as soon as we want them to?’
- (25) *Cic. Att. 2, 11, 1, 7*  
 Ad me statim iussi re-currere.  
 ‘I told him to come back to me at once.’
- (26) *Cic. Att. 9, 15, 4, 2*  
 Ita subito ac-currit ut ne Trebatium [...] possim videre.  
 ‘He suddenly comes over, so I won’t be able to see Trebatius.’

- (27) *Cic. Fam. 7, 7, 1, 5*  
 Suadeo [...] ad nos quam primum re-curras.  
 ‘I insist that you come back to us as soon as you can.’
- (28) *Cic. Fam. 14, 3, 4, 1*  
 Dexippo [...] imperavi statim ut re-curreret.  
 ‘I ordered Dexippus to come back at once.’
- (29) *Cic. Fam. 15, 16, 2, 4*  
 In mea ne potestate ut sit spectrum tuum, ut, simul ac mihi collibitum sit de te cogitare, illud oc-currat?  
 ‘Is it possible for me to conjure up your spectre, that it come to me as soon as I think of you?’
- (30) *Cael. Cic. Fam. 8, 8, 1, 10*  
 At ego, simul atque audiui, [...] ad subsellia rei oc-curro.  
 ‘But I, as soon as I heard it, I run to the bench of the culprit.’
- (31) *Planc. Cic. Fam. 10, 21a, 3*  
Cum primum poterit, istoc re-currere non dubitabit.  
 ‘As soon as he is able to, he will not hesitate in coming back.’
- (32) *Galba Cic. Fam. 10, 30, 3, 1*  
Repente Antonius [...] suas copias de vico produxit et sine mora con-currit.  
 ‘All of a sudden Antonius led forth his troops out of the village and attacked without delay.’
- (33) *Sen. Contr. 1, 5, 2*  
Subito fastidiosus raptor oc-currit.  
 ‘Suddenly the loathsome plunderer appears in haste.’
- (34) *Curt. 5, 7, 6*  
Quod ubi exercitus [...] conspexit, [...] con-currit.  
 ‘The army ran up to the place as soon as they spotted this.’
- (35) *Curt. 9, 1, 27*  
Subito [...] rex Indus [...] oc-currit.  
 ‘Suddenly the king Indus runs to their encounter.’
- (36) *Cels. 5, 27*  
 Ne suc-currere quidem statim sibi possunt.  
 ‘They are not able to assist themselves immediately.’
- (37) *Sen. Dial. 12, 2, 1, 4*  
 Ne statim cum eo con-curram.  
 ‘I shall not come to fight against it immediately.’
- (38) *Sen. Epist. 19, 114, 6*  
 Non statim, cum haec legeris, hoc tibi oc-curret [...]?  
 ‘Will it not come to your mind at once, when you have read this?’
- (39) *Sen. Frg. 31, 13*  
 Numina vocant, quae [...] subito oc-currerent.  
 ‘They call up spirits to come to them at once.’
- (40) *Homer. 947*  
 Huic subito [...] similis Tritonia fratri oc-currens iuuenem [...] decipit.  
 ‘Tritonia deluded the youth, appearing to him suddenly in the shape of his brother.’
- (41) *Petron. 139, 5*  
 Unus ex noviciis servulis subito ac-currit.  
 ‘One of the new serfs suddenly comes up in haste.’

- (42) *Stat. Theb. 4, 377*  
Subito [...] regina chori de-currit in aequum.  
 ‘Suddenly the queen of the choir runs off into the plain.’
- (43) *Frontin. Strat. 1-3, 1, 7, 2*  
Iussit [...] eum [...] statim [...] pro-currere.  
 ‘He ordered him to run forth at once.’
- (44) *Suet. Diius Augustus, 67, 1*  
In-currenti repente fero apro [...] obiectus est.  
 ‘He was thrown in front of a wild boar which suddenly ran against him.’

## 2 Telic predicates headed by prefixed *equito* ‘ride’

- (45) *Liv. 22, 42, 5*  
 Qui ubi ad-equitavit portis, cum duobus equitibus vallum intravit.  
 ‘As soon as he rode up to the doors, he trespassed the fence with two riders.’

## 3 Telic predicates headed by prefixed *fluo* ‘flow’

- (46) *Ov. Met. 6, 134*  
Extemplo tristi medicamine tactae de-fluxere comae.  
 ‘Her hair, touched by the horrible venom, suddenly falls off [lit. “flows down/away”].’
- (47) *Liv. 29, 32, 12*  
 Fecit ut intra paucos dies sex milia peditum armatorum, quattuor equitum ad eum con-fluerent.  
 ‘That made that in a few days six thousand foot-soldiers and four thousand riders crowded together where he was.’
- (48) *Cic. Fam. 9, 20, 3, 3*  
Ubi salutatio de-fluxit, litteris me involvo.  
 ‘As soon as the visits stop, I envelope myself in my books.’
- (49) *Val. Max. 6, 9, 7*  
 [Vires atque opes humanae] ad-fluunt subito, repente dilabuntur.  
 ‘The vigours and the wealths of humans come suddenly in a flow, and suddenly slip asunder.’
- (50) *Cels. 2, 8*  
Subito nigra alvus pro-fluxit.  
 ‘Suddenly a black flux flows forth.’
- (51) *Colum. 9, 15*  
 Deinde ubi liquatum mel in subiectum alveum de-fluxit, transferetur in vasa fictilia.  
 ‘Then as soon as the liquefied honey has flowed completely into the vessel located underneath, it should be transferred into earthenware vessels.’
- (52) *Colum. 12, 52*  
Ubi [...] oliva [...] in lutum de-fluxit [...] [aenum] calefieri debet, ut inmundae baccae eluantur.  
 ‘When the olives have fallen down into the mud a copper pot must be heated up to wash off the dirty fruits.’

#### 4 Telic predicates headed by prefixed *gredior* ‘step, walk’

- (53) *Ter. Eun. 642*  
Sed quid hoc, quod timida subito e-greditur Pythias?  
‘But why does Pythias walk out all of a sudden?’
- (54) *Verg. Aen. 4, 90*  
Quam simul ac tali persensit peste [...] Iovis coniunx, nec famam obstare furori,  
talibus ad-greditur Venerem Saturnia dictis.  
‘As soon as Juppiter’s spouse sensed that she was the prey of this passion, the Saturnian approached Venus with these words.’
- (55) *Liv. 3, 60, 8*  
Ubi inluxit, e-greditur castris Romanus.  
‘As soon as the sun sets up, the Romans walk out of their camp.’
- (56) *Liv. 22, 56, 6*  
Extemplo [provinciam] aliam Romanam ad-grederentur.  
‘That all of a sudden they attacked another Roman province.’
- (57) *Liv. 42, 60, 3*  
Ne extemplo castra hostis ad-grederetur.  
‘Lest the enemy should suddenly attack the camp.’
- (58) *Sall. Iug. 54, 9*  
Romanos [...] repente ad-greditur.  
‘He suddenly attacks the Romans.’
- (59) *Sall. Iug. 55, 8*  
Statim in collis re-gredi.  
‘To step back up to the hills at once.’
- (60) *Sall. Iug. 60, 6*  
Repente magna vi murum ad-greditur.  
‘Suddenly he attacked the wall with a great force.’
- (61) *Sall. Iug. 94, 2*  
Statim di-grediens.  
‘Suddenly stepping aside.’
- (62) *Nep. Themistocles, 4, 3*  
Quos si statim ag-grederetur, uniuersos oppressurum.  
‘If he attacked them suddenly he would crush them all.’
- (63) *Cic. Cluent. 40*  
Tum repente [...] L. Clodium [...] ad-greditur.  
‘Then he suddenly walks up to L. Clodius.’
- (64) *Cic. Mil. 54*  
Videte nunc illum [...] e-gredientem e villa subito.  
‘See him now suddenly walking out of the villa.’
- (65) *Cic. Att. 6, 8, 4, 2*  
Hanc epistulam dedimus L. Tarquitio simul e portu e-gredienti.  
‘This letter we gave to L. Tarquinius as soon as he walked out of the harbour.’
- (66) *Tac. Hist. 3, 77, 3*  
Statim re-gredi.  
‘To come back at once.’

- (67) *Tac. Hist. 4, 76, 3*  
 Quod si statim con-grediantur, nullas esse Ceriali nisi e reliqui<i>s Germanici exercitus legiones.  
 'If they attacked suddenly, Cerialis had no legions except for those remaining from the army of Germany.'
- (68) *Ter. Phorm. 891*  
 Hisce ostendam me, ubi erunt e-gressi foras.  
 'I will appear to them as soon as they walk out into the street.'
- (69) *Liv. 29, 28, 9*  
 Si urbem extemplo ad-gressurus Scipio foret, ita conclamatum ad arma est.  
 'If Scipio suddenly attacked the city there would be a call to arms.'
- (70) *Liv. 30, 9, 3*  
 Ipsam Carthaginem repente ad-gressurum credebant.  
 'They thought that he would attack Carthago itself all of a sudden.'
- (71) *Liv. 30, 25, 5*  
 Tres quadriremes, [...] quinqueremem Romanam [...] repente ad-gressae sunt.  
 'Three quadriremes suddenly attacked the Roman quinquereme.'
- (72) *Liv. 32, 24, 2*  
 Tum simul ab omni parte [...] urbem est ad-gressus.  
 'Then suddenly he attacked the city from all quarters.'
- (73) *Liv. 36, 35, 3*  
Extemplo e-gressi sunt.  
 'They walked out all of a sudden.'
- (74) *Liv. 38, 5, 8*  
Repente opera est ad-gressus.  
 'He attacked the works all of a sudden.'
- (75) *Liv. 40, 22, 7*  
 Qua triduo ascenderat biduo est de-gressus.  
 'He descended in two days, although he had ascended in three.'
- (76) *Sall. Iug. 43, 2*  
 Is ubi primum magistratum in-gressus est [...] ad bellum, quod gesturus erat, animum intendit.  
 'As soon as he entered the magistracy, he devoted his attention to the war which he was to conduct.'
- (77) *Sall. Iug. 52, 5*  
Ubi eum Rutilius praeter-gressus est, paulatim suos in aequom locum deducit.  
 'As soon as Rutilius passed by him, he slowly led his men to a flat space.'
- (78) *Sall. Iug. 91, 4*  
 Sed ubi dies coepit et Numidae nihil hostile metuentes multi oppido e-gressi, repente [...] portas obsidere iubet.  
 'As soon as the day began and the Numids walked out of the citadel, he ordered to block the doors immediately.'
- (79) *Sall. Hist. Frg. 4, 49, 1*  
 Exercitum dimisit, ut primum Alpīs di-gressus est.  
 'He send the army away as soon as he departed from the Alps.'
- (80) *Caes. Civ. 3, 75, 2*  
Statimque e-gressus et nouissimum agmen consecutus celeriter ex conspectu castrorum discessit.  
 'He suddenly marched out and, quickly joining his rearguard, walked far from the view of the camp.'



- (81) *Bell. Afr. 86, 3*  
Statim inde di-gressus Rebilo proconsule [...] Messala Uticam ante praemisso [...], ipse eodem iter facere contendit.  
 ‘Suddenly walking away from the proconsule Rebilus and having sent Messala to Utica in advance he set off for the same place.’
- (82) *Cic. Orat. 35*  
 Itaque hoc sum ag-gressus statim Catone absoluto.  
 ‘So I have addressed this work as soon as I have ended the work on Cato.’
- (83) *Vell. 2, 33, 3*  
 Neque Pompeius, ut primum ad rem publicam ad-gressus est, quemquam <aequo> animo parem tulit.  
 ‘Nor did Pompeius, in fact, as soon as he entered into public affairs, stand his peers.’
- (84) *Val. Max. 3, 3, 7*  
 Seruus barbarus Hasdrubalem [...] subito ad-gressus interemit.  
 ‘A foreign serf killed Hasdrubal after suddenly stepping at him.’
- (85) *Tac. Agr. 7, 2*  
Statim in partes trans-gressus est.  
 ‘Vespasianus suddenly passed over to his cause.’
- (86) *Plin. Nat. 7, 96, 2*  
Statim ad solis occasum trans-gressus.  
 ‘He straightforwardly passes into the west.’
- (87) *Suet. Nero, 40, 4*  
Statimque in gymnasium pro-gressus.  
 ‘He immediately went to the gymnasium.’
- (88) *Gell. 6, 17, 12*  
 Ille, ubi hoc dixit, di-gressus est.  
 ‘He marched away as soon as he said that.’
- (89) *Flor. Epit. 1, 13, 17*  
Subito ad-gressus a tergo Camillus adeo cecidit ut omnia incendiorum vestigia Gallici sanguinis inundatione deleret.  
 ‘Camillus, having suddenly stepped at them from the back, killed so many that the rest of the fire was extinguished with the flow of blood.’
- (90) *Flor. Epit. 3, 5, 11*  
Statimque in Asiam trans-gressus [...] [regem] obprimit.  
 ‘Having immediately passed over to Asia, he subdued the king.’

## 5 Telic predicates headed by prefixed *navigo* ‘sail’

- (91) *Plin. Nat. 6, 97, 1*  
 Ichthyophagi tam longo tractu, ut XXX dierum spatio prae-navigaverint.  
 ‘The territory of the Ichthyophagi is so long that they sailed past them in thirty days.’

## 6 Telic predicates headed by prefixed *repo* ‘crawl’

- (92) *Colum. 5, 6*  
Ubi deinde pro-repseri<n>t plantae, stramenta colligemus.  
 ‘Then, as soon as the plants have crept forth, we will gather the straw.’

- (93) *Suet. Diius Augustus, 94, 4*  
 Draconem repente i-rrepsisse ad eam paulo que post egressum.  
 ‘That on a sudden a snake glided up to her and in short time went away.’
- (94) *Apul. Met. 9, 5*  
Statim latenter in-repit eius hospitium temerarius adulter.  
 ‘At once a bold lover secretly crept into his house.’

## 7 Telic predicates headed by prefixed *salio* ‘jump’

- (95) *Lucr. 2, 85*  
 Nam <cum> cita saepe obvia confluxere, fit ut diversa repente dis-silient.  
 ‘Since, if they happen to collide in their agitation, they immediately jump away in different directions.’
- (96) *Lucr. 6, 121*  
 Divolsa repente maxima dis-siluisse capacis moenia mundi  
 ‘That the strongest walls in the world, torn in pieces, explode at once in all directions.’
- (97) *Verg. Aen. 5, 139*  
Ubi clara dedit sonitum tuba, funibus omnes [...], pro-siluere suis.  
 ‘As soon as the clangor of the trumpet gives the sign, they jump forth from their lines.’
- (98) *Ov. Fast. 4, 795*  
 Scintillam subito pro-siluisse ferunt.  
 ‘They say that a spark suddenly leapt forth.’
- (99) *Ov. Met. 1, 671*  
Haec ubi disposuit, patria Iove natus ab arce de-silit in terras.  
 ‘When he had settled these things, the son of Juppiter leapt down onto the earth from his father’s stronghold.’
- (100) *Hor. Sat. 2, 6, 97*  
Haec ubi dicta agrestem pepulere, domo levis ex-silit.  
 ‘Soon as these speeches had wrought upon the peasant, he leaps nimbly from his cave.’
- (101) *Liv. 22, 48, 2*  
Repente ex equis de-siliunt.  
 ‘They suddenly leapt down from their horses.’
- (102) *Liv. 26, 40, 5*  
De-silire perniciter ubi datum signum esset.  
 ‘To leap down briskly at a given signal.’
- (103) *Liv. 26, 4, 6*  
Ubi ad coniectum teli uentum est, signo dato uelites de-siliunt.  
 ‘As soon as they came within range the signal was given and the velites sprang down to the ground.’
- (104) *Cic. Verr. Action secunda, 5, 73*  
 Qui tot dies tacuisset, repente [...] ex-siluit conscientia sceleris.  
 ‘Who had been silent for so many days suddenly started up out of the awareness of his crime.’

- (105) *Cic. Cael. 62*  
 Ut eo mitteret amicos qui delitiscerent, dein repente, cum venisset Licinius venenum que traderet, pro-silirent hominem que comprehenderent.  
 ‘That he sent thither friend who set themselves in ambush and then, on a sudden, when Licinius had arrived and was delivering the poison, jump forth, and arrest the man.’
- (106) *Cic. De orat. 2, 213*  
 Neque ad-siliendum statim est ad genus illud orationis.  
 ‘You must not jump at once into that kind of discourse.’
- (107) *Vitr. 2, 7, 2*  
 Tiburtina [...] simul [...] sunt ab [igne] [...] tacta, dis-siliunt et dissipantur.  
 ‘The Tiburtine stones, as soon as they have been touched by fire desintegrate.’
- (108) *Curt. 6, 5, 26*  
Ut primum rex in conspectu fuit, equo ipsa de-siluit.  
 ‘As soon as she saw the king she leapt down from the horse herself.’
- (109) *Curt. 7, 7, 32*  
 Singuli repente de-siliunt.  
 ‘They suddenly leap down one by one.’
- (110) *Curt. 8, 1, 43*  
 Ex lecto repente pro-siluit.  
 ‘He suddenly leapt forth from the bed.’
- (111) *Sen. Nat. 3, 27, 2*  
 Urbes [...] cito ac repente dis-siliunt.  
 ‘States quickly and suddenly break a part in pieces.’
- (112) *Sil. 3, 688*  
Subitum nemus [...] ex-siluit.  
 ‘Suddenly a grove of oaktrees jumped out.’
- (113) *Sil. 16, 262*  
Subito abruptis fugiens altaria taurus ex-siluit vinclis.  
 ‘Suddenly, tearing off his bonds, the bull jumps off from the altar and escapes.’
- (114) *Ps. Quint. Decl. 2, 19*  
 Illos, qui non statim primo timore pro-siliunt, fragor noctis agitavit.  
 ‘The noise during the night agitated those who do not leap forth at once with the first hint of fear.’
- (115) *Ps. Quint. Decl. 19, 9*  
 Non enim praecipiti raptus impulsu ex-silui repente.  
 ‘I did not, in fact, start up suddenly with a violent shock.’
- (116) *Frothin. Strat. 1-3, 2, 4*  
Repente in dextrum [...] cornu pro-siluit.  
 ‘He suddenly leapt forth into the right wing.’
- (117) *Suet. C. Caligula, 54, 2*  
 Deinde repente [...] pro-siluit.  
 ‘Then he suddenly leapt forth.’
- (118) *Gell. 16, 19, 11*  
Statim coram de-siliret praeceps in mare.  
 ‘He would jump down immediately into the sea.’
- (119) *Apul. Met. 4, 3*  
 Ad eum statim pro-silit.  
 ‘She immediately jumped forth at him.’

- (120) *Flor. Epit. 2, 2, 5*  
 Hinc in Aegypton subito tran-siluit.  
 ‘Then he jumped over suddenly into Egypt.’

## 8 Telic predicates headed by prefixed *volo* ‘fly’

- (121) *Quadrig. Hist. 19*  
Id ubi rescierunt propinqui obsidum [...] in uiam pro-uolarunt.  
 ‘The moment the parents of the hostages learnt it, they flew forth onto the way.’
- (122) *Liv. 3, 61, 7*  
Haec ubi inter signa peditum dicta dedit, ad-volat deinde ad equites.  
 ‘As soon as he has given the signs to the foot-soldiers, he flies onto the riders.’
- (123) *Caes. Gall. 2, 19, 6*  
Subito omnibus copiis pro-volaverunt impetumque in nostros equites fecerunt.  
 ‘All of a sudden they flew forth with all their troops and made an attack against our riders.’
- (124) *Caes. Gall. 3, 28, 3*  
Subito ex omnibus partibus silvae e-volaverunt et in nostros impetum fecerunt.  
 ‘Suddenly they flew out of everywhere in the woods and made an attack against our men.’
- (125) *Caes. Gall. 5, 17, 2*  
Repente ex omnibus partibus ad pabulatores ad-volaverunt.  
 ‘Suddenly they flew onto the foragers from all quarters.’
- (126) *Caes. Gall. 7, 27, 3*  
 Illi subito ex omnibus partibus e-volaverunt.  
 ‘They suddenly flew out of all quarters.’
- (127) *Cic. Phil. 10, 12*  
 Alter ad-uolat subito ad direptionem pestem que sociorum.  
 ‘One of them had suddenly appeared for the ruin and destruction of the allies.’
- (128) *Cic. Mur. 85*  
 In agros suburbanos repente ad-volabit.  
 ‘In little time he will fly over into the suburban fields.’
- (129) *Cic. Cael. 63*  
 Tum repente e-volasse istos praeclaros testes.  
 ‘Then suddenly these respectable witnesses flew away.’
- (130) *Cic. Sest. 54*  
Statim me percusso ad meum sanguinem hauriendum [...] ad-volaverunt.  
 ‘Instantly, the moment I was struck, they flew up to me to drink up my blood.’
- (131) *Cic. Div. 2, 37*  
 Cor subito non potuisse nescio quo a-volare.  
 ‘That the heart could not suddenly have flown away I know not where.’
- (132) *Cic. Fam. 11, 27, 4*  
 Oblitum ne me putas qua celeritate, ut primum audieris, ad me Tarento ad-volaris [...]?  
 ‘Do you suppose that I have forgotten with what speed you flew to me from Tarentum, as soon as you learned it?’

- (133) *Rhet. Her. 4, 17, 24*  
 Qui fortunis alicuius inducti amicitiam eius secuti sunt, hi, simul ac fortuna dilapsa est, de-uolant omnes.  
 ‘All those who follow after someone’s friendship, drawn by his wealth, fly away as soon as the fortune has slid apart.’
- (134) *Rhet. Her. 4, 48, 61*  
Simul atque hiemem fortunae uiderunt, de-uolant omnes.  
 ‘As soon as they have seen the ruin of the fortune, all of them fly away.’
- (135) *Homer. 805*  
 Patroclus subitoque armis munitus Achillis pro-uolat.  
 ‘And Patroclus suddenly flies forth, provided with Achilles’s weapons.’
- (136) *Phaedr. 2, 7, 7*  
Subito latrones ex insidiis ad-volant.  
 ‘Suddenly the thieves fly onto them out of the ambush.’
- (137) *Phaedr. 3, 16, 15*  
 Illa [...], simul cognovit vocem laudari suam, cupide ad-volavit.  
 ‘As soon as she heard that her voice was being praised, she flew over there anxiously.’
- (138) *Stat. Theb. 5, 554*  
Extemplo monitu ducis ad-volat.  
 ‘Suddenly, following the leader’s order, he flies over there.’
- (139) *Plin. Nat. 7, 52, 2*  
 Cogitatio etiam [...] animum subito trans-volans effingere similitudinem aut miscere existimatur.  
 ‘Even the thought which suddenly flies accross the spirit is believed to determine or alter the resemblance.’
- (140) *Suet. Vitellius, 9, 1*  
 A parte dextra repente aquila ad-uolauit.  
 ‘From the right an eagle suddenly flew over.’
- (141) *Gell. 9, 11, 7*  
 Corvus repente inprovisus ad-volat et super galeam tribuni insistit.  
 ‘A crow suddenly flies over there and lands on the tribune’s helmet.’



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