The syntax of heads and phrases

A study of verb (phrase) fronting

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Though this be madness, yet there is reason to 't
[Polonius, Hamlet]

Many of the truths we cling to depend greatly on our point of view
[Obi-Wan Kenobi, Return of the Jedi]

Table of contents

CHAPTER FOUR

Acknowledgements

Structural linguistics is a bitterly divided and unhappy profession,
and a large number of its practitioners spend many nights drowning
their sorrows in Ouisghian Zodahs
[*The Restaurant at the End of the Universe*]

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Introduction

The theoretical goal of this dissertation is to contribute to our understanding of the structural conditions governing movement, especially regarding the distinction between head and phrase movement. More specifically, I attempt to set the basis of a theory in which movement processes do not make a difference between heads and phrases: both types of constituents move uniformly to specifier/adjoined positions, and both abide by the same locality constraints (phase theory, relativised minimality, etc). The empirical domain is constituted mainly by the predicate cleft construction. This is a verb focalisation/ topicalisation construction, whose most notorious property is the presence of two instances of the same verb in the same sentence: first, an infinitive at the left edge of the clause, and second, a fully inflected form in the regular verb position. Predicate clefts have been attested in a large number of languages around the globe: to name but a few, Yiddish, Brazilian Portuguese, Hebrew, Korean, Nupe, Gungbe, Ewe, Swedish, Buli, Vata, Yoruba, and several creoles.[1] In this dissertation, I will focus on two languages in which the predicate cleft construction has received very little attention, namely, Spanish and Hungarian. An example of each language follows.

1) *Predicate clefting*

a. Leer, Juan leyó un libro [*Spanish*]
read.INF J read.PST.3SG a book
"As for reading, Juan has read a book"

b. Olvasni, olvasta János egy könyvet [*Hungarian*]
read.INF read.PST.3SG J a book.ACC
"As for reading, János read a book"

For ease of exposition, throughout this book I will refer to the fronted infinitive as the *topic* and to its inflected counterpart as the *tail*. Abstracting away from the issue of the two instances of the verb (cf. section 2 below for discussion), I focus on what the exact relation is between the topic and the tail. It can be shown, mainly through standard locality tests, that they stand in a movement relation, i.e., the topic and the tail form an A-bar movement chain that has the rather exceptional property of allowing pronunciation of two of its links. This conclusion raises a problem, as it appears to resort to a type of movement that is standardly thought not to be possible, namely, A-bar movement of a bare head. The obvious

[1] See Kandybowicz (2006:145-146) for a longer list and references..

solution is to reanalyse the examples in (1) as cases of remnant VP movement. However, I will show that this is not a workable alternative. To begin with, although Spanish and Hungarian do have object scrambling, it is not productive enough to create a remnant VP in all the required occasions. In fact, it can be shown that some of the constituents that are stranded under predicate clefting behave as though they are still sitting in a VP-internal position, which precludes a remnant movement analysis. Therefore, it is necessary to define a theory that allows bare heads to undergo what otherwise would be categorised as phrase movement.

Before going ahead, let me say a word about the term "predicate cleft". This is something of a misnomer, as the Spanish and Hungarian structures I examine are not clefts in any way. This term is taken from Koopman's (1984) study of the verb focalisation construction in Vata, which also features verb copying. Now, in Vata, this construction *is* a cleft, so the label of "predicate cleft" is fully transparent and justified. In spite of this difference, though, I will still use "predicate cleft", as is the one term that best conveys the surface appearance of the construction (i.e., [infinitive]…[finite verb]). I also find it suggestive that the analyses I will propose for Spanish and Hungarian are, in essence, contemporary reinterpretations of Koopman's original 1984 analysis of Vata predicate clefts. It seems to me that these intuitions are lost with other alternatives. For instance, "predicate fronting" and "predicate topicalisation" are too vague in that they can basically be used to cover any construction in which a predicate appears displaced from its base position. Other possible candidate, "verb doubling" (or "verb (re)duplication") is already used to refer to a completely different construction in languages like Cantonese or Gungbe.

1. Structure of the dissertation

Chapter one

Chapter one contains the theoretical foundations of the dissertation. I start by discussing the current theory of head movement and its major theoretical problem, namely, the difficulty of defining "head" (and especially "complex head") under Chomsky's (1995b) proposal that syntax contains no information about bar-levels. Part of this chapter is devoted to arriving at a working definition, which involves a close reading of the theory. The hypothesis I will defend is that, while "head" can be defined in purely syntactic terms, "complex heads" are a construct that arise at the interface of narrow syntax and PF. At this point, one may define a theory of head and phrase movement without reference to bar levels. One of the interesting properties of this theory is that it allows bare heads to undergo what otherwise would be categorised as phrase movement –exactly what I have argued above is necessary to account for the syntax of Hungarian and Spanish predicate clefts. A large portion of this dissertation is devoted to exploring this claim in full empirical detail.

Chapter two

After establishing the theoretical base, I move on to a detailed study of the Spanish predicate cleft construction, exemplified in (1)a above, and repeated here for convenience.

1) a. Leer, Juan leyó un libro
read.INF J read.PST3SG a book
"As for reading, Juan has read a book"

In spite of its relative frequency in spoken language, so far there are no detailed descriptions or analyses of this construction. Therefore, one of the goals of this chapter is to establish the main properties of predicate clefting in Spanish. One major property of the construction is that the topic is of category *v* (that is, the head introducing the external argument). Another important property is that there is a dialectal split regarding the relation between the topic and the tail. For a subset of speakers (to which I belong), this is a relation of movement, whereas for the rest, it is one of construal. In this chapter, I focus on the former group, as these speakers are obviously the relevant ones to test the theory of movement introduced in chapter one. Bear in mind that the claim I am defending is that the derivation of (1)a doesn't require remnant predicate movement: rather, a bare head might undergo A-bar movement to the exclusion of its complement. To test this prediction, I apply Ordóñez's (1997, 1998) tests for object movement in Spanish. In all cases, the result is that objects stranded under predicate clefting are too low in the structure to license a remnant movement derivation. Hence, it follows that the infinitive must be moving on its own. I will also offer an explanation (couched in terms of late insertion) as to why the topic surfaces as an infinitive, in spite of being related via movement to a finite verb.

Chapter three

In chapter three, I turn to infinitive focalisation in Hungarian, the example in (2). Small caps indicate focal stress.

2) ÚSZNI$_i$ akart t_i János
swim.INF want.3SG J
"János wants to SWIM (and not to WALK)"

For this construction, I propose an analysis similar to Spanish predicate clefting –i.e., movement of a bare verbal head to a specifier position, SpecFocP in this case. One apparent difficulty is constituted by the fact that it is possible to focalise large verb clusters that, on the surface, look quite complex. However, a closer analysis reveals that the set of verb clusters that can be focalised corresponds exactly to those that can be analysed as complex heads, thus lending extra support to the theory of movement developed in the first chapter. A substantial part of this chapter is devoted to commenting on an analysis of (2) based on Koopman & Szabolcsi's (2000) analysis of verb clusters in terms of reiterative remnant movement. I show that, while their approach can account for the data, it does so at the cost of invoking a number of stipulations and mechanisms that are not necessary in the analysis I develop. I conclude,

therefore, that analyses based on remnant movement ought to be discarded in favour of head-to-spec movement alternatives.

Chapter four

Continuing the study of Hungarian verb fronting constructions, I move on to the predicate cleft construction, exemplified in (1)b above and repeated below.

1) b. Olvasni, olvasta János egy könyvet
read.INF read.PST.3SG J a book.ACC
"As for reading, János read a book"

Although I propose an analysis analogous to the one for Spanish predicate clefts in chapter two, the Hungarian construction presents various difficulties that occupy a large part of this chapter. These have to do mostly with particle verbs. The generalisation I uncover is that pied-piping of verbal dependents is generally banned, except for particles and some bare nouns that form a semi-idiomatic unit with the verb. However, I show that this pattern cannot be explained by assuming that these elements have incorporated into the verb, as they remain syntactically independent in the tail. I propose an analysis in which the verb and the particle move to the topic position independently of each other. The apparent unity of the [particle-verb] sequence is argued to be an illusion, due to some other properties of Hungarian. Ultimately, this analysis also involves A-bar movement of bare heads, in support of the theory outlined in chapter two.

Outlook

In the closing chapter, I try to extend the analysis I have developed in the previous chapters so as to cover other languages. I show that there are three different types of languages with respect to the mechanisms of predicate movement. The first type is constituted by languages like English and Niuean, which only have VP movement (either remnant or not). Second, there are languages in which only long head-to-spec movement is available: Bulgarian, Serbo-Croatian, and Hungarian fall in this slot. Finally, there are languages in which both of these options are available, such as Spanish, German, and Hebrew. In essence, it can be shown that, in the realm of predicate fronting, head-to-spec movement is available in any environment where VP movement is also available. This results in a rather interesting picture, as we can claim that all languages have the same type of operation, namely, movement of a verbal constituent to a specifier position. The only difference lies in the amount of material that can be pied-piped, which conclusion leads into a different (but equally interesting) line of research –namely, determining what mechanisms of grammar regulate pied-piping (cf. Heck 2004 for a detailed study of this question).

2. What this dissertation is not about

Before starting, let me emphasise what the goal of this book is. I am going to examine predicate cleft constructions in two languages. As I already said above, my focus will be on the structural properties of these constructions and on their implications for the theory of movement. What I will *not* discuss is the issue of the double pronunciation of the verb. I will simply accept as a fact that, in Spanish and Hungarian, predicate clefting leaves a copy of the verb downstairs, but I will not attempt to derive it from other properties of the languages. Interested readers are instead referred to the discussion in Abels (2001), Kandybowicz (2006), and Landau (2006). Focusing on data from Russian, Nupe and Hebrew, respectively, all three authors arrive at pretty much the same analysis, namely, that double pronunciation is a morphological repair strategy. Consider, for instance, the following Russian example, taken from Abels (2001).

3) *Russian*

a. **Citat,** Ivan ee **citaet**
read.INF I it read.PRES.3SG
"As for reading, Ivan reads it"

b. * **Citat,** Ivan ee **-aet**
read.INF I it PRES.3SG
"As for reading, Ivan reads it"

Consider what will happen if the lower copy of the clefted verb was phonetically null (i.e., realised as a gap). In that case, the verb's inflectional affixes (*-aet*) would lack a verbal stem to attach to, as in (3)b. As affixes require a stem, this would result in a morphologically deviant sentence. Abels, Landau, and Kandybowicz all propose that this situation can be salvaged by exceptionally allowing pronunciation of the lower link of the chain, so as to provide a host for the affixes.

The appeal of this proposal lies in the fact that it is actually quite parsimonious. All that is necessary the copy theory of movement[2] and the assumption that sometimes morphological well-formedness pressure can override the tendency of PF to spell out only one link of a movement chain. In fact, this analysis has a clear extension in the case of split topicalisation in Germanic, exemplified below (cf. van Riemsdijk 1989 for discussion). In German, the negative determiner *kein* 'no' is composed of negation plus an existential quantifier (cf. Penka & Zeijlstra 2005 for a recent analysis). In (4)c, the determiner is split in such a way that the existential part is topicalised while the negative part is left behind. Since the latter cannot be spelled out on its own (4)b, the lower copy of the existential part is exceptionally spelled out, so as to prevent a crash at PF.

[2] Although Abels actually assumes a multidominance theory of movement. This is irrelevant, though, as in both in copy and multidominance approaches, what is important is that all links of a movement chain are structurally identical to each other.

4) *German split topicalisation*
   a. Sie kennt [**keinen** alten Professor]
      she knows no old professor
      "She knows no old professors"
   b. * [**Einen** alten Professor] kennt sie [**k**-]
      an old professor knows she NEG
      "She knows no old professors"
   c. [**Einen** alten Professor] kennt sie [**keinen**]
      an old professor knows she none
      "She knows no old professors"

In principle, this hypothesis can be extended to Spanish and Hungarian. Since inflectional information in these two languages is affixal, double pronunciation would be required to provide it with a stem. In fact, I believe it can be applied to the large majority of examples in this dissertation. However, I also believe it is not universal. For one, it predicts that no doubling should occur if no inflectional features are left stranded under predicate clefting. One such case is predicate clefting in passive clauses in Spanish, which I will discuss in more detail in chapter two. The relevant property of these cases is that the topic is not an infinitive, but a passive participle that is morphologically identical to the tail (5). Since no affixes are stranded, the prediction is that no double pronunciation should arise. In reality, though, this is incorrect. Example (5)a is quite degraded unless the passive participle is repeated downstairs. Note that one cannot attribute the ungrammaticality of this example to the passive participle forming a putative syntactic or morphological unit with the auxiliary. As shown in (5)b, it is possible for adverbs to intervene between the two, showing that they are indeed syntactically independent.[3]

5) a. **Reparada**, la puerta ha sido ?*(**reparada**)
      fixed the door has been fixed
      "As for being fixed, the door has been fixed"
   b. La puerta ha **sido** recientemente / repetidamente **reparada**
      the door has been recently repeteadly fixed
      "The door has been fixed recently/several times"

Similarly, one would expect not to have double pronunciation in the case of verbs embedded under modals. These verbs surface as infinitives in the tail, i.e., they are morphologically identical to the topic. However, verb doubling is also necessary in these cases, as shown in (6)b.

6) a. Juan suele **jugar** al fútbol los domingos
      J HAB.3SG play.INF at football the sundays
      "Juan has always usually played football on Sundays"

[3] Cable (2004) has noted that Yiddish cases parallel to (5)a are subject to an interesting restriction, namely, that the participle in the tail must be focused. Arguably, it is the focus status that triggers double pronunciation. However, this analysis is not extensible to Spanish, as in (5)a the tail need not be in focus. The same holds for (6)b.

b. **Jugar**, Juan suele ***(jugar)** al futbol los domingos
play.INF J HAB.3SG play.INF at football the sundays
"As for playing, Juan usually plays football on Sundays"

Sjef Barbiers (p.c.) suggests that something might be stranded in the tail in (6)b as well. This analysis would require an analysis of infinitives in which they raise to a relatively high position in the inflectional domain, in spite of not being inflected for aspect, tense, or agreement in the surface. See Grohmann & Etxepare (2003) for independent evidence in favour of this analysis. Notice that this analysis would entail that infinitives in the topic and infinitives in the tail are not the same type of element. While infinitives in the tail are "true" infinitives with a full functional structure, the ones found in the topic are default forms corresponding to a truncated structure.[4] I find this an interesting hypothesis, but I will not explore it in this dissertation.

In short, we can conclude that, although a morphological repair approach might possibly be correct in forcing double pronunciation in most of the examples discussed in this chapter, there are some cases that might call for further refinement. At this moment, however, I have nothing interesting to suggest in this respect.[5] Before finishing this section, though, I would like to point out that, sometimes, it might appear that double pronunciation is somewhat an arbitrary property of some languages. This is, in a sense, what one could infer from Cozier's (2006) discussion of predicate clefting in Trinidad Dialectal English (TDE), some examples of which follow.

7) *Trinidad Dialect English*
a. Is WALK (that) Tim did walk
b. Is TOUCH (that) he did touch upon that matter

The verbal morphology of TDE is identical to that of standard English, yet TDE features double pronunciation in predicate clefts whereas standard English does not in the predicate fronting construction. Thus, any strictly morphological rationale for doubling will fail to account for the difference between TDE and standard English. For the time being, I must leave it as a stipulation that TDE features double pronunciation, whereas standard English does not, and similarly for other languages. Ideally, though, one would like to find a rationale for every case of (non)pronunciation, something more insightful than postulating an independent parameter regulating it. This, however, is beyond the scope of this dissertation.

[4] In principle, the same reasoning ought to be applicable to the passive cases in (5).

[5] Rajesh Bhatt (p.c.) suggests a possible link between double pronunciation and ellipsis. For one, Spanish has no VP ellipsis –it has null complement anaphora, cf. Depiante 2000, which is arguably a different phenomenon. In principle, the impossibility of eliding a VP would be parallel to the impossibility of realising it as a trace under predicate clefting. Although initially attractive, this parallelism breaks down in the case of Hebrew, which, in spite of exhibiting double pronunciation, has true VP ellipsis. Thanks to Kyle Johnson for pointing this out to me.

3. Pronominal doubling

Both Spanish and Hungarian feature an additional predicate topicalisation structure, in which a topicalised (verbal) predicate is resumed by a demonstrative pronoun –*eso* 'that' in Spanish and *azt* 'that' in Hungarian. Let us refer to the fronted predicate as the *topic* and to the demonstrative pronoun as the *double*.

8) a. [Visitar a Ana], María suele hacer **eso** [*spanish*]
visit.INF to A M HAB.3SG does that
"To visit Ana, María usually does that"
b. [Annat meglatogátni] **azt** szokta Mari [*hungarian*]
A.ACC PV.visit.INF that HAB.3SG M
"To visit Anna, Mari usually does that"

I will not discuss this construction in this dissertation, given that it has already received a thorough analysis in Lipták & Vicente (to app.). However, given that this construction will be occasionally brought into the discussion whenever necessary to establish a contrast with other types of predicate fronting, a brief introduction is in order. Bear in mind, though, that what follows is only a presentation of the basic properties. Readers interested in a more in-depth analysis of the fine details of this construction are instead referred to Lipták & Vicente (to app.).

Evidence from locality and reconstruction effects suggests very strongly that, in both Spanish and Hungarian, the fronted predicate is generated in a clause internal position and reaches its surface position through A-bar movement. The major point of the article is that, despite this initial similarity, this is *not* a unified construction. The most compelling piece of evidence in favour of this conclusion is the observation that the Hungarian and Spanish versions of this construction appear in different environments. In Spanish, *eso*-doubling is possible only if the higher embedding verb (the habitual *suele* in the example above) can independently select for a nominal. Consider, for instance, the verb *pasar* 'to happen', which can take a nominal complement (9)a but not a verbal complement (9)b. In spite of this restriction, *pasar* is fine in the *eso*-doubling construction (9)c.

9) a. Juan no quiere que le pase [nada malo]
J not want.3SG that CL happen.3SG anything bad
"Juan doesn't want anything bad to happen to him"
b. * Juan no quiere que le pase [suspender el exámen]
J not want.3SG that CL happen.3SG fail.INF the exam
"Juan doesn't want failing the exam to happen to him"
c. [Suspender el exámen], Juan no quiere que le
fail.INF the exam J not want.3SG that CL
pase eso
happen.3SG that
"To fail the exam, Juan doesn't want that to happen to him"

In contrast, the modal *poder* 'to be allowed/to be able', which can take a verbal complement but not a nominal one, is banned in the *eso*-doubling construction.

10) a. * Juan no puede [un viaje]
J not can.3SG a trip
"Juan cannot a trip"
b. Juan no puede [irse de viaje]
J not can.3SG go.INF of trip
"Juan cannot go on a trip"
c. * [Irse de viaje], Juan no puede eso
go.INF of trip J not can.3SG that
"To go on a trip, Juan cannot that"

In order to account for this pattern, we propose that it is the pronominal double that is the actual complement of the verb, and that the topic is subordinated to the double. Subsequent movement of the topic to the left periphery strands the double, in a way reminiscent of Sportiche's (1988) analysis of quantifier float, or Uriagereka's (1995) of clitic doubling.

In contrast to Spanish, in Hungarian *azt*-doubling it is irrelevant whether the higher verb can take a nominal complement. *Azt*-doubling is possible if the higher verb belongs to the set of infinitive-embedding predicates. This set includes auxiliaries, modals, and control/raising verbs such as (amongst others) *akar* 'want', *szokott* 'habitual', *tud* 'can', *kell* 'must', *kíván* 'wish', *próbál* 'try', or *fog* 'future'. In fact, a large majority of the verbs in this set cannot take a nominal complement, which suggest that the analysis of Spanish *eso*-doubling cannot be extended to Hungarian.

Due to other properties of the Hungarian double (such as the fact that it always has to be the minimal pronoun *azt*, and that it always appears in a left peripheral position), we propose that *azt* is actually an impoverished spell out of an intermediate copy left by the topic on its way up. To be more precise, the topic first moves from its base position to a left peripheral position, and then undergoes a second (shorter) movement to a slightly higher topic projection. Adopting Grohmann's (2003) anti-locality-based analysis of Germanic left dislocation, we suggest that the two higher links of this chain are too close together, and thus create a problem for the PF component. The solution, in the same way as in Grohmann's original proposal is to spell out the lower link in an impoverished way, namely, as a bare demonstrative pronoun. This analysis accounts in a unified way for several properties of *azt*-doubling.

Chapter one
The theory of heads and phrases

1. Introduction

The difference between heads and phrases is one of the fundamental dichotomies of syntactic theory. Both entities show different behaviour in a number of aspects, and the way they are affected by movement processes is amongst the better studied ones. The outcome has been the postulation of two different types of movement, namely, phrase movement and head movement. Although the distinction might seem quite neat on paper, in reality it is not so easy to implement. For instance, Harley (2004:239) refers to head movement, somewhat euphemistically, as "something of a conundrum". She writes

> "…getting the structural mechanism of head movement to interact properly with the other fundamentals of the theory was a headache even within X-bar theory […] When Chomsky (1995b) introduced Bare Phrase Structure as a fundamental part of the minimalist program, it became essentially impossible."

Harley's remark refers to Chomsky's proposal to eliminate bar levels from phrase structural representations. As a consequence, one also loses the distinction between "head" and "phrase", at least to the extent that these notions are defined in terms of bar levels.[1] Now, if the theory doesn't offer a way to distinguish heads from phrases, then one cannot make any meaningful distinctions either between "head movement" and "phrase movement". In the face of these difficulties, a number of proposals have been advanced in the past decade, attempting to integrate head movement into the general theory of grammar in a smoother way. This is not an easy task, though, as is evidenced by the number of different approaches that have been taken. These include treating head movement as a phonological process (Brody 1997; Chomsky 2000; Abels 2001, 2003; Boeckx & Stjepanović 2001; Harley 2004), as a sequence of remnant phrasal movements

[1] However, "head" and "phrase" can still be given a definition as long as it is not based on bar levels. Chomsky himself proposes to derive their status in terms of geometric relations between nodes. We will get back to this hypothesis in much more detail in section 3.

(Koopman & Szabolcsi 2000; Mahajan 2003; Starke 2004), as interarboreal movement (Bobaljik & Brown 1997; Nunes 2001, 2004), as self-projecting movement (Fanselow 2003; Bury 2003), and as the outcome of a rebracketing mechanism (Matushansky 2006).

The goal of this chapter is to develop a theory of head movement that is compatible with Bare Phrase Structure (BPS henceforth). I will defend two major hypotheses. First, that head movement happens so as to create a larger morphological unit –as opposed to phrase movement, which is triggered by feature checking reasons. This will result in an analysis in which complex heads are viewed as a construct that arises at the interface between narrow syntax and PF. I will develop this idea in section 3. The second hypothesis I will introduce in this chapter is that bare heads may undergo what otherwise would be categorised as phrase movement, i.e., long distance movement to a specifier position. This idea will be developed in section 4, and it will be a core part of the analysis of infinitive fronting constructions in Spanish and Hungarian in chapters two through four. However, before getting to that point, I will spend some pages in section 2 reviewing the major properties of head movement.

2. A brief introduction to head movement

2.1. The basic mechanics

The current implementation of head movement is the result of work by Travis (1984) and Baker (1985, 1988). Prior to these studies, it was commonly accepted that heads could only move to a designated set of positions in the structure (cf., Jackendoff 1977, Chomsky 1981), but there were no special constraints on what specific positions they could be moved to. For instance, one could define a rule moving an uninflected verb form to INFL, so as to derive a tensed verb, as in Chomsky (1957). However, the mechanics of V-to-INFL movement weren't any different from, for instance, movement of a wh- item to COMP. Both required an initial structural description and a transformational rule that specified what the outcome was. The phrase structural status of the moved element (i.e., head or phrase) was, in and of itself, irrelevant for the formulation of the rule.

Against this background, Travis (1984) introduced the hypothesis that movement of heads is fundamentally different from movement of phrases. This hypothesis is embodied in the Head Movement Constraint (HMC), whose original definition follows.

1) *The Head Movement Constraint (Travis 1984:131)*
A head *x* may only move into the head *y* that properly governs *x*.

Although this formulation looks simple enough, there are various implicit assumptions, and it will be instructive to unpack them. First of all, note that this is a constraint that makes explicit mention to heads, as opposed to phrases. This restriction is, I believe, a modification of Emonds' (1970) structure preservation hypothesis, which is reproduced below.

2) *Structure preservation*
A transformation is structure preserving if it introduces or substitutes a constituent C into a position in a phrase marker held by a node C.

In the rule system assumed in the 1970s, the effect of (2) was that constituents could only be moved between positions marked as being of the "same kind". That is, nouns could only appear in N positions, verbs could only appear in V positions, and so on. Consider, for instance, Emonds' general format for transformational rules, given in (3). Here, the constituent X is being moved between positions marked as [B__], i.e., of the "same kind".

3) *Structure preservation (Emonds 1970:38)*
W – (B **X**) – Y – (B__) – Z → W – (B __) – Y – (B **X**) – Z

In the 1980s, the rule system gave way to the X-bar schema, and to the more general operation Move α. The structure preservation hypothesis was not abandoned, though. Rather, it was recast into the emerging distinction between bar levels. This meant that heads, being X^0-type elements, could only appear in X^0-type positions –i.e., the only movement option for heads is to incorporate into another head, so as to satisfy structure preservation. Movement into a specifier position is banned because specifiers are XP-type positions. The same logic bans movement of an XP into an X^0-type position. However, as pointed out by Harley in the quote on page 11, the analysis cannot be maintained if one adopts a system like BPS, where the notions of "X^0-type position" and "XP-type position" are abandoned. We will get back to the definition of "head" in section 3, and determine how this difference can be recast in BPS terms.

Second, the formulation of the HMC in (1) states that a head must move *into* another head. The choice of this preposition is not accidental. It has always been assumed that head-to-head movement results in the two heads in question forming a constituent to the exclusion of everything else. This assumption is motivated by the fact that they do seem to function as a constituent. For instance, after head movement happens, the formed complex head can move as a whole and incorporate into a higher head. On the assumption that only constituents move, it follows that a moving head must move *into* a higher head. Although this geometry is nowadays widely accepted, it still runs into some technical difficulties. In section 4 I will explore Matushansky's (2006) alternative in terms of a rebracketing operation.

Finally, Travis' original formulation of the HMC makes explicit reference to proper government, which is the hallmark of the ECP.[2] As a consequence, Chomsky (1986), Baker (1988), and Rizzi (1990) proposed that the HMC ought be viewed as a theorem derived from the ECP. Although their reasoning is correct, this line of analysis was abandoned when Chomsky (1995a) eliminated the notion of government. However, this created a problem, since the ECP was the only thing ensuring the strict locality of head movement. Without it, there is no obvious way of preventing a head from moving over other heads. It has been

[2] Recall that an empty category is properly governed if it is theta governed or antecedent governed (or, in some versions, both theta *and* antecedent governed). In both cases, government requires that the governing head c-commands the governed one, and that no barriers intervene. See Chomsky (1986) and Rizzi (1990) for extensive discussion.

proposed at some points (cf. Roberts 2001) that the locality of head movement can be subsumed under Relativised Minimality (RM). This type of approach would require identifying a feature shared by all heads, which would block movement of a head over another. This is not an easy task, and even if such a feature were identified,[3] there is still an additional ECP effect that cannot be subsumed under RM. I am referring to the restriction that only heads of complements can incorporate into higher heads. Incorporation of a specifier or the head of a specifier into a higher head is not possible. This constraint was correctly excluded under (1), given that incorporation of a specifier or out of a specifier would violate the ECP. However, I cannot see how this effect can be replicated under a RM-based view of head movement locality.

2.2. Other aspects of head movement

2.2.1. Ordering within complex heads

Baker (1985:375) proposes the Mirror Principle, the original definition of which is given in (4). This principle ensures that there is a mirror image correlation between the selectional hierarchy and the order of morphemes within a complex head.

4) *The Mirror Principle*
Morphological derivations must directly reflect syntactic derivations (and vice versa).

Although the Mirror Principle is descriptively correct to a large extent,[4] it does *not* follow from the set of assumptions made at the time. The ECP requires the lower head to adjoin to the higher one, but it doesn't say anything about whether it must be to the right or to the left. Therefore, (4) mostly stands as a correlation in need of an explanation. For most of this chapter, I will simply accept the Mirror Principle as it is given in (4), as the way in which it can be derived is not relevant for most of the discussion. However, in section 4, I will propose a theory of head movement that derives it directly from the mechanics of movement.[5]

As promised in footnote 4, let me mention a case that sometimes has been taken to be a problem for the Mirror Principle, namely, Semitic verbal morphology. Take (Modern) Hebrew, for instance, where verb roots and inflection are not discrete morphemes as in other languages around the globe. Rather, roots

[3] Roberts (2001) suggests a categorial [+V] feature for the clausal domain, building on Grimshaw's (1991) idea that the clause is an extended projection of the verb. However, this solution should also force the same locality conditions on VP movement, which is clearly not correct: VPs can be A-bar moved in clear obviation of the HMC.

[4] We will return to a problematic case in a moment. See, however, section 3.8 for typological evidence in favour of the Mirror Principle.

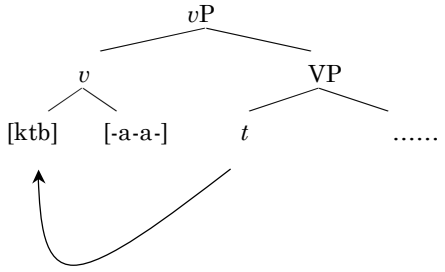
[5] As far as I know, Antisymmetry is the only other analysis that derives the Mirror Principle. Under the definition of c-command in Kayne (1994:14), it is always the case that an incorporated head asymmetrically c-commands its host. Given that asymmetric c-command maps into linear precedence, it follows that the incorporated head always surfaces to the left of its host.

are clusters of typically three consonants (sometimes two or four). To give one single example, the root [ktb] is loosely associated with the meaning of writing. Inflection of various kinds consists of embedding the root in a template (a *binyan*, plural *binyanim*), consisting of a vocalic melody and various affixes. Below, I provide an illustration of how the [ktb] root interweaves with various binyanim. For transparency, the root component is boldfaced.

5) a. **k**a**t**a**b** 'wrote'
b. ni**kt**a**b** 'was written'
c. hi**kt**i**b** 'dictated'
d. hu**kt**a**b** 'was dictated'
e. hit**k**a**t**e**b** 'corresponded'

It is easy to see why this pattern could constitute a challenge to the Mirror Principle. Take, for instance, (5)a, and suppose that the vocalic pattern *–a-a-* is the instantiation of the *v* head that introduces the external argument.[6] Under these assumptions, it is difficult to see how the form *katab* is derived. If incorporation takes place, as in (6), one would expect the consonantal root and the vocalic pattern to show up side by side, but not interwoven.

6) *An ill-formed derivation*

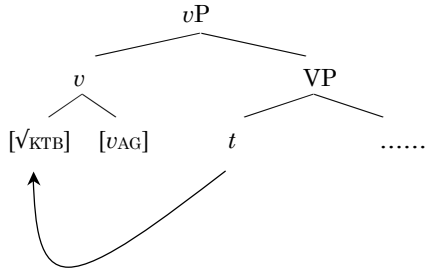


However, I believe this is a problem only inasmuch as one wants to assume that narrow syntax manipulates morphemes with a phonological matrix. One plausible alternative is to adopt a late insertion model (à la Halle & Marantz 1993), where narrow syntax only operates over sets of formal features, and phonological exponents are inserted in a post-syntactic component.[7] In such a model, it is possible to specify that the combination of a root with the semantic import of [ktb] plus an agentive *v* results in *katab*, as shown in (7). For transparency, I've labelled the root as $\sqrt{}_{KTB}$, but this is not meant to represent its phonological shape.

[6] This assumption is purely for the sake of exposition. What matters for the argument is that this particular pattern is associated to a specific functional head that the root incorporates into. I believe *v* is the most plausible choice, given the transitive agentive meaning of *katab*.

[7] This is, in fact, the model I will assume throughout this dissertation.

7) *A late insertion alternative*



Phonology
[√KTB + vAG] = *katab*

In short, we may conclude that Semitic morphology doesn't represent a problem for the Mirror Principle, which only regulates the order of morphemes if they are spelled out as discrete units. This is quite a natural corollary, I think, as one can only impose an order on a sequence if its members are sufficiently distinct.

2.2.2. The atomicity of complex heads

It is usually assumed that complex heads are syntactically indivisible, i.e., one may not target a proper subpart of a complex head and move it to the exclusion of the rest of the head. Less verbosely, excorporation is assumed to be impossible. This restriction is basically a subcase of the Lexical Integrity Hypothesis (LIH), first proposed by Postal (1969).[8]

8) *No excorporation*
It is not possible to subextract a constituent out of a complex head

Every now and then, some apparent counterexample to (8) shows up in the literature. However, they usually turn out to be just that: apparent. Julien (2002:66-86) argues convincingly that, under closer examination, such cases can be given an alternative analysis that doesn't resort to excorporation.[9] Therefore, I will assume that (8) holds universally. Now, notice that the ban on excorporation is only one aspect of the LIH, which also bans access to the internal structure of

[8] Deriving (8) is not an easy task. Although it is usually just stipulated, there are some attempts to make it follow from other principles. For instance, Ackema (1999) claims that it can be reduced to the ECP. I will present my own rationale for (8) in section 3.9 below.

[9] For instance Barbiers & van Koppen (2006) discuss cases in Dutch such as *noem-ik-de* 'call.I.PST', in which a subject pronoun intervenes between a verb root and the tense morpheme. Given that such cases arise only in contexts that involve verb movement to C, they propose that the verb root excorporates out of T, stranding the tense suffix. While I think that their analysis is essentially correct, there is the hidden assumption that the verb root had been incorporated into T. If one drops this assumption, so that V moves to the left of T without incorporating into it (something afforded by the theory to be developed in section 4.2), then deriving such examples would not require excorporation. Under this alternative, the appearance of incorporation must be reduced to mere phonological adjacency (cliticisation). This hypothesis is supported by the observation that the construction at hand is possible only if the subject is a weak pronoun. This restriction suggests that *-ik-de* is best analysed as a sequence of clitics.

heads for non-movement processes. This claim, usually referred to as *anaphoric islandhood*, is putatively supported by examples like the following, where the *tea* part of *teapot* cannot be used as the discourse antecedent for *it*.

9) * I took the [**tea**$_i$-pot] and poured **it**$_i$ in the mug

However, it is not clear to me that this example shows that heads are syntactically indivisible. The kind of co-reference attempted in (9) requires *tea* to be interpreted referentially. However, nouns contained in English compounds (e.g., *to babysit*, *to lipread*, and so on) can only be given a non-referential interpretation. Therefore, the ungrammaticality of (9) can be attributed to the impossibility of getting the required reading of *tea*, rather than to the atomicity of *teapot*. However, this restriction is certainly not universal. For instance, in the Mohawk example in (10) below, the incorporated noun *-its-* 'fish' is interpreted as referring back to *rabahbot* 'bullhead', which is mentioned earlier in the discourse. The implication of this example is clear: the indicated reading can only be derived if complex heads are transparent for syntactic and semantic operations, contrary to what the LIH predicts.

10) *Mohawk (Baker 1996:321)*
Rabahbot$_i$ wa'-k-atkatho-' tsi yutʌhninutha' sok
bullhead fact.AGR.see.ASP at store so
wa'-k-**its**$_i$-a-hninu-'
fact.AGR.fish.buy.ASP
"I saw a bullhead at the store, so I bought that fish [lit., I fish-bought]"

More recently, Harris (2006) has discussed similar data in Georgian. In (11), we can see that the demonstrative *-am-* 'this' is anaphoric to the proper name *Gamsaxurdia*, even despite being contained inside a word (note that *less* is realised via a circumfix, namely *u…o*).

11) *Georgian (Harris 2006:121)*
Gamsaxurdia$_i$ čemi saq'vareli mc'erali-a, da u-**am**$_i$-mc'eral-o-d
G my favourite writer.is and less.this.writer.less.with
kartuli lit'erat'ura c'armoudgenili-a
Georgian literature unimaginable.is
"Gamsaxurdia is my favourite writer, and Georgian literature is unimaginable without this writer [lit., this-writer-less]"

Sproat (1985) points out an environment in which even English violates anaphoric islandhood. He observes that there is a productive sub-lexical anaphor, namely, *self-* in verbs of the form *to self-V*, and nouns of the form *self-N*.[10,11] Some

[10] Lieber (1992) also provides cases in which binding theory can access the internal structure of a word, such as (i) for Condition C. Such examples, however, do not seem to be as productive as sub-lexical *self-*, so I will put them aside.

i) * He$_i$ distrusts [Reagan$_i$-ites]

[11] It has also been argued that quantifiers like *everybody*, *nothing*, and so on, are syntactically complex despite the fact that they are words. The claim is that they consist of a quantificational head plus a semantically bleached noun (*body*, *thing*) functioning as the

examples are given in (12). If *self-* is to be properly bound, then the internal structure of the word it is contained in must be accessible for binding theory. [12]

12) a. [This tape]$_i$ will **self$_i$**-destruct in ten seconds
b. Peter$_i$ usually experiences **self$_i$**-hate
c. Susie$_i$ is a **self$_i$**-admirer

On the basis of these data, it seems safe to claim that complex heads are transparent for at least some syntactic/semantic processes –namely, those that do not involve movement. This generalisation is encoded in (13) below, which will be derived from the theory of complex heads that I develop in section 3 of this chapter.[13]

13) *Atomicity of heads*
The internal structure of complex heads is accessible for syntactic and semantic operations other than movement.

2.2.3. The trigger of head movement

In a number of analyses of head movement, there is an underlying intuition that it happens for reasons different from those that trigger phrase movement. The latter takes place so as to check features off against designated functional heads, e.g., [+case], [+wh], and so on (or, alternatively, as a consequence of Agree plus EPP satisfaction). In contrast, the goal of head movement seems to be to create a larger morphological unit. This hypothesis was already present in Chomsky's (1957) original treatment of verbal inflection, where he proposed that the verb moves so as to pick up the tense affix (cf. Bobaljik 1995 for a more recent implementation of this claim), and several current approaches to head movement adopt this general idea. For instance, Harley (2004) and Roberts (2004) propose that head movement is driven by [±AFFIX] specifications on heads.[14] Megerdoomian (2003) proposes that complex heads are formed through

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restrictor. If so, sentences like [*every$_i$-body*] *has paid for their$_i$ drink* could be argued to involve binding of a pronoun by a quantifier contained within a complex word. The argument, however, depends on the assumption that the pronoun is bound by the quantificational head alone, rather than by the [quantifier - restrictor] constituent. This is issue is too complex to be discussed here, so I will not use it as direct evidence against anaphoric islandhood.

[12] Ackema & Neeleman (2004:114ff) claim that Sproat's data do not require words to be transparent if anaphor binding is done through reference to the theta role hierarchy, as opposed to structural configurations. However, this account predicts that anaphor binding may only occur among co-arguments of the same predicate, which is clearly incorrect (cf. Li 2005, ch. 1, for discussion).

[13] Marvin (2003) presents very interesting data that suggest that some complex heads might have phase boundaries within them. If this is correct, then access to the complement domain of those phases will be blocked even for non-movement purposes. I don't think this hypothesis poses any problem for (13), though: as I will argue in section 3, complex heads are actually phrases, so (in the same way as phrases) complex heads are transparent *in principle*, unless there is an intervening phase boundary.

[14] A similar analysis is also assumed in Brody (1997), Abels (2001), and Bury (2003), though not so explicitly laid out.

designated phase boundaries that feed the PF interface only, i.e., phase boundaries that create morpho-phonological units.

To be fair, there are analyses in which head movement also happens for feature checking reasons (e.g., Svenonius 1994, or Matushansky 2006). However, such approaches typically fail to account for the fact that the outcome of head movement very consistently behaves as one morphological unit. Admittedly, this property can be implemented in feature-checking approaches to head movement, but it would come as an extra, rather than as an inherent property of head movement.[15] In order to capture this intuition, let me propose to the following hypothesis.

14) *The trigger of movement*
   a. Phrase movement happens for feature checking reasons.
   b. Head movement happens to create a larger morphosyntactic unit.

Note that this definition begs the question of what "morphosyntactically larger" means, especially in the face of examples of incorporation into empty heads –e.g., N-to-D movement with proper names (Longobardi 1994) or verb movement in the absence of inflection (Thráinsson 2003). These cases clearly show that (14)b cannot be understood in terms of "adding overt morphemes". Rather, one must take the view that a morpheme is a set of features, independently of whether they are phonetically realised or not. Abels (2003:264), who also proposes a split along the lines of (14), expresses this intuition by stating that, if *x* incorporates into *y*, then the resulting [*x y*] consists of a proper superset of the features of either *x* or *y* on their own.[16] A more thorough development of this hypothesis will be presented in section 3.7 below.

2.3. Interim summary

In this section, I have reviewed the major properties of the standard theory of head movement, which we can summarise as follows.

15) *Head movement*
   a. STRUCTURE: it affects heads (both in the launching and the landing site).
   b. CONSTITUENCY: its output is a constituent (as opposed to phrase movement).
   c. LOCALITY: it is subject to the head movement constraint.
   d. ORDERING: morphemes within complex heads appear in the mirror image of their merged order.

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[15] Baker (2002) makes a typological argument against a feature checking approach to head movement. However, his reasoning depends on a few extra assumptions (e.g., an affix-hopping approach to English-style verbal morphology) that make it less straightforward than it actually seems.

[16] Note that I only adopt Abels' formulation, given that he ends up proposing that head movement is a PF process. See the Appendix to this chapter for a criticism of PF analyses of head movement.

e. NON-ATOMICITY: complex heads are transparent for syntactic and semantic processes other than movement.
f. TRIGGER: head movement happens to create larger morphological units.

The remainder of this chapter is devoted to exploring the question of how these properties can be made compatible with the general tenets of the theory of movement. In section 3 below I focus on the question of what constitutes a head (and, by extension, a complex head), especially in a framework without bar levels (cf. Chomsky 1995b). This is quite an important point, as having a working definition of "head" is a necessary condition for a successful theory of head movement. I will argue that the non-atomicity property (15)e is a consequence of the fact that complex heads are derived in syntax, by the same processes as phrases, namely, merger and movement. It follows from this that their internal structure is accessible in the same way as the internal structure of phrases. The ban on excorporation, discussed in page 16 above, will be argued to be a phonological restriction on certain clusters of morphemes. The observation that head movement is morphologically triggered (15)f is also derived from this hypothesis. Finally, I will also say a few words about the locality property (15)c in section 3.9.

In section 4, I will set the foundations of a unified theory of head and phrase movement, in which all movement lands in a specifier position and is subject to similar locality conditions. This hypothesis, obviously, requires some extra mechanism to account for the constituency property (15)b. I will adopt Matushansky's (2006) hypothesis that this property is the result of morphological merger between two adjacent constituents (cf. Marantz 1984). This analysis will offer some insight into the nature of the Mirror Principle (15)d. The major point of interest of the unified theory of movement proposed in this section, though, is that it predicts the existence of a type of head movement not covered by the standard theory, namely, long-distance movement of a bare head to a specifier position. Discussion of this new type of movement will be the focus of chapters two and three of this dissertation, where I examine various infinitive fronting constructions in Spanish and Hungarian.

3. The syntax of complex heads

The quote from Harley (2004) that I reproduced in page 11 highlights the most fundamental problem in the current theory of head movement. Namely, that one can hardly make a distinction between head and phrase movement if there is no way to make a principled distinction between "head" and "phrase" in the first place. What I intend to do in this section is to determine how the notion of "head" (and by extension "complex head") can be defined, especially taking into account current ideas about phrase structure and syntactic theory at large. The basis of the solution is a close reading of the theory. In particular, I do not think that it is a correct statement to say that under BPS there is no way to define "head" or "phrase", as is sometimes claimed. What BPS does is to eliminate bar levels, which simply entails that one cannot define a constituent on the basis of its bar

level –not that "head" and "phrase" are meaningless notions. The goal of BPS is to develop a theory of phrase structure that is based only on geometric relations and the features of the lexical and functional items, but without reference to diacritics. Therefore, it is still possible to refer to "heads" and "phrases" as long as they are defined in these terms.

The argumentation is reasonable simple, but the path through it is not so straight, so let me offer a small roadmap now. I begin by discussing some of the foundations of X-bar theory (section 3.1), and the consequences of the transition to Bare Phrase Structure –especially, the elimination of bar levels and the impossibility of defining complex heads in purely syntactic terms (section 3.2). In order to arrive at a working definition of "complex head", I take a detour through the notion of "complex word", which has also been argued (Julien 2002) not to be definable in purely syntactic terms (section 3.3). The core theoretical proposal is presented in this section, where I suggest that both complex words and complex heads are different manifestations of the same phenomenon, namely, syntax-PF interaction. Or, to put it differently, a complex head is simply a phrase whose subconstituents happen to form a word. The technical details of the proposal are worked out in sections 3.4 through 3.9. The main advantages of this hypothesis is that it allows us (i) to maintain the BPS hypothesis that phrase structural relations are established solely on the basis of geometric relations between nodes, (ii) to capture the intuition that head movement is morphologically triggered, and (iii) to derive the ban on excorporation while preserving the transparency of complex heads for non-movement purposes (cf. section 2.2.2 above).

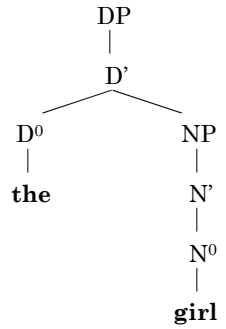
3.1. Some background

Let me begin with some discussion of the theory of phrase structure assumed throughout the GB era.[17] X-bar theory is based on the assumption that phrases are always projected from lexical items. This is fairly conventional. One less straightforward assumption is that every lexical item always projects all the way up to the XP level, which Kornai & Pullum (1990:30-32) refer to as *maximality*. This is coupled with the property of *succession* (Kornai & Pullum 1990:28-29), whereby every node of bar level X^n immediately dominates a node of bar level X^{n-1}, for all $n > 0$.[18] The result of this set of assumptions is the mechanism of vacuous (non-branching) projection, whereby every lexical item projects an X' and an XP, even if it doesn't take any complements or specifiers. The GB representation of the simple phrase *the girl* is given in (16).

[17] Cf. Kornai & Pullum (1990) for a detailed discussion of the formal properties of X-bar theory.

[18] Though *succession* doesn't hold for adjunction, where the bar level of the host category is preserved.

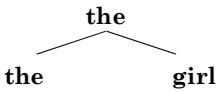
16) *Vacuous projection in GB syntax*



As can be inferred from the discussion above, whether a given node in a tree qualifies as a head or as a phrase is something that can be encoded directly in the node itself. Thus, in structural terms, a head is nothing more than a node marked with a superscripted zero (a zero-level category). This is independent of whether that node has any complex internal structure or not.[19] Similarly, intermediate projections are nodes marked with a bar, and maximal projections are nodes marked with a double bar (or XPs in the more familiar notation). In all cases, the bar level of a particular node determines its structural behaviour to a large extent.

In the late 1980s and early 1990s, though, some researchers started questioning the adequacy of X-bar theory. For instance, Kornai & Pullum (1990) argue at length, on purely theoretical grounds, that bar levels are superfluous, and that they should be eliminated from phrase structure representations. Chomsky (1995b) reaches the same conclusion, in what has come to be known as the Bare Phrase Structure (BPS) hypothesis. The core idea of BPS is that structure building is a function of merger and movement (*qua* copy plus merger) alone. All phrase structural relations are to be expressed in terms of geometric relations between nodes and the features of the items involved. No reference should be made to X-bar-theoretic notions like bar levels. Thus, under BPS, (16) is redrawn as (17).[20] In this tree, *the* and *girl* are simply shorthand for the syntactic and semantic features contained in the determiner and the noun, not the actual spell out forms thereof.

17)



[19] It has sometimes been suggested (cf. Ackema 1999 and references) that the internal structure of a head should be assigned negative bar levels, i.e., X^{-1}, X^{-2}, and so on. This is orthogonal to the discussion here, though it shows that the GB definition of "head" is based not on structure itself, but on the bar levels assigned to particular nodes.

[20] Note that in early transformational grammar (see Postal 1964 and references) there was a rule that would collapse a tree like (16) into one like (17). The point of BPS, though, is that a representation like (17) is never derived from a base like (16). It is simply generated like that in the first place.

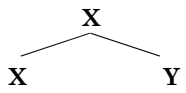
Now, as Chomsky correctly notes (see also Carnie 1996, 2000), once bar levels are eliminated, it is not possible to determine whether a given node qualifies as a head or as a phrase simply by looking at its label. Chomsky's hypothesis is that, instead of relying on a diacritic, the head vs. phrase status of any given node can be inferred from its position in relation to other nodes. Thus, a head (an X^{min}) is redefined as a node that doesn't dominate any projection of itself –i.e., a terminal node. In contrast, a phrase (an X^{max}) is a node that is not dominated by any projection of itself, that is, the topmost projection of any given terminal. Any other nodes cannot be defined, and, by hypothesis, cannot be targeted by any syntactic operation.[21] This is the hypothesis that I will adopt in this dissertation.

18) *Head*
A head is a terminal node.

3.2. The problem of complex heads

Carnie (1996, 2000) notes that the definition in (18) creates a problem. Consider the following structure.

19)



Does (19) qualify as a head or as a phrase? In principle, we want it to be (potentially) either. It could be a phrase, with X being its head. But we might also want it to be a complex head. In GB theory, the difference would lie in the bar level assigned to the higher X node: if it had a double bar, (19) would be a phrase, but if it had a zero, it would be a complex head. Now, under BPS, it is not possible to resort to bar levels. In fact, as Chomsky notes (see also Carnie 1996, 2000), the tree in (19) is unambiguously a phrase. Both Y and the lower X node do not dominate any projections of themselves, hence they qualify as heads (X^{min}). On the other hand, the higher X node does dominate a projection of itself. Consequently, it qualifies only as a phrase (X^{max}), not as a (complex) head. Therefore, one must conclude that heads should not have any internal structure, since something cannot qualify as a head unless it is a terminal element. This is entailed directly by the definition in (18).

However, there are several cases where heads look like they have internal structure –for instance, all the incorporation cases discussed in Baker (1988) and subsequent literature. Chomsky (1995a:322) gets around this problem by stipulating a word interpretation (WI) component. The key characteristics of WI are that (a) it takes two X^{min} as its input and returns another X^{min}, and (b), the internal structure of its output is not accessible to the syntactic component.[22] Or in other words, once WI is assumed, a head is no longer definable as a terminal element, but as an atomic element for syntactic purposes.[23] Technically, the WI

[21] See Epstein et al (1998) for discussion of this latter point.

[22] In Chomsky's own words, "WI ignores principles of C_{HL} within X^0".

[23] Matushansky (2006:70) also adopts this position, arguing that a head is a syntactically indivisible bundle of features.

component does the work it is designed to do (i.e., marking a complex structure as syntactically indivisible), but it is conceptually quite unappealing in that it misses the whole point of eliminating bar levels in the first place, namely, to develop a theory of phrase structure based on geometric relations alone, without reference to diacritics. Empirically, WI is also suspicious as it predicts that complex heads should be impenetrable for subsequent syntactic operations. However, we saw in section 2.2.2 that this is incorrect, and that the internal structure of complex heads is accessible. A final problem stems from Julien's (2002) claim that words need not correspond to syntactic constituents. As we shall see below, she shows that some complex words are simply a series of string-adjacent morphemes, but which do not necessarily form a constituent. However, Chomsky states that WI necessarily applies to a constituent (specifically, an X^0, see footnote 22). Therefore, WI cannot cover Julien's cases of non-constituent words.

In what follows, I propose to take Chomsky's and Carnie's initial conclusion seriously. That is, I will assume that a head is exclusively defined as a terminal element. Consequently, what have been called complex heads are actually phrases, again in conjunction with Chomsky's and Carnie's conclusions. However, I will argue below that complex heads are a special type of phrases, namely, one whose subparts form a morphological complex –i.e., a word. Developing this hypothesis requires some discussion of the status of words in syntax, to which I turn in the next subsection.

3.3. The definition of wordhood

We have seen that, under BPS, there is no inherent structural difference between a complex head and a phrase. Both are pieces of structure that are derived by combining morphemes in syntax. This is also the view taken in much work on Distributed Morphology, where the lexicon only contains an inventory of individual morphemes, not of combinations of morphemes: whenever we see a multi-morphemic constituent, it has been syntactically formed. This holds irrespectively of whether the constituent in question is labelled as a head or a phrase.

At first blush, one might quite reasonably think that BPS and Distributed Morphology are defective theories, given their failure to provide a means to differentiate complex heads from phrases. On a closer look, though, this failure might actually turn out to be an asset. To explain this idea better, let me equate "complex head" with "complex word" for a moment (this distinction will be revised later). Now, providing a definition of "(complex) word" as a syntactic construct has always proven to be a surprisingly difficult task. In fact, in recent years, the idea has emerged that this is so simply because words have no status in syntax. Julien (2002:16-35) examines several definitions of "word" and concludes that none of them is adequate. After completing her survey, she writes:

> …if wordhood cannot be associated with any particular structural morpheme configuration, it follows that grammar cannot have at its disposal any specific word-forming devices. If a word is just the accidental outcome of the manipulation of morphemes that takes place

> in syntax, it must be the case that words come into being in our perception; that is, words are *perceived* rather than *formed*. Hence, the correct formulation of the question […] is not "how are complex words formed?", but "how can two or more morphemes, each of which is a syntactic terminal, come to be perceived as one single word?" [Julien 2002:36, emphasis in the original]

Now, if a word is not a syntactic construct, what is it? Julien proposes to define it in the following terms:

20) *Word (Julien 2002:321)*
A word is a sequence of morphemes with internal cohesion and distribution.

By "internal cohesion and distribution", Julien means that the morphemes making up a word form a string that may not be interrupted by other material. Moreover, internal to the word, these morphemes consistently surface in the same position.

Note also that by defining "word" in terms of sequences of morphemes, it follows that the morphemes making up a word need not form a constituent in syntax, as long as they are spelled out adjacent to each other. This is an interesting idea, as it recognises linear sequencing as an intrinsic property of words. However, linearity is not a property of syntactic structures. Syntax simply creates hierarchical structures, and linear sequencing comes about when those structures are spelled out. Therefore, what (20) implies is that word formation is a process related to the phonological component. In turn, this conclusion also opens up the possibility that words need not correspond to syntactic constituents, as long as their component subparts stand in an uninterrupted linear sequence. The most notorious case of words that do not form a constituent is possibly Bantu verb morphology. Verbs in Bantu languages consist of a lexical root plus various inflectional morphemes on both sides of the root. Consider, for instance, the following Chichewa example (taken from Pylkkänen 2002:18).

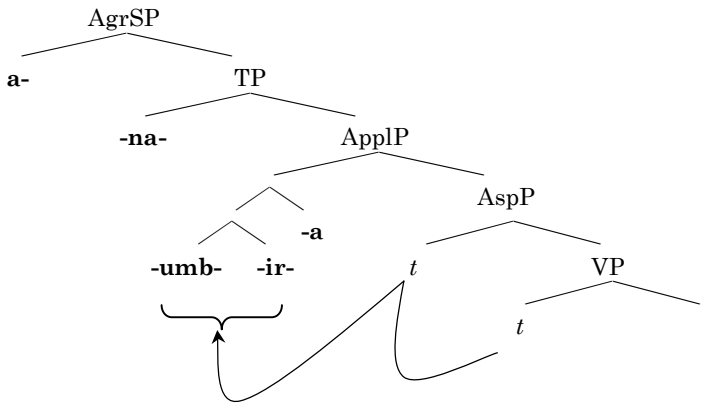
21) *Chichewa*

Mavuto	**a-na-umb-ir-a**	mpeni	mtsuko
M	SM.PST.mold.APPL.PERF	knife	waterpot

"Mavuto molded the waterpot with a knife"

The representation of (21) is given in (22). The current consensus within Bantu linguistics (which Julien also shares) is that forms like (21) involve head movement (incorporation) of the root into all the heads that surface as suffixes to the root (in this case, the applicative *–ir-* and the perfective *-a*). In contrast, the prefixal morphemes that encode tense and subject/object agreement are not taken to incorporate into the verb. They simply appear in their original merged position. Since nothing intervenes between them and the verb root, it gives the illusion that they form a unit. This is what Julien refers to when she writes that words are just sequences of morphemes that happen to be perceived as a unit.

22)



Now, in this particular example, the sequence of morphemes in question is not a constituent. However, there is nothing preventing other similar sequences from forming a constituent to the exclusion of the rest of the structure. Such cases are, effectively, complex heads –i.e., a constituent whose component subparts show enough cohesion to be perceived as a unit. This amounts to saying that "complex heads" are simply a subtype of words. I will adopt this hypothesis in the remainder of this chapter.

23) *Complex head*
A "complex head" is a word whose component morphemes form a constituent to the exclusion of the rest of the structure.

The immediate advantage of this hypothesis is that it solves the problem encountered by Chomsky and Carnie (cf. section 3.2), namely, the impossibility of defining complex heads in syntactic terms once we accept the elimination of bar levels. The solution I have proposed is based on taking Chomsky's and Carnie's conclusion quite seriously: if complex heads cannot be defined in syntactic terms, then they must be defined in non-syntactic terms. Under this hypothesis, complex heads are structurally phrases, exactly as predicted by BPS, and their special status is tied to a non-syntactic property, namely, that their subconstituent morphemes form a sequence that is spelled out as a unit. In the following pages, I explore the finer details of this idea.

3.4. Morpheme clustering

The theory of complex head I want to develop here is based on Julien's definition of word, reproduced in (20) above. This definition states that words (and, by extension, complex heads) are sequences of morphemes that happen to be perceived as a unit. Note that there is an important hidden assumption in this definition, namely, that there exists an algorithm that determines which sequences of morphemes constitute words and which don't. Without such an

algorithm, a statement like (19) would be vacuous. Therefore (19) must be augmented with (24).

24) *Complex words*
Every language contains a mechanism that specifies what (arbitrary) sequences of morphemes are spelled out as words.

A mechanism like this is necessary the moment one accepts that complex words are combinations of morphemes. In fact, as far as I can see, something along these lines is assumed in *every* theory of word formation, independently of other background assumptions and technical details. For instance, lexicalist theories (Williams & di Sciullo 1987; Ackema & Neeleman 2004) postulate a pre-syntactic word formation component with rules about possible and impossible words. In non-lexicalist approaches (Baker 1988, Hale & Keyser 1993, Borer 2005a, b), word formation is mostly done via head movement, so the problem lies in specifying which instances of head movement are allowed or banned in a given language. This can be done in several ways, among them, strong vs. weak features on the host head (Julien 2002), covert vs. overt incorporation (Svenonius 1994), [±AFFIX] specifications (Harley 2004, Roberts 2004), designated phase boundaries (Megerdoomian 2003), and so on.

Let me stress that something like (24) is really indispensable. We know that, both across and within languages, equivalent morphemes cluster in different ways, and that this variation is unpredictable and arbitrary. Therefore, this knowledge must be stored somewhere, in the same way as the spell out forms of individual morphemes. For instance, there doesn't seem to be a deep reason why English past tense is realised as an affix (*play-ed*) whereas future tense is a free morpheme (*will play*).[24] Also, in English, plurality in nominals is uniformly expressed through the affix *–(e)s* on the noun, but this is hardly the case universally. For instance, Borer (2005b:33) cites Kraho (Amazonian-Indian Creole), as marking plurality via the independent word *me*.

25) *Kraho*
a. Me kahay
PL woman
"Women"
b. Me par
PL foot
"Feet"

Similar alternations can be found in other contexts and languages. To cite just one more example, Megerdoomian (2003) examines the syntax of complex predicates in both Persian and Eastern Armenian. She presents extensive evidence that complex predicates are derived in the same way in these two languages, i.e., by topping a lexical core with various functional heads expressing causation, inchoativity, and other such notions. Yet, complex predicates are spelled out differently in each language. In Persian (26)a, complex predicates surface as two independent words (a lexical core plus a light verb), whereas in

[24] Note that saying that *–ed* is an affix (or phonologically deficient, or clitic-like, or…) and *will* is not simply amounts to a restatement of the question.

Eastern Armenian (26)b they surface as one single word (functional information being expressed in the form of inflectional affixes).[25]

26) a. Maen gowje-faeraengi-ro **xosk** **kaerd-aem** [Persian]
I plum.european.ACC dry.ADJ made.1SG
"I dried the tomato"

b. Yes p'amidor-a **cor-a-ts-r-ets-i** [Eastern Armenian]
I tomato.ACC dry.INCH.CAUS.PERF.PST.1SG
"I dried the tomato"

Therefore, the conclusion is that any theory of word formation must assume something like (24), so one might as well make full use of it. In what follows, I develop the hypothesis that head movement is a strategy to create complex words. Note that this is hardly a new idea: it is, in fact, a modern implementation of the intuition (dating back to the 1980s) that head movement happens to "pick up morphemes".

3.5. Word formation at the interface

Let us recapitulate. In section 3.3 above, I introduced Julien's (2002) definition of word, which is repeated here for reference. In section 3.4, I complemented it with the statement in (24), which I argued is necessary to account for which sequences of morphemes constitute a word in any given language.

20) *Word*
A word is a sequence of morphemes with internal cohesion and distribution.

24) *Complex words*
Every language contains a mechanism that specifies what (arbitrary) sequences of morphemes are spelled out as words.

As I already noted, the crucial part of these definitions is the view of words as *sequences* of morphemes. Linearity (sequencing) is not a property of syntactic structures, which may only be defined in hierarchical terms. Linearity only arises when those structures are spelled out, i.e., at the PF component. From this one can infer that wordhood (i.e., what specific sequences of morphemes constitute a word) is something that is determined at PF. Or, in other words, (24) is a statement about the phonological component. This conclusion is in line with work on Distributed Morphology (Halle & Marantz 1993 and much subsequent work), where it is assumed that narrow syntax only operates with syntactic and semantic features: the phonological exponents corresponding to them are inserted post-syntactically, at the PF component.

The attentive reader might have noticed that the discussion so far distributes word formation across two different modules of grammar, namely, syntax and PF: syntax manipulates morphemes to create a structure, and PF

[25] Cf. den Dikken & Sybesma (1999) for a similar argument. They claim that languages with serial verbs have the same structure as languages without them: a serial verb is simply a *v* head that is spelled out independently of the verb root.

translates that structure into a sequence of morphemes. If subparts of that sequence are specified to be words, then a morphologically well-formed structure results. The problem lies on the assumption that operations taking place in syntax are independent of the ones taking place at PF, and vice versa. In other words, what ensures that the structures created by syntax will be result in legitimate words when transferred to PF?

Borer (2005a) also considers this problem. In the same way as me, she assumes that syntax simply creates a structure out of syntactic and semantic features, which is then transferred to PF. Her position is that, as a matter of fact, there is nothing ensuring that syntax will provide an input for a well-formed phonological structure. She writes that, after all syntactic processes are completed, "it remains to be hoped that some post-derivational phonological storage area will be able to dispense […] a well-formed phonological representation" (Borer 2005a:31). In her system, if such a representation cannot be provided, a morphologically deviant derivation results. This is an issue that Borer (amongst others) simply chooses to live with. Although logically possible (and technically feasible), this is not a very elegant analysis, as presumably syntax will also generate structures that are ill-formed at PF.

This situation can be avoided if one allows for a more direct interface between syntax and PF. Note that this does not necessarily mean resorting to look-ahead. The entire idea of look-ahead is based on the premise that syntax and PF are sequentially ordered, i.e., the PF computation does not start until the syntactic derivation is finished. Note, however, that this idea has been *de facto* abandoned in analyses that assume multiple spell-out points (see Uriagereka 1999 and much work after him). In this line of analysis, PF and LF representations are computed along with the syntactic derivation.

In most current analyses, it is assumed that syntax and PF/LF interact at a number of designated points, namely, phase boundaries. It is only at these points that one can check that the combinations of morphemes created by syntax are morpho-phonologically well-formed. Note, though, that if one assumes that syntax and PF/LF can interact multiple times during the derivation, there is no *a priory* reason to limit this interaction to phase boundaries.[26] A radical implementation of this idea is the one proposed by Epstein & Seely (2003), in which every syntactic operation corresponds to an interface point.[27,28] Epstein &

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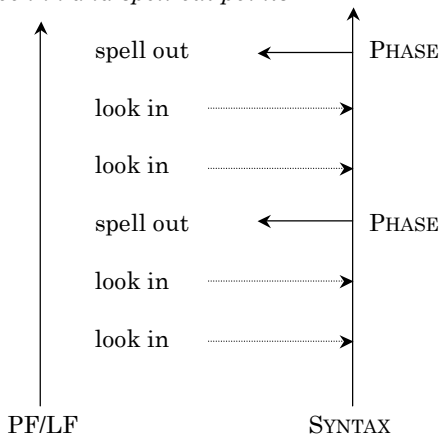
[26] This is also the logic in Uriagereka's (1999) original conception of multiple spell-out, where spell-out can happen at any point necessary, irrespective of the phase/non-phase status of the part of the structure in question.

[27] See Wodjak (2005) for a more detailed implementation. Michal Starke has also developed a similar hypothesis in a series of talks. However, as his work remains in unwritten form, I cannot comment on it properly.

[28] Ricardo Etxepare (p.c.) challenges this conclusion by observing that Spanish denominal/deadjectival verbs such as *encarcelar* 'to jail' seem to contain a full PP (*en carcel* 'in jail'). He argues that the choice of whether *en carcel* is spelled out as an independent PP or as part of a verb is contingent on the presence of a verbalising head dominating the PP, which in turn suggests that wordhood is only checked at specific points in the structure (contrary to what I have proposed here). I agree with him that this is a productive pattern. Note, though, that this analysis depends on the assumption that the *en-* part of *encarcelar* is a (locative) preposition. There are two problems with this assumption, though. The first one is that *en-* appears in several denominal/deadjectival verbs that have no correlate of this preposition in their non-derived form. For instance: *encarecer* 'to raise the price' (lit. *en-*

Seely's actual proposal is that every operation in narrow syntax triggers spell out of the structure to PF and LF. A slightly weaker model has been proposed by van Gelderen (2003). She claims that syntactic operations trigger what she calls *look-in points*, i.e., points where syntax interfaces with PF and LF, but without triggering actual spell out. The latter only takes place at phase boundaries. More specifically, look-in points are points where PF and LF can check whether the syntactic structure created so far would yield a semantically and phonologically well-formed representation. If that is not the case, PF and LF can drive syntactic operations so as to ensure that, at the phase level, the spelled out structure is well-formed both semantically and phonologically. A schematic representation of the model is given below.

27) *Look-in and spell-out points*



Van Gelderen uses this model to derive the properties of scrambling in Russian and Japanese in terms of prosodically driven movement. In particular, she claims that, in these languages, the element in focus must occupy a position where it can receive stress through the Nuclear Stress Rule. She hypothesises that, at every look-in point, PF can check what the outcome of the Nuclear Stress Rule would be for the structure in question. If stress doesn't happen to fall on the element that represents new information, PF can force certain movements in syntax, so as to ensure that constituent in focus ends up in the position where nuclear stress is assigned. The same reasoning can be used to derive word formation: at every check-in point, PF can check if the morphemes in the structure are arranged in ways that will eventually correspond to words. If that is not the case, then PF can force some movements to happen in syntax, so as to arrive at a morphologically

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expensive-V) is arguably derived from something loosely like *hacer (*en) caro* 'make expensive' –note the ungrammaticality with the preposition. Similarly for *encariñar* 'to grow fond of' (lit. *en*-fondness-V), derived from *coger (*en) cariño* 'to get fondness'. The second problem is that the type of derivation Etxepare proposes would have to be restricted to *en* PPs, as no other preposition can appear inside denominal/deadjectival verbs. I have no proposal of what *en-* is, but it seems likely to me that it does not correspond to a preposition.

well-formed structure. In the next section I argue that this may happen in two ways (each one with different consequences): either via head movement, or by removing the material that intervenes between the morphemes that constitute a word.

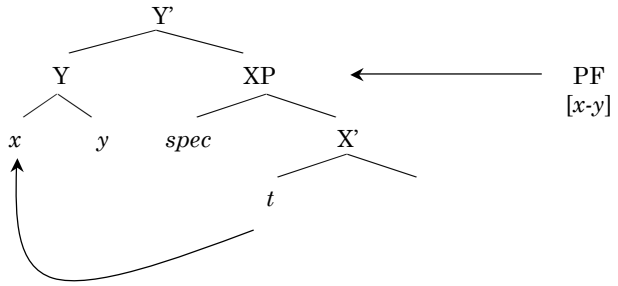
I am aware of the fact that the look-in model described goes against the idea (present in much current work) that syntax and PF/LF only interact in a few designated points –namely, phase boundaries. The look-in hypothesis is meant to account for the intuition, expressed in an increasing number of studies, that a number of syntactic operations are directly linked to purely phonological or semantic factors. For instance, it has been claimed that, in several languages, certain movements happen exclusively to create a well-formed prosodic structure (cf. Neeleman & Reinhart 1998 for Dutch; Zubizarreta 1998 for Spanish; Stjepanovic 1999 for Serbo-Croatian; Szendrői 2001 for Italian and Hungarian; Arregi 2003 for Basque; van Gelderen 2003 for Russian and Japanese). Similarly, Nilsen (2003) argues that certain movements take place solely for the purpose of deriving a legitimate semantic representation. In the same way as above, the question is how this intuition can be formalised. One possibility is to maintain the assumption that syntax and PF/LF only interact at a limited number of points. The consequence is that syntax would operate without regard to PF/LF requirements, and therefore it would also produce a number of semantically or phonologically illegitimate structures that would have to be filtered out. Admittedly, this type of approach would derive the correct results, but it seems to me that it would be missing the point. If such processes are indeed linked to phonological or prosodic requirements, then it is reasonable to consider the possibility that it is PF and LF themselves that are driving these processes –and not simply weeding out illegitimate structures.

In the alternative I am suggesting here, syntax only generates exactly those structures that are semantically and phonologically compliant. This is achieved by letting syntax have access to the requirements of PF and LF as the derivation progresses. Obviously, this hypothesis introduces an extra degree of complexity in the derivation, but I believe that the elimination of crashing derivations compensates for it. On top of this, this hypothesis also does justice to the intuition that certain movement processes (see above) happen for purely non-syntactic reasons, rather than denying this connection and capturing the relevant grammaticality patterns through post-syntactic filters.

3.6. The analysis

Let me start by considering a prototypical head movement case, in which *x* incorporates into *y*. Under the hypothesis we have constructed above, the trigger for this movement is a specification in the phonological component to the effect that *x* and *y* form a word. In order for this to happen, they must be rearranged so that they can be spelled out adjacent to each other, and head movement is one way to achieve this result. This is schematically represented in (28).

28) *Head movement*



As Lisa Cheng (p.c.) has pointed out to me, this conception of head movement is somewhat reminiscent of Chomsky's (2000) suggestion that head movement is a phonological operation. There are some important differences, though. For one, Chomsky literally meant that head movement happens at PF, that is, outside syntax. In the model I have proposed, on the other hand, head movement is still a syntactic operation, even though it is driven by a PF requirement. In this way, it is possible to capture the fact that head movement can feed LF interpretation. The reader is referred to the appendix to this chapter for discussion of some semantic effects of head movement.

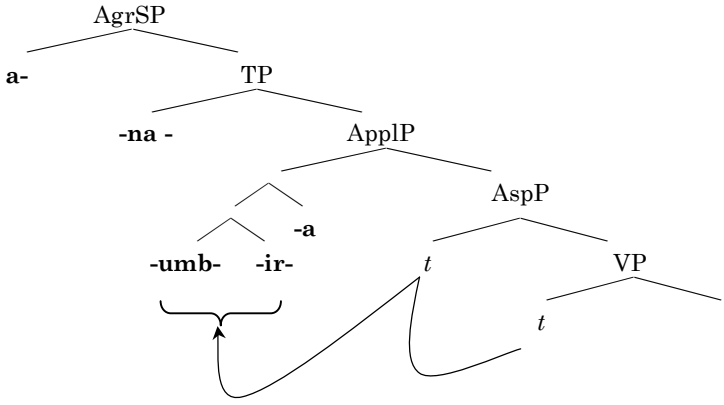
Let me turn now to the second option I mentioned above, namely, removing the material intervening between the morphemes that constitute a word. In section 3.3 above, I introduced Bantu verbal morphology as one case in which the morphemes making up a word do not form a constituent. I repeat the relevant example below, along with its structural representation.

21) *Chichewa*

Mavuto	**a-na-umb-ir-a**	mpeni	mtsuko
M	SM.PST.mold.APPL.PERF	knife	waterpot

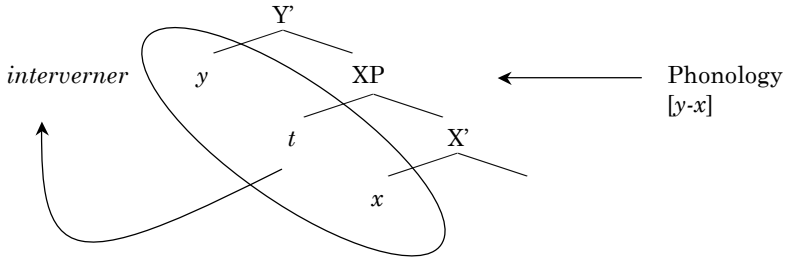
"Mavuto molded the waterpot with a knife"

22)



In order for *anaumbira* to be perceived as a word, it must be the case that all the relevant morphemes are adjacent to each other. This is not such a straightforward condition as it might seems at first sight, as these morphemes are distributed over a fairly large portion of the clause, so other constituents (both arguments and adverbials) could reasonably intervene between them. Therefore, one must ensure somehow that no non-verbal constituent *ever* appears in a position where it could disrupt the sequence of morphemes. This is an issue that Julien (2002) doesn't tackle, as it doesn't actually fall under the scope of her research question.[29] However, this restriction can be explained under the theory presented in the previous section. The idea is pretty much the same as the one used above to drive head movement –i.e., a specification that two morphemes (*x* and *y*) have to be spelled out adjacent to each other. Importantly, this need not be accomplished via head movement. The crucial thing is that the morphemes in question end up adjacent to each other. Head movement is one way in which this can be accomplished, but not the only one. I propose that a second way on ensuring adjacency is for syntax to move all overt intervening material away, as in the tree in (29).

29) *Word formation and evacuating movement*



I appreciate that the movement depicted in (29) is non-standard in that it takes place for a fully altruistic reason –namely, to allow *x* and *y* to be spelled as one word.[30] I do not think, though, that this constitutes any special problem. Bear in mind that what is non-standard is not the movement itself, but its trigger. Given the analysis of prefixation that Julien proposes, there isn't anything that keeps non-verbal constituents from being merged between the inflectional prefixes. Consequently, the intervening material has to be evacuated in order to derive a legitimate word. Therefore, the question becomes, what drives this movement? As discussed in section 3.5 above, one could assume that movement applies (or not) without regard for PF requirements. The derivations where something ends up intervening between the prefixes are simply filtered out. Such an analysis would derive the right pattern, but in a rather mysterious way: there is one step of movement that applies blindly, but which just happens to provide the environment for *x* and *y* to be spelled out adjacent to each other. In contrast, the

[29] In fact, Leston Buell (p.c.) has pointed out to me that, to the best of his knowledge, no analysis of Bantu verbal morphology attempts to explain why non-verbal material may not intervene in the sequence of prefixes. Existing analyses simply assume it as a fact.

[30] Thanks to Idan Landau (p.c.) for raising this issue.

alternative I have proposed explicitly acknowledges that there is a link between movement of the intervener and the adjacency of *x* and *y*. Thus, while introducing an extra degree of complexity (in the sense of a less restricted syntax-PF interface), it provides a reason why the movement in (29) should take place.

In short, by allowing narrow syntax to interact with the phonological component, we can implement the insight that head movement (and word formation at large) is triggered by a morpho-phonological requirement, rather than feature checking (cf. section 2.2.3). Second, we can capture Julien's (2002:36) intuition that syntax contains no word formation rules. Finally, we can derive the fact that complex heads seem to form a unit without actually marking them with a diacritic in syntax, which solves the problem that Chomsky (1995b) and Carnie (1995, 2000) encountered (cf. section 3.2).

3.7. Incorporation into empty heads

The hypothesis I have defended above is that head movement happens to create a larger morphological unit. However, as mentioned at the end of section 2.2.3 this hypothesis faces a problem in the case of incorporation into empty heads, as in this environment the output of head movement is phonologically identical to the input. In this subsection I offer some thoughts about the way in which such cases can be assimilated to the theory I have developed so far.

Let me begin by considering what amendments one would have to introduce in my analysis so as to allow for incorporation into empty heads. I have argued that head movement happens in order to create a larger morphological unit (i.e., a word). Under this hypothesis, it must be the case that empty heads can indeed create a larger morphological unit, so "morphosyntactically larger" cannot be understood simply in terms of adding overt morphemes. Rather, one has to understand it in the sense of increasing featural complexity, regardless of whether the extra features receive a phonological realisation or not –see Abels (2003:264) for a discussion of this idea. Under this view, incorporation into an empty head does result in a larger morphological unit, as it results in the addition of more features.

A related question is why this should be the case, i.e., why incorporation into empty heads should exist at all. The traditional view on this issue is that it happens so as to "lexicalise" the features of the empty head. That is, the features in question need to be associated to some overt lexical item that can "support" them, in the same way as, e.g., suprasegmental phonological features require the presence of a phonological segment. One interesting example is given by Aboh (2003), who observes that, in Gungbe, a yes-no question is expressed simply by a falling tone on the final syllable of the clause: consider the contrast between (30)a and (30)b. Example (30)c is given to show that the falling tone is not associated to any type of constituent (such as verbs), but just to whatever element happens to be at the right edge of the clause in question.

30) *Gungbe (Aboh 2004:29)*
a. Àsíbá tón
A go.out.PERF
"Asiba went out"

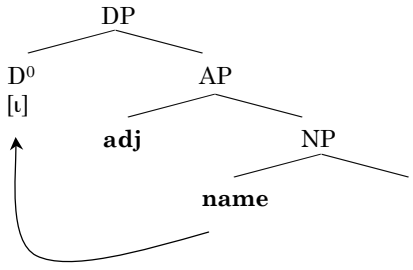
b. Àsíbá tôn
A go.out.PERF.Q
"Did Asiba go out?"
c. Mì yró Àsíbâ
you call.PERF A.Q
"Did you call Asiba?"

Aboh argues that the falling tone corresponds to a clause-final interrogative C head that has lost all phonological content except for its tone. As suprasegmental information cannot be expressed on empty morphemes, the tone gets imposed on the neighbouring syllable, independently of what constituent it corresponds to.

What I want to argue is that incorporation into an empty head should be seen as a similar process, that is, supporting a feature that otherwise wouldn't get any lexical realisation. Consider, for instance, Longobardi's (1994) observation that proper names in Italian may follow adjectives only if a determiner is present in the structure (31). He argues that (31)c is a consequence of the name being generated in N^0 and incorporating into a phonologically null D^0 head, as in the tree in (32). The trigger for this movement is the requirement that proper names be interpreted as definite. However, the definiteness operator (ι) is not generated in N^0, but in D^0. In the absence of a determiner, the proper name must move up to D^0 so as to support the [ι] operator.

31) *Longobardi (1994:624)*
a. E' venuto [DP il vecchio Cameresi]
is arrived the old C
"Old Cameresi has arrived"
b. * E' venuto [DP vecchio Cameresi]
is arrived old C
"Old Cameresi has arrived"
c. E' venuto [DP Cameresi vecchio]
is arrived C old
"Old Cameresi has arrived"

32) *N-to-D movement of proper names*



This particular instance of movement might be easy to detect because the semantics of proper names requires a definiteness operator, hence one may infer the existence of this head even in the absence of an overt exponent. In other cases, however, this might not be so straightforward. A particularly interesting

case is the correlation between verb movement and verbal inflection. During the 1980s and up to the mid 1990s, it was believed that this was a bidirectional dependency: a given language will have verb movement only if its inflection is rich enough.[31] However, more recent studies have shown that this generalisation is incorrect, and that the correlation is best stated as a unidirectional dependency. That is, rich inflection will trigger verb movement obligatorily, but a language may still exhibit verb movement in the absence of rich inflection.

This correlation has been studied in deeper detail by Thráinsson (2003), and Bobaljik (2003), in reference to the loss of verb movement in a dialect of Faroese.[32] They claim that this phenomenon is linked to the impoverishment of verbal inflection, but not in a direct way. In particular, they show that there is a lag of over 100 years between the loss of verbal inflection and the loss of verb movement. This represents various generations of speakers that had verb movement into an empty inflectional head. Thráisson and Bobaljik speculate that this movement is diagnosed on the basis of the relative positioning of the verb with respect to negation and VP adverbs. Although Thráinsson and Bobaljik are not very explicit about it, one can assume that the relevant inflectional head was still there, but without any phonological content. Therefore, verb movement was necessary to "lexicalise" its features. In this respect, this movement was similar to the N-to-D movement operation discussed above. The reason why the verb movement rule was eventually lost was because (i) it wasn't forced by any semantic factors, unlike N-to-D movement; and (ii) because the evidence in favour of it was too weak, based solely on word order in a limited set of sentences (i.e., those containing negation or a VP adverb). Eventually, we may assume that the inflectional head in question disappeared altogether from the phrase structure of Faroese.[33]

In sum, we have seen that incorporation into empty heads can be implemented under the assumption that features without a phonological realisation can also contribute to the building of a larger morphological unit: head movement is a strategy to express the features of those heads overtly. However, the two cases I mentioned (N-to-D movement of proper names and verb movement in Faroese) show that this is a restricted phenomenon in that it requires two types of evidence: first, evidence that the empty head in question is present in the structure; and second, evidence that there is indeed movement to it. Note that, by requiring two independent types of evidence, we predict that there are empty heads that don't get anything incorporated into them. This seems to be correct, as suggested by the existence of languages without T-to-C movement in interrogatives, where a C head can easily be inferred on the basis of the meaning of the sentence. This suggests that it is not a universal requirement for empty heads to be lexicalised: in the same way as overt heads, some of them trigger incorporation of a lower head, and some others don't. In turn, this

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[31] There are various hypotheses of what qualifies as "rich" inflection, but I will not discuss them as this is not relevant to the discussion. Interested readers are referred to Koeneman (2000) and Bobaljik (2003).

[32] Thráinsson also mention various dialects of Swedish as having undergone the same process.

[33] See Thráinsson (1996) and Bobaljik & Thráinsson (1998), who argue that, for any given language, inflectional heads are only generated if there is sufficient evidence in favour of them (*contra* universalist proposals like Rizzi 1997).

reinforces the idea that the morphological trigger of head movement (section 2.2.2) should be viewed in terms of adding more features to a word, irrespectively of whether they receive a phonological realisation or not.

3.8. Ordering and cyclicity

In the analysis I have developed so far, PF not only contains information about which morphemes cluster together to form words: it also specifies the order in which those morphemes are linearly ordered. Thus, given two morphemes *x* and *y*, such that *x* is the stem and *y* an affix, PF determines whether *y* will be spelled out as a prefix or a suffix on *x*. If *y* is a suffix, head movement will apply, so as to derive the order [*x*-*y*], as in (28). On the other hand, if *y* is a prefix, evacuating movement will obtain, as in (29). Now, the difference between (28) and (29) is deeper than whether the resulting order is [*x*-*y*] or [*y*-*x*]: while in the case of head movement the two morphemes end up forming a constituent to the exclusion of the rest of the structure, this is not so in the case of evacuating movement. In this section, I want to show that this difference between the two strategies of word formation is indeed necessary. The argument is based on the ordering possibilities of combinations of more than two morphemes. More specifically, I will show that (a) head movement and evacuating movement can be interspersed to a degree, but not with total freedom; and (b) the restrictions follow from the structural difference proposed above.

Julien (2002:234-235), on the basis of an exhaustive cross-linguistic survey, makes the generalisation that prefixal morphemes must appear necessarily in their merged order, whereas suffixal morphemes necessarily appear in the mirror image of their merged order. For instance, when considering the distribution of aspect and tense markers with respect to verb roots, she finds that there are only three possibilities: (i) if both tense and aspect are prefixal, the order will be [tense-aspect], as in (34)a; (ii) if both are suffixal, the order will be [aspect-tense], as in (34)b; (iii) if one is suffixal and the other one prefixal, it will be tense that is a prefix and aspect that is a suffix (34)c. Any order that deviates from this pattern is ungrammatical (35).[34] The status of these orders can be summarised in the generalisation in (33).

33) *Julien's generalisation*
Morphemes suffixed to a root appear necessarily in the mirror image of their merged order, whereas prefixed morphemes appear in their merged order.

[34] Some languages show an A V T pattern, in apparent contradiction to Julien's generalisation. On closer inspection, though, it appears that these languages tend to place the object between the verb and the tense marker, so their actual order is A V O T. This suggests phrase movement of [A V O] to the left of the tense marker, making these data irrelevant for the generalisation, which is only concerned with cases in which aspect, tense, and the verb root form an uninterrupted unit.

34) *Attested morpheme orders*
- a. (S) T A V (O)
- b. (S)(O) V A T (O)
- c. (S) T V A (O)

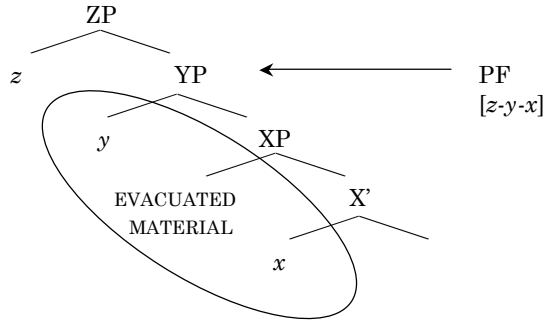
35) *Unattested morpheme orders*
- a. * (S) A T V (O)
- b. * (S) A V T (O)
- c. * (S) V T A (O)
- d. * S A V T O

This generalisation provides strong support for a structural difference between head movement and evacuating movement. In more technical terms, one can reformulate Julien's generalisation as (36)

36) *Patterns of suffixation and prefixation*
- a. Prefixation (via adjacency) only feeds further prefixation
- b. Suffixation (via head movement) feeds both further suffixation and prefixation.

Consider the relevant derivations in a bit more detail. In a sequence of three heads (from bottom to top, *x*, *y* and *z*), suppose that *x* does not incorporate into *y*, but rather all intervening material is removed so as to form an [*y*-*x*] unit under adjacency. Next, the higher head *z* is merged. The resulting configuration is given in (37), and from it, it is obvious why the [*y*-*x*] unit cannot invert with *z*: since [*y*-*x*] is not a constituent to begin with, it cannot be moved across *z*. Therefore, the order [*y*-*x*-*z*] is correctly blocked. If *z* is to form a unit with [*y*-*x*], the only possibility is by prefixation under adjacency [*z*-*y*-*x*], deriving the second part of the generalisation in (36).[35]

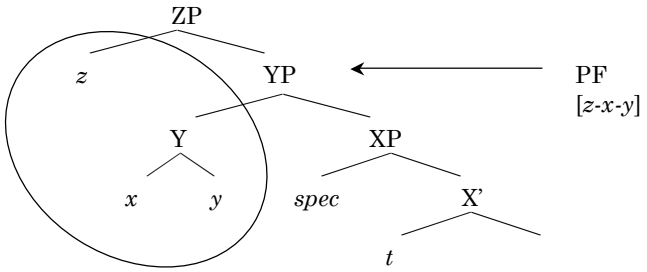
37) *Multiple prefixation*



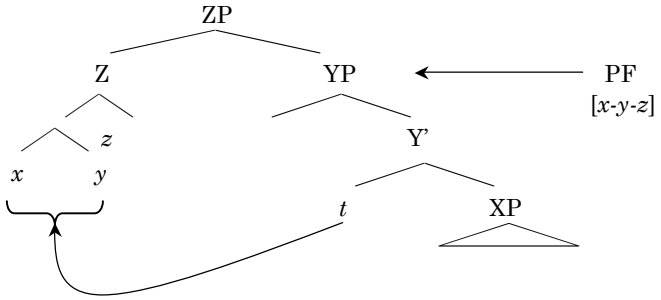
[35] Of course, it would still be possible to move the entire YP to SpecZP. Note, however, that this would also pied-pipe whatever complements *x* may have, which would result in an [[*y*-*x*-[…]]-*z*] order. See also the discussion in the previous footnote.

In contrast, if *x* incorporates into *y*, creating the unit [*x*-*y*], both possibilities are open. This unit forms a constituent (38), so unlike [*y*-*x*] in (37), it can be moved and incorporated into *z*, deriving [*x*-*y*-*z*]. Alternatively, *z* may also undergo prefixation under adjacency (39), which would yield the order [*z*-*x*-*y*]. However, the latter alternative would leave us in the same position as (37) above: since [*z*-*x*-*y*] does not form a constituent, any higher morphemes that must be integrated within this word may only do so via prefixation under adjacency, not via incorporation.

38) *Suffixation feeds prefixation*



39) *Suffixation feeds further suffixation*



We have seen that, by having a structural difference between head movement and evacuating movement, we can derive Julien's generalisation about the cross-linguistic patterns of morpheme ordering. For the moment, I will accept this difference as is, but I will get back to it in section 4.2.3 below.

3.9. Locality of head movement and movement of complex heads

As discussed in section 2.1, the locality of head movement in the GB era was regulated through the ECP, which entails that a head could only move if it was properly governed by the host head. This accounts for the strict locality of head movement, where a head cannot move over a higher head. Equally importantly, it

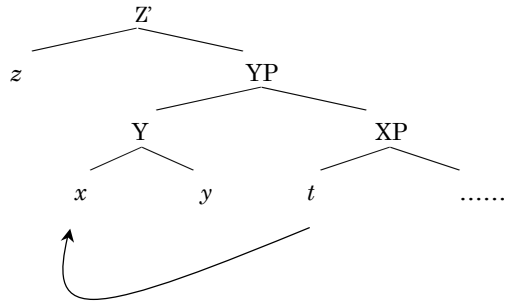
also accounts for the observation that incorporation of (or out of) specifiers and adjuncts is impossible, as these are not governed positions. Now, the notion of government was eliminated with the advent of the minimalist program (Chomsky 1993, 1995a), and consequently so was the ECP, which is irreducibly based on government. As far as I understand, this was done for theory-internal reasons alone, namely, the fact that government wasn't a "conceptually necessary" relation. Whether this move was justified or not is a matter of debate, but what is clear is that the locality of head movement could no longer be subsumed under the ECP. Some other mechanism had to be found. As already mentioned in section 2.1 above, it has sometimes been suggested (cf. Roberts 2001) that the relevant notion could be relativised minimality, as defined by Rizzi (1990). I don't think, however, that this is a workable option. Since relativised minimality is based on features, it would be necessary to find a feature common to all heads, such that it would block a head from skipping over another. However, I cannot see what such a feature would be. Moreover, this approach would have nothing to say about why incorporation of specifiers or adjuncts is categorically excluded. If anything, it would predict it to be possible if no interveners are present.

In essence, the HMC/ECP approach defined a privileged relation between a head and the head of its complement, and this is what should be captured by any approach to the locality of head movement. I know of two ways of implementing this intuition. The first one (Svenonius 1994; Julien 2002; Matushansky 2006) capitalises on the fact that the domain of head movement is the same as the domain of c-selection, which is taken as evidence that both phenomena are just different manifestations of the same mechanism. More specifically, it is proposed that c-selection is a feature checking relation between a head and the head of its complement, which is realised via head movement. In the second one (Brody 1997; Abels 2001a; Bury 2003), the privileged relation between a head and the head of its complement is taken to be a primitive of syntax: complements are stipulated to stand in a different structural relation to a head (domination) than specifiers and adjuncts (sisterhood). I will not attempt to make a choice between these two options, as that would require a rather lengthy discussion. Moreover, for my purposes here, it is enough to assume that there is a way to define the relation between a head and the head of its complement. Both hypotheses can do this, so I will simply take (40) as a descriptive statement and leave its deeper underpinnings as a question for future research.

40) *Complex word formation*
A head (i.e., a syntactic terminal) may enter a process of complex word formation with the head of its complement.

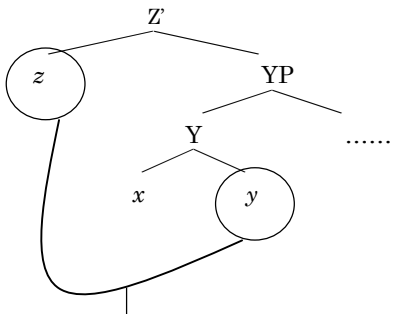
What I want to determine here is how (40) squares with the theory of head movement developed above. To understand the situation, consider the following tree, in which x has incorporated into y.

41)



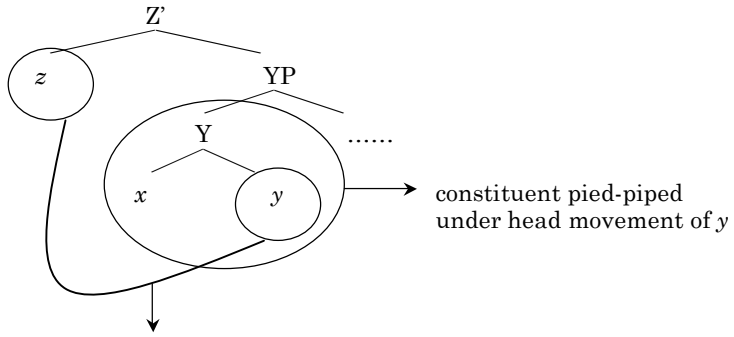
Suppose that the complex head [*x*-*y*] is to incorporate into *z*. According to (40), this is possible if one can establish a complementation/c-selection dependency between *z* and the head of YP. Now, we established in section 3.1 above that only terminal nodes qualify as heads, so the head of YP in (41) is *y*, not Y. Consequently, the relation that feeds head movement holds between *z* and *y*.

42)



Therefore, since complex heads themselves cannot enter into the required complementation/c-selection relation, it follows that, in a strict sense, there can be no head movement of complex heads. What I want to propose here is that movement of complex heads must be redefined as movement of a bare head pied-piping some extra constituents –namely, the ones that the bare head is specified to be spelled out with, as represented in the tree in (43) below. Pied-piping is obligatory because if it didn't happen, the requirement that *x* and *y* be spelled out together would be violated.

43) *The derivation of successive cyclic head movement*



Interestingly, this view of complex head movement derives the observation in section 2.2.2 above, namely, that while excorporation seems to be truly unattested, the internal structure of complex heads is, to some extent, visible for syntactic processes. Under this hypothesis, excorporation is banned because it would break the adjacency between the subconstituents of a complex head. On the other hand, a complex head is not a privileged domain in purely syntactic terms, so there is no reason why its parts should be inaccessible for other syntactic operations.

3.10. Summing up: the definition of (complex) head

The goal of this section was to derive a definition of "complex head" that didn't make reference to bar levels. The hypothesis I have defended is the following.

23) *Complex head*
A "complex head" is a word whose component morphemes form a constituent to the exclusion of the rest of the structure.

The core of this hypothesis is that complex heads are just a subcase of the larger category of complex words, which I have argued arise at the interface between syntax and PF –i.e., through a specification that the morphemes in question have to be spelled out together. This hypothesis captures a number of aspects of complex heads, namely, the intuition that head movement is morphologically triggered, as opposed to feature checking requirements, the observation that complex heads are transparent for syntactic and semantic operations other than movement, and the cross-linguistic patterns of morpheme ordering in complex words. On top of this, it creates a possibility to define complex head without actually introducing a special diacritic in syntax, which in turn allows us to maintain the strong hypothesis that a head is exclusively defined as a terminal node. Moreover, as we shall see in section 4 below, it can set the basis for a

unified theory of movement, in which the distinction between head and phrase movement is minimised to a large extent (with a possibility to eventually eliminate it entirely).

4. Towards a unified theory of movement

In section 3, we have seen how it is possible to define "complex head" in a system that doesn't incorporate bar levels. The goal of this section is to go a little step further and set the foundations of a theory of movement in which head adjunction does not exist. That is, I will propose that *all* movement is movement to a specifier position, irrespective of the size of the moving constituent. As we shall see, this hypothesis makes the interesting prediction that there ought to be cases of (complex) heads undergoing what would otherwise be categorised as phrase movement. I will only say a few words about this prediction, as it will be explored in full detail in chapters two and three. The larger part of this section will be devoted to solving the most obvious problem raised by this analysis, i.e., how to analyse the cases of head movement discussed in the previous section, where I explicitly assumed head adjunction. I will adopt the solution developed by Matushansky (2006), whereby head adjunction is the outcome of two independent operations: movement to a specifier position plus morphological merger.

4.1. Eliminating head adjunction

In section 2.1, we saw that the GB rationale for distinguishing head and phrase movement stems from Emonds' structure preservation hypothesis, which ensures that there is a one-to-one correspondence between categories and syntactic positions: X^0 categories may only move to X^0 positions, whereas XP categories may only move to XP positions. This restriction became essentially meaningless with the introduction of BPS (Chomsky 1995b), which eliminated bar levels from phrase structure representations. However, this doesn't mean that the notions of "head" and "phrase" cannot be defined anymore: it simply means that they have to be defined without making reference to bar levels. Thus, Chomsky (1995b) proposes to define a head (X^{min}) as a node that doesn't dominate any projection of itself, i.e., a terminal node –cf. the definition in (18) above. In contrast, a phrase (X^{max}) is defined as a node that is not dominated by any projection of itself. With this much in place, Chomsky proposes the Chain Uniformity Condition (CUC), whose formulation I reproduce below.

44) *The Chain Uniformity Condition*
A movement chain must be uniform with regard to the phrase structural status of its links.

What (44) means is that, given any movement chain, if the upper link qualifies as an X^{max}, so must the lower link. Similarly, if the upper link is an X^{min}, so must the lower link. Chains that do not abide by this definition are ill-formed. In other

words, Chomsky is defining the Chain Uniformity Condition to do the same job as structure preservation in earlier version of the theory. I don't believe this reformulation is correct, though (recall Harley's remark quoted in page 11). Before raising my objections, let me go through the entire set of conditions Chomsky imposes on movement chains.

45) *Chomsky's conditions of movement chains*
   a. **Cyclicity**: movement must target the root of the tree.
   b. **Last resort:** movement must have a trigger.
   c. **Uniformity**: movement chains must be uniform with respect to the phrase structure status of its links.

Chomsky writes that these conditions are "natural", but he does not develop this qualification further. Let us explore it, then. Cyclicity is a general condition in grammar, holding not only in narrow syntax, but also in PF and LF.[36] Hence, it is reasonable that it should hold for movement chains as well (note that Cyclicity also subsumes the c-command condition on traces, cf. Epstein et al 1998; Epstein 1999). Similarly, Last Resort can be argued to be natural in the sense that grammatical operations in general are assumed to take place only if there is a reason for them,[37] so it is expected that the creation of a movement chain should only happen if there is a suitable motivation.

Given this reasoning, Uniformity stands in a delicate position, as there doesn't seem to be anything else in the grammar that it could be relevant for. Its only purpose seems to be to restrict the shape of movement chains. In fact, Uniformity is not even extensible to non-movement dependencies. Consider, for instance, the following Spanish example.

46) Ayer vinieron [Pedro y Juan]
yesterday came.3SG P and J
"Pedro and Juan came yesterday"

What we have here is a case of a coordinate subject triggering plural agreement on a verb. Now, each of the conjuncts is singular, therefore the verb must be agreeing with the entire coordinate structure –i.e., a phrase. On the uncontroversial assumption that agreement is encoded in a functional head (say, AgrS), examples like (46) instantiate a dependency that violates Uniformity. Thus, in order to derive (46), one must assume that Uniformity only applies to movement dependencies.

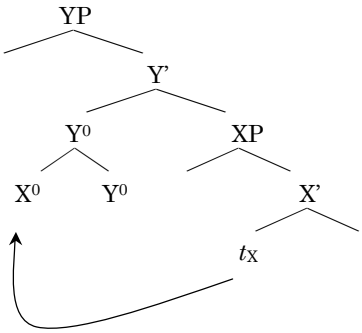
Even granting a restriction like this, Chomsky himself acknowledges that Uniformity must be dropped in the case of head-to-head movement –that is, the

[36] Obviously, (45)a is a syntax-specific formulation of cyclicity. Different formulations would be necessary to cover semantics and phonology, but the underlying principle would be the same in all cases: one is not allowed to backtrack and modify a feature embedded in the structure created so far.

[37] Again, this doesn't hold only for narrow syntax, but also for LF and PF operations. To give an example of each, existential closure is considered to apply only if there are any unbound variables left in the structure, and (de)voicing of consonants only happens in specific phonological environments.

one process it is supposed to account for. Consider a typical such configuration, in which X^0 incorporates into Y^0.

47) *Head-to-head movement*



In this structure, t_X qualifies as an X^{min}, since it does not dominate any projection of itself. However, it does not qualify as an X^{max}, since it is dominated by various projections of itself (namely, X' and XP). Now, X^0 (the head of the movement chain adjoined to Y^0) qualifies as an X^{min} for the same reason as t_X. Importantly, it is also an X^{max}, since it doesn't project any further in this position. Thus, (47) depicts a situation in which the links of a movement chain have a different X^{min}/X^{max} status, in contradiction to the Chain Uniformity Condition.[38]

The conclusion at this point is that the Chain Uniformity Condition raises serious problems, and that it cannot be maintained in a system like BPS. There are two possible courses of action one can take at this point. One is to abandon BPS and to revert to a more traditional system, in which the notions of "head" and "phrase" can be expressed more easily –and, by extension, "head movement" and "phrase movement. The other possibility is to stick to BPS and drop Uniformity instead. In this dissertation, I adopt the second hypothesis, which results in a system in which movement chains must only respect Cyclicity and Last Resort.

4.2. Generalised movement to specifier position

4.2.1. Head movement to specifier positions

Suppose that we grant that movement chains only need to respect the conditions on cyclicity and last resort. The theory of movement entailed by this hypothesis is one in which movement processes are not sensitive to the structural distinction between heads and phrases. That is to say, both heads and phrases behave in the same way when it comes to movement processes: both move to specifier/adjoined

[38] Chomsky justifies this exception by postulating a word interpretation (WI) component that regulates adjunction to heads. The status of this component was already discussed in section 3.2. Even if Chomsky's reasoning were correct, it would only reinforce my point, as it would show that Uniformity has an extremely restricted domain of application.

positions, and both respect the same set of locality conditions.[39] This theory makes the prediction that, given the appropriate conditions, it ought to be possible to move a bare head as though it was a phrase, i.e., move to a specifier position across indefinitely long distances as long as no island boundaries are crossed. Now, it is one thing to argue that a particular operation is theoretically possible, and a quite different thing to show that it is attested in the real world. This is precisely the goal of chapters two through four of this dissertation, in which I examine the syntax of the three constructions exemplified below. The Spanish predicate cleft construction in (48)a will be analysed in chapter two; the Hungarian infinitive focalisation construction in (48)b will be in chapter three; and, finally, Hungarian predicate clefts (48)c will receive an analysis in chapter four.

48) a. Leer, Juan ha leído un libro [*spanish*]
read.INF J has read a book
"As for reading, Juan has read a book"

b. OLVASNI nem fog [*t*] János egy könyvet [*hungarian*]
read.INF not will.3SG J a book
"János will not READ a book"

c. Olvasni, olvasott János egy könyvet [*hungarian*]
read.INF read.3SG J a book.ACC
"As for reading, János read a book"

The argumentation in the chapters below is based on showing that, in the examples in (48), the fronted infinitive reaches its surface position through A-bar movement. Beyond that, it will be shown that this movement can*not* be reduced to remnant predicate movement, simply because both Spanish and Hungarian lack the means to produce a remnant constituent in all the necessary cases. We will see that the stranded predicate-internal constituents in (48) cannot possibly have moved out of the relevant category prior to predicate clefting. The immediately consequence is that any remnant movement analysis is ruled out. The conclusion, then is that it must be a bare head that is undergoing A-bar movement –exactly as the theory of movement I have proposed predicts is possible. As these examples will be studied in full detail in chapters two through four, I will not linger on them any more.

4.2.2. Reanalysing head-to-head movement

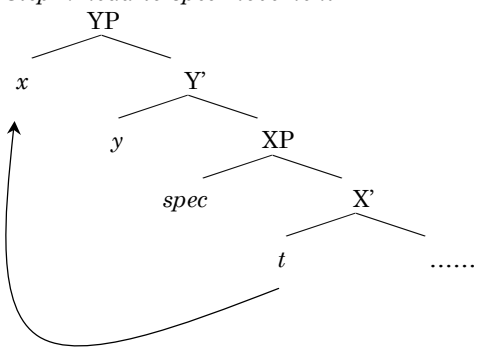
At this point, there is one obvious question that must be answered. If all movements take place to specifier positions, how is head-to-head movement to be reanalysed? I will adopt the solution that has been proposed by Matushansky (2006), whereby head adjunction is the result of a rebracketing mechanism that operates under structural adjacency (i.e,. the morphological merger mechanism proposed by Marantz 1984, Halle & Marantz 1993).[40] In particular, Matushansky's proposal is also motivated by the goal of deriving a theory where

[39] For the purposes of this thesis, I will follow the standard assumption that locality of movement is regulated by phase theory and relativised minimality.

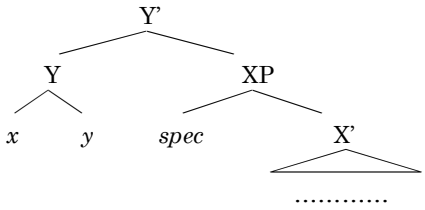
[40] Roberts (2004) also hints at this possibility, but doesn't develop it so explicitly.

all movement happens to specifier positions. Her proposal is that a head may move to the specifier position of a higher head, as in (49). At this point, morphological merger applies, combining the two adjacent heads into one constituent (50).

49) *Step I: head-to-spec movement*



50) *Step II: morphological merger*



This mechanism is cyclic, so after (50) it would be possible to take the newly formed unit [*x-y*], move it to the specifier of a higher head, and apply m-merger again. Note that this entails that m-merger must happen in syntax, immediately following the movement of the lower head. This is actually the opposite conclusion that Matushansky (2006:94-95) reaches: she argues that m-merger is a morphological operation, happening outside syntax. She assumes a multiple spell out model, in which every syntactic configuration that can feed m-merger is spelled out to the morphological component, rebracketed, and then plugged back into syntax for subsequent operations. Note that, under this hypothesis, spell out is an integral part of m-merger: therefore, it is predicted that the output of m-merger is syntactically opaque. Matushansky claims that this conclusion correctly predicts the ban on excorporation. However, we already saw in section 2.2.2 that complex heads are transparent for syntactic processes other than movement, which suggests that m-merger may not involve spell out to the morphological component. Now, what is crucial for m-merger to take place is that there is some interaction between PF (morphology) and syntax. This can be achieved through the look in/spell out mechanism defined in section 3.5. This system allows m-merger to happen in syntax, without spelling the structure out.

Therefore, the transparency of complex heads is preserved, although the ban of excorporation has to be derived in a different way (cf. section 3.9).

Furthermore, Matushansky's analysis derives the Mirror Principle (cf. section 2.2.1). The initial movement of the lower head to the specifier of the higher one results in the two heads reversing their linear order –i.e., they appear in the mirror image of their merged order. The subsequent m-merger operation simply creates a different constituent structure, but it doesn't affect the linear order. The only required assumption is that specifiers universally merge to the left of their heads, which I believe is not controversial at all. This is a welcome improvement over the classical analysis of head movement, where Mirror Principle effects had to be stipulated.

In a nutshell, what Matushansky is proposing is that head-to-head movement should be analysed as head-to-spec movement. However, since I have argued that head-to-spec movement is the only type of movement available, one important question arises: how can one distinguish long distance head-to-spec movement (section 4.2.1) from the more local variety that replaces head-to-head movement? The important difference is that, while the latter always results in m-merger, the former never does. Let me, therefore, capitalise on this difference and claim that local head-to-spec movement is a word formation strategy, as discussed throughout section 3: it happens so that two morphemes can be spelled out as a word, and it is this morphological specification that triggers m-merger (cf. section 4.2.3 below for additional discussion). In contrast, long head-to-spec movement has the same trigger as run-of-the-mill phrase movement, i.e., checking of formal features (or, in more contemporary terms, Agree plus EPP satisfaction), reinforcing the view that long head-to-spec movement is formally identical to phrase movement.

4.2.3. Constraints on m-merger

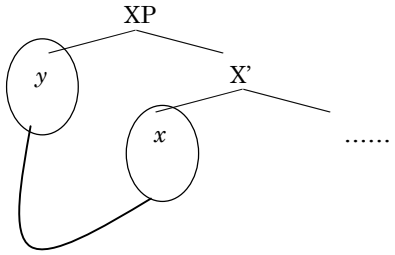
The first step of Matushansky's approach to head movement is quite straightforward, as movement to a specifier position is the only type of movement available in the system I have proposed above. The second step, morphological merger, requires some more comment. This operation was introduced in the early 1980s (see, e.g., Marantz 1984) as is also assumed in current work on Distributed Morphology. In the context at hand, its job is to reconfigure phrase structure so that two adjacent elements that do not form a constituent end up forming one. Matushansky is not very explicit about the structural conditions governing m-merger, and she simply states that "it applies to two heads in a particular (spec-head) configuration" (Matushansky 2006:94). Let us explore this configuration in a little bit more detail.

As I mentioned above, the standard view takes m-merger to operate under adjacency. I take "adjacent" to mean that nothing at all intervenes between the nodes in question –not even phonologically null material. This relationship is defined in more formal terms in (51), and exemplified in (52). The trees in (53) and (54) illustrate two environments where m-merger is blocked. In (53), the structural requirement is met, as the mother node of *y* immediately dominates the mother of *x*. However, *z* disrupts the linear adjacency relation, making m-merger impossible. The tree (54) is an example of a case where both the

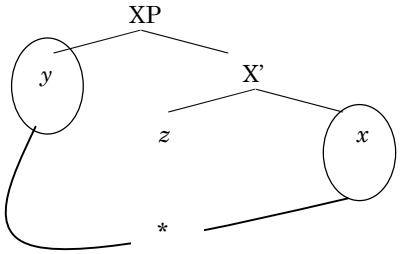
structural and the linear adjacency requirements are violated, and m-merger is consequently also blocked here.

51) *Morphological merger*
Two constituents *y* and *x* may undergo m-merger if
a. *y* and *x* form a complex word, or a subpart of one
b. *y* and *x* are linearly adjacent
c. *y* and *x* stand in a spec-head configuration.

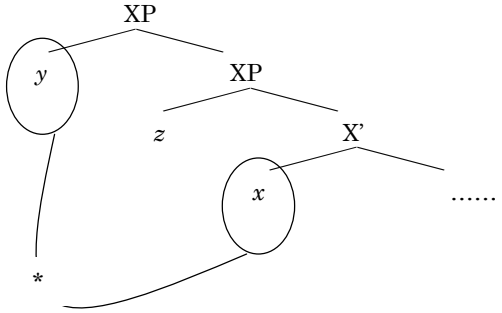
52) *Morphological merger possible*



53) *Morphological merger merged by intervening z*



54) *Morphological merger blocked by intervening z*



Note, further, that (51)c entail one extra restriction on m-merger, namely, that m-merger cannot apply across XP boundaries, even if the two elements in question are adjacent. This conclusion is also supported by the patterns of

prefixation/suffixation discussed in section 3.8. There, I argued that Julien's generalisation in (33), as well as the patterns in (34) and (35), can be derived only if [prefix-stem] sequences never form a constituent: rather, the prefix and the stem are always the heads of separate projections. If m-merger could apply across XP boundaries, [prefix-stem] sequences could actually be turned into a constituent. However, if this was possible, one could no longer derive Julien's generalisation, from which we must conclude that m-merger cannot cross XP boundaries. Hence, it can only apply between a head and its inner specifier, as defined in (51)c.[41]

One of Matushansky's observations is that there seem to be no cases in which head movement is not followed by m-merger. Such cases would be easy to identify, as they would feed excorporation. However, Julien (2002) has argued extensively that excorporation does not seem to exist in natural language, which, if correct, entails that head movement always triggers m-merger. One can implement this intuition by positing that m-merger applies whenever possible, i.e., in any case where all four conditions in (51) are met. As these are quite stringent conditions, it is ensured that m-merger will only apply in a very small number of contexts.

4.2.4. Complex heads and m-merger

Let me go back to condition (51)c above. This condition states that m-merger is possible under structural adjacency of the two constituents in question, as long as it results in the creation of a complex word. However, it makes no mention of the structural complexity of the two constituents. This much is necessary to account for cases of successive head movement, in which one of the constituents is a complex head –properly, a phrase, as argued throughout section 3. This is somewhat reminiscent of Carnie's (1996, 2000) proposal that phrases may incorporate into higher heads, although there are some crucial distinctions. The most important one is that, in Carnie's analysis, *any* phrase may incorporate into a higher head.[42] In the analysis I have proposed, a phrase may undergo m-merger with a host head only if the conditions detailed in (51) are met: first, the two constituents to be merged stand in a spec-head relation; second, nothing intervenes between them; and third, after m-merger, they are spelled out as a word, or as a subpart thereof. This is shown schematically in (55), and with a Spanish verb form (*bebías*, drink.PST.2SG, 'you drank') in (56).

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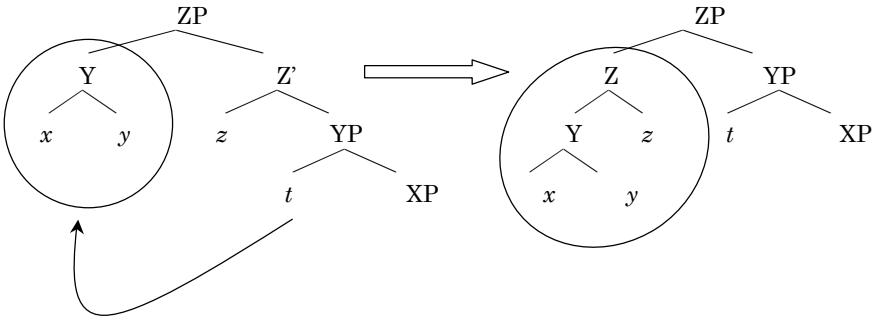
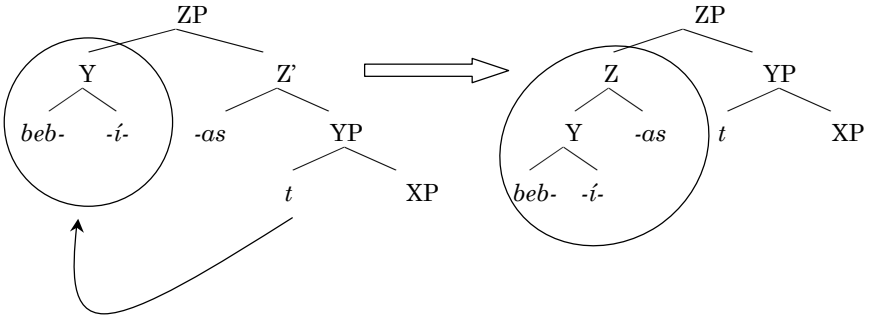
[41] Johan Rooryck (p.c.) has pointed out that this condition, coupled with the definition of head in (18) as a terminal node, entails that incorporation (*qua* movement to spec plus m-merger) is only possible if the host head is monomorphemic (that is, a terminal node). He suggests that this might make certain predictions about the patterns of enclisis and proclisis across Romance. While this is indeed an issue worth exploring, I must defer it to future work.

[42] Obviously, on the usual conditions that the movement has a proper trigger and that it doesn't violate other syntactic conditions (e.g., locality, cyclicity…).

55) *M-merger applying to a complex head*



56) *A Spanish example*



This is a point in which I differ from Matushansky (2006). She explicitly proposes that m-merger may only apply between two heads. She handles successive head movement by claiming that [*x-y*] in (55) qualifies as a head, even in spite of the fact that it has a complex internal structure. She justifies this claim in two steps: first, she defines head not as a terminal node (as I have done), but as a constituent whose internal structure is opaque for syntactic purposes. Second, she argues that m-merger creates heads, in the sense of opaque constituents. Since [*x-y*] in (55) has, by assumption, been created through m-merger, it qualifies as a head, and can therefore undergo further m-merger with *z*.

The main objection against Matushansky's analysis is that, as we saw in section 2.2.2, complex heads are *not* opaque. This undermines her whole rationale for categorising [*x-y*] as a head. Beyond this, one may also wonder why one needs to stipulate, in the first place, that m-merger may only apply between heads. As proposed in (51) a, the trigger for m-merger is that the two constituents in question should be spelled out as a word. Their internal complexity is irrelevant. Note that this is a straightforward extension of the base assumption I've made in this section, namely, that movement affects all constituents in the same way, irrespective of their complexity. If we accept this, then it is also reasonable to accept that m-merger doesn't make a distinction either, even if the consequence is incorporation of something that is, strictly speaking, a phrase. This might seem strange at first sight, but I can't see any serious problems with

it, at least to the extent that it is restricted by condition (51)a. In fact, given the goal of BPS (to eliminate diacritics from phrase structure representations) we could potentially expect a configuration like (55) to arise at some point.

5. Chapter summary

The main thesis I have defended in this chapter is that all movement is movement to a specifier position. This is an appealing hypothesis in that it entails that all movement operations are structurally identical, in contrast with the traditional rigid division between head and phrase movement. Under the hypothesis I have defended, head-to-head movement is to be reanalysed as the consequence of m-merger applying on the output of a regular head-to-spec movement step.[43]

One of the consequences of this hypothesis is that some of the constructions that have so far been analysed in terms of remnant movement may be now reanalysed in terms of long distance head-to-spec movement. We will see in chapters two and three that this is in fact the optimal analysis for a series of infinitive fronting construction in Spanish and Hungarian. In order to reinforce this view, we will look at a few more languages in chapter four, so as to create an initial typology of predicate movement. The outcome of this discussion is that phrase movement and long head-to-spec movement can be considered essentially as one and the same operation, differing only in the amount of additional material that is pied-piped. In this way, we will set the foundations for a unified theory of movement.

This analysis will, nonetheless, retain what I see as a major wrinkle, namely, the appeal to m-merger as an integral part of head-to-head movement. It is not clear why m-merger should exist at all, given Julien's (2002) hypothesis that syntactic constituency is not an inherent property of words. In principle, one could simply move a bare head to the specifier position of the higher head and form a word thus, without invoking m-merger. I won't have much to say about this, mostly because the answer to this problem requires tackling an even deeper question –namely, why do languages group independent morphemes into words to begin with? This is an issue that falls outside the scope of this study, and which I must, therefore, leave as an open question.

[43] One important question here is whether m-merger can apply after a step of "long" head-to-spec movement. Note that the resulting structural configuration would satisfy conditions (51)b and (51)c. Thus, if condition (51)a were also satisfied, m-merger would apply. However, while this is a theoretical possibility, it does not take place in the cases discussed in chapters two through four below. The reason is that the cases of "long" head-to-spec movement discussed there are triggered by topic/focus features –as opposed to "short" head-to-spec movement, which I have argued in section 3 happens for purely morphological reasons. Since in the "long" cases the host head and the moved one do not constitute a morphological unit, (51)a is not met and m-merger does not take place.

Appendix: semantic effects of head movement

Chomsky (2000) proposes to treat head movement as an operation happening in the PF branch of the derivation. The major argument behind this hypothesis is the putative lack of semantic effects of head movement.[44] It is true that the better-studied instances of head movement (e.g., V-to-T movement) do not seem to have any impact on LF, but this is only due to the fact that they typically involve movement of non-quantificational heads. As a consequence, one cannot see how these heads interact with other quantifiers, which is the usual way in which the semantic effects of movement are studied. Therefore, and rather unsurprisingly, once this factor is controlled for by using heads with some semantic import, semantic effects of head movement do start to show up. In this appendix, I report three recent arguments that head movement feeds LF interpretation, the first one based on NPI licensing and the other two on the scope of modals. To the extent they are correct, they constitute empirical evidence against a phonological analysis of head movement.

Independently of these arguments, it has also been repeatedly pointed out that Chomsky's hypothesis raises a number of difficult problems. For instance, Zwart (2001) and Matushansky (2006) note that it requires building quite some syntax into the phonological component.[45] In particular, PF should be equipped with at least (i) a mechanism to distinguish heads from non-heads; (ii) some locality notions, so as to derive HMC effects; and (iii) a mechanism to distinguish complements from non-complements, so as to block head movement out of the latter. This clearly deviates from the null hypothesis that PF simply provides phonological exponents for the syntactic structure. Note that this is not a question of whether it is possible to define a theory of PF that includes these mechanisms. Even if this turns out to be possible possible, it would be extremely odd that an operation whose constraints are clearly syntactic should happen *outside* syntax. The point is that, even if the arguments below are eventually proven incorrect, the null hypothesis still is that head movement happens in syntax, and not at PF.

A1. NPI licensing

The first argument (and, I believe, the most straightforward one) is based on NPI licensing by a negative head. Roberts (2006) points out the following paradigm, which he attributes to Richard Kayne.

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[44] Note that Chomsky assumes a T-model, in which PF and LF remain separate, and in which neither branch is sensitive to whatever happens in the other one. However, several proposals have appeared in recent years in which PF and LF can communicate with each other –cf. van Gelderen (2003), Csirmaz (2005), or Reinhart (2006). If these proposals are correct, one can no longer reduce the lack of semantic effects of head movement (or of any other operation) to the hypothesis that it happens at PF.

[45] As an additional argument, Donati (2006) points out that, under Chomsky's hypothesis, head movement shouldn't be able to cross phase boundaries, which is an obviously incorrect prediction. See her work for the full argumentation.

57) a. * Anybody didn't eat the tuna sandwiches
b. Which sandwiches didn't anybody eat?
c. * Which sandwiches did anybody eat?
d. * Which sandwiches did anybody not eat?
e. * Not anybody ate the tuna sandwiches

Sentence (57)a is a prototypical example of an NPI that fails to be licensed because it is not in the scope of a downward entailing operator. In (57)b, negation has been taken to C along with auxiliary, and the NPI is licensed. Example (57)c shows that wh- questions are not NPI licensing environments and that the presence of negation is necessary. Example (57)d show that it is also necessary for negation to be moved to C along with the verb, across the subject NPI. Finally, (57)e shows that the placement of negation in a pre-subject position (with a sentential negation reading) is contingent on there being T-to-C movement. This correlation makes it difficult to argue that in (57)b negation is base generated in C and then *did* incorporates into it. Rather, it is generated below TP and taken up whenever T-to-C movement applies.[46] The conclusion, then, is that the NPI in (57)b is licensed because T-to-C movement has taken place. Evidently, this would not be possible if head movement was a phonological operation, since, by assumption, whatever happens at PF does not affect semantics. Hence, T-to-C movement –and head movement in general, by extension- must happen in narrow syntax, where it can feed semantics.

Modals also constitute a type of heads with quantificational content. Hence, it should be expected that their movement should also show semantic effects. In the next few pages, I report two recent studies (Lechner 2005 and Gergel 2005) that show that this is the case. As a consequence, the idea that head movement takes place in narrow syntax will be reinforced.

A2. Modals I: Lechner (2005)

To date, the only study I am aware of that examines in detail some semantic effects of head movement is Lechner (2005). His argument consists basically of proving two separate points: (a) that modal verbs undergo (head) movement, and (b) that they are interpreted in their derived position. From the conjunction of these two premises, it follows that head movement can have a semantic effect, and hence, it cannot be relegated to the phonological component.
Lechner's argumentation is quite intricate, but it essentially reduces to explaining the availability of split scope readings in sentences containing a modal and a negative quantified argument. For instance:

58) a. Not every pearl can be of average size [¬◊ > ∀]
[=it is not possible that every pearl is of average size]

[46] Roberts (2004) assumes without argument that *didn't* is base generated as such in T, rather than being derived syntactically. I know of no evidence to tease these two options apart, and the issue is in any event orthogonal to this part of the argument, so I'll leave it as an open question.

b. Sam can find no solution [¬◊ > ∃]
[=it is not possible that Sam finds a solution]

Lechner assumes that negative quantified arguments –i.e., *no*(*t*) *Q NP*- are licensed in the scope of an abstract negative operator NOT (different from sentential negation), and are given the opposite denotation of their surface form (cf. von Stechow 1993).[47] Thus, ⟦not every pearl⟧ is interpreted as ⟦every pearl⟧ licensed by NOT. Under this view, split readings arise when a third quantifier (in this case, the modal) appears between NOT and the quantified argument. A large part of Lechner's work is intended to show that the scope position of the modal is a derived one, as in the representation in (59).

59) [NOT] **[can]**$_i$ [every pearl] $\boldsymbol{t}_i$ [be of average size]

The first step consists of determining the positions where the quantified argument can take scope. Lechner provides some evidence showing that such arguments have limited scope reconstruction possibilities. In particular, he proposes that strong quantifiers cannot reconstruct below Tense. That is, *every* in (58)a must be interpreted at least as high as SpecTP.[48]
Next, he turns to the scope position of the modal. He argues that modals like *can* are generated in a position below sentential negation. This is evidenced by examples like (60), where it is shown that *can* tends to take narrow (inverse) scope with respect to sentential negation.

60) He can not come [✓ ¬ > ◊ / ??? ◊ > ¬]

To show that this is the result of reconstruction of the modal (rather than QR of negation), Lechner provides the following example, which he claims has the scope reading indicated underneath it.

61) It can sometimes not be avoided to confront the enemy
[*sometimes* > ¬◊ = sometimes it is not possible to avoid confrontation]

The interesting property of (61) is that it contains a PPI (*sometimes*), which has to be interpreted outside the scope of negation. Now, consider the two possibilities to derive the relevant reading, namely (a) reconstruction of the modal, and (b) QR of negation.

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[47] Alternatively, one can assume that negation undergoes QR, stranding the existential quantifier (cf. Penka & Zeijlstra 2006). The outcome would be the same, as the quantifier would remain in the same position, and one would still need to get the modal to outscope it.
[48] Cf. Sauerland (2003), who shows that universal subjects can reconstruct below negation, and still be high enough to bind a variable in the experiencer. Lechner assumes, on the basis of such examples, that there is a clausal hierarchy [AgrS > NegP > TP > *v*P], and that universal subjects reconstruct to SpecTP.

i) Every$_i$ child doesn't seem to his$_i$ father to be smart [¬ > ∀]
[=(only) some children seem to their fathers to be smart]

62) Alternative 1: modal reconstruction

a.	it [can][sometimes][not] …		*surface order*
b.	it [sometimes][not][can]…		*modal reconstruction*

63) Alternative 2: QR of negation

a.	it [can][sometimes][not]…		*surface order*
b.	[not] it [can][sometimes]	…	*QR of negation*
c.	[sometimes][not] it [can]	…	*QR of 'sometimes'*

The last step in (63) is necessary to derive the observed scope reading. However, Lechner claims that this step is ill-formed, on the basis of the examples in (64), due Szabolcsi (2004), which have *somewhat* and *sometimes* in a VP internal position. As PPIs, they need to QR to escape the scope of negation. But, on the other hand, they are weak indefinites and cannot cross the island created by negation. Since they are subject to contradictory requirements, the sentences are judged ungrammatical.

64) a. * John did**n't** appreciate this **somewhat**
b. * John did**n't sometimes** come to class

Given (64), it follows that *sometimes* cannot QR across negation in (63)c either, entailing that (63) is not a possible way to derive the observed reading of (61). As a consequence, it must be derived via reconstruction of the modal, which in turn entails that the surface position of *can* is a derived one.

Now, let us consider the scope representation in (59) again. To begin with, Lechner assumes that the surface position of the subject is SpecAgrSP, from where it can reconstruct to SpecTP. The latter position is what is represented in (59). On the other hand, the base position of the modal is lower than this. We've already seen that modals are generated below sentential negation, so given a clausal hierarchy AgrSP > NegP > TP (cf. footnote 48), it follows that modals may never be generated higher than T^0. Now, if the modal is generated below the lowest position where the subject can be interpreted, then the modal will outscope the subject only if it moves to a position higher than the subject. If this movement is head movement,[49] it follows that head movement can feed LF interpretation.

59) [NOT] **[can]**$_i$ [every pearl] $\boldsymbol{t}_i$ [be of average size]

Although Lechner's analysis raises various interesting questions (which I will not discuss here) about the scopal properties of modals and other elements, the conclusion is clear: the split readings in (58) can only be derived if the modal can take scope in a derived position.

[49] Bear in mind that English modals and auxiliaries are exceptional in undergoing movement to T, unlike lexical verbs (Pollock 1989). If one assumes a split TP, then modals must also be assumed to move up to AgrS. For one, they can move to C in interrogatives, conditionals, and other constructions. If movement to AgrS didn't happen in the first place, movement to C would involve an HMC violation.

A3. Modals II: Gergel (2005)

The final argument is based on Gergel's (2005) extensive study of the interaction of ellipsis and modality. His major proposal (following ideas from Lobeck 1995) is that ellipsis at large must be licensed in an appropriate syntactic configuration, independently of the familiar parallelism requirements. With regard to VP ellipsis, he argues that it is licensed under sisterhood with a head with an interpretable tense feature.[50] Gergel argues that this hypothesis can offer some insights into the different behaviour of various classes of modals under VP ellipsis of their complements.

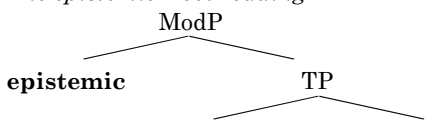
As is well-known, modals can typically receive two different interpretations, which are labelled *root* (or *circumstantial*) and *epistemic*. The distinction reflects the scope of the modal: an epistemic modal scopes over the entire proposition, whereas a root modal only scopes over the predicate. The example in (65), featuring the necessity modal *must*, is ambiguous between both readings, and so is example (66) with the possibility modal *may*.

65) *A necessity modal*
Susie **must** be at the party
a. EPISTEMIC: it is a necessary assumption that Susie is at the party (given what I know/believe).
b. ROOT: Susie is required to be at the party.

66) *A possibility modal*
Susie **may** be at the party
a. EPISTEMIC: it is possible that Susie is at the party (given what I know/believe).
b. ROOT: Susie is allowed to be at the party.

Since the epistemic/root distinction is based on the scope of the modal, it is customary in the literature to encode the distinction by assuming that there are two positions in the clause where a modal can be interpreted: in the lower position, they only scope over the predicate, yielding a root reading; in the higher position, on the other hand, they scope over the entire proposition, which results in an epistemic reading. Gergel proposes the following structure, where root readings arise at the TP level and epistemic readings at the higher ModP level.

67) *The epistemic/root reading*



[50] Here, "VP" is used as a cover term for whatever extended projection one wishes to assume is targeted by VP ellipsis (e.g., *v*P, AspP…). Neither Gergel nor me assume that the VP proper is a sister of T.

root VP

Something that doesn't follow from this structure alone is the different behaviour of necessity and possibility modals under VP ellipsis of their complements. In this environment, necessity modals lose their epistemic reading, even in clauses that are fully ambiguous in non-elliptical contexts (an observation that Gergel traces back to Ross 1969). This is shown in (68). The same restriction holds in the pseudogapping example in (69), on the assumption that pseudogapping is a subcase of VP ellipsis (cf. Lasnik 1999 and subsequent work).

68) a. John **must** wash his car every day
[✓ epistemic / ✓ root]
b. John **must** wash his car every day, and Peter **must** [VP ___] too
[* epistemic / ✓ root]

69) a. I don't know if John obeys his mother, but he **must** obey his father
[✓ epistemic / ✓ root]
b. I don't know if John obeys his mother, but he **must** [VP ___] his father
[?? epistemic / ✓ root]

On the other hand, possibility modals retain their epistemic reading under VP ellipsis of their complements, as shown in (70)b and (71)b. For each example, a minimal pair is provided with a necessity modal to highlight the contrast (examples and judgements quoted from Gergel 2005:242).

70) a. Mary **must** be a successful student, and Frances **must** [VP ___] too.
[* epistemic / ✓ root]
b. Mary **may** be a successful student, and Frances **may** [VP ___] too.
[? epistemic / ✓ root]

71) a. Mary **must** have fallen off the ladder, and Frances **must** [VP ___] too.
[* epistemic / ✓ root]
b. Mary **may** have fallen off the ladder, and Frances **may** [VP ___] too.
[? epistemic / ✓ root]

How do the paradigms in (68) through (71) square with Gergel's hypothesis that VP ellipsis is licensed by an interpretable tense feature? He claims that possibility modals have interpretable tense in both their root and epistemic variants, whereas necessity modals only have interpretable tense in their root interpretation. Gergel provides various arguments in support of this hypothesis. I believe the most straightforward one is based on the observation that necessity modals can retain their epistemic reading if the ellipsis site is licensed not by the modal itself, but by an auxiliary. Compare the examples in (72) to (70)a and (71)a.

72) a. Mary **must** have been a successful student, and Frances **must** have
[VP___] too
[✓ epistemic]

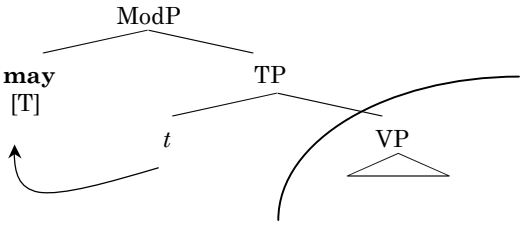
b. Mary **must** have fallen off the ladder, and Frances **must** have
[VP___] too
[✓ epistemic]

The following quotation (from Gergel 2005:234) constitutes a good summary of his reasoning.

> "As [(72)] shows, there is no general co-occurrence prohibition of epistemic modals with VP ellipsis in a single clause. In fact, it would be puzzling if there was, given that a VP ellipsis site inherits the properties of the elided VP at the syntax-semantics interface, provided it is licensed at all. What rather is the case is that licensing fails. […] Once a supporting head carrying [T] is merged into the structure, epistemic readings are accounted for."

In short, what Gergel proposes is that an epistemic possibility modal can license VP ellipsis because it carries an interpretable [T] feature. Now, recall Gergel's hypothesis that licensing requires a sisterhood relation between the elided VP and the head with the [T] feature. Given the structure in (67), the required licensing configuration only holds if the modal is merged at the TP level, in a local relation to the elided constituent. The epistemic reading is a consequence of the modal being interpreted higher, in ModP. This is represented in (73) below, where the curved line marks the domain of ellipsis.

73) *Ellipsis licensed by the [T] feature of 'may'*



Note that, in this analysis, the modal reaches its scope position (i.e., ModP) via head movement. To the extent that Gergel's analysis is correct, it constitutes a further argument in favour of the existence of semantic effects of head movement.

Chapter two
Predicate clefting in Spanish

Eu, en meigas, creer non creo, mais haberlas haylas
I in witches believe.INF not believe.1SG but exist.INF exist.3PL
"Orthodox knowledge cannot explain certain things"
[popular Galician aphorism]

1. Introduction

This chapter has two inter-related goals. The first one is to describe the main properties of the Spanish predicate cleft construction. Although this is a fully productive aspect of Spanish syntax, no detailed analyses of their fine properties exist to date, except for my own previous work (see Vicente 2005). The only reference to it I am aware of consists of just a couple of paragraphs on page 2372 of Bosque & Demonte's (1999) descriptive grammar. This short passage barely does anything more than acknowledging the existence of the construction and hinting rather vaguely at a possible connection with clitic doubling and (pseudo)clefts. Therefore, this chapter aims at filling this gap in the literature. On top of this, there is a theoretical goal, which is to provide support for the hypothesis outlined in section 4 of chapter one, that bare heads may undergo what would otherwise be categorised as phrasal movement. Thus, I will devote several pages to examining the relation between the topic and the tail, and showing that it cannot be reduced to remnant phrase movement.

2. Basic properties

2.1. Basic form

A predicate cleft consists of an infinitive in a left peripheral (topic) position, doubled by a fully inflected form of the same verb in a clause internal position. For convenience, I will refer to the fronted infinitive as the *topic* and to the

inflected verb as the *tail*. It is important to note that the topic has to be an infinitive (1)a. It cannot be an inflected verb (1)c, or a past participle (1)c.

1) a. ✓ Leer, Juan ha leído el libro
read.INF J has read the book
"As for reading, Juan has read the book"
b. * Leído, Juan ha leído el libro
read.PST.PART J has read the book
"As for reading, Juan has read the book"
c. * Leyó, Juan leyó el libro
read.PST.3SG Juan read.PST.3SG the book
"As for reading, Juan read the book"

There is one exception to this generalisation, though: if the main clause is passive, then the topic cannot be an infinitive (2)a. Rather, it has to be a passive participle agreeing in number and gender with the promoted internal argument (2)b. This exception is an important part of the argument made in this chapter, so I will defer further discussion to section 2.5.1.

2) a. * Leer, la revista ha sido leída
read.INF the magazine has been read.FEM.SG
"As for reading, the magazine has been read"
b. ✓ Leída, la revista ha sido leída
read.FEM.SG the magazine has been read.FEM.SG
"As for being read, the magazine has been read"

Finally, there are no restrictions on the type of predicates that can be clefted. As shown below, the topic can be a state (3)a, an activity (3)b, an achievement (3)c, and an accomplishment (3)d.

3) *Predicate clefts and aspectual classes*
a. Saber, Juan sabe holandés
know.INF J know.3SG dutch
"As for knowing, Juan knows Dutch"
b. Conducir, Juan condujo un camion
drive.INF J drive.3SG a truck
"As for driving, Juan drove a truck"
c. Perder, Juan perdió la cartera
lose.INF J lost.3SG the wallet
"As for losing, Juan lost his wallet"
d. Construir, Juan construyó su propia casa
build.INF J built.3SG his own house
"As for building, Juan built his own house"

As far as I know, the only verbs that cannot be clefted are the auxiliaries *ser* 'be' (passives) and *haber* 'have' (perfect tenses). Quite likely, the reason for this restriction is that these auxiliaries lack lexical content, and hence they do not make felicitous topics.[1]

[1] We will see in chapter four that the same restriction holds for Hungarian.

4) a. * Ser, la revista ha sido leída
be.INF the magazine has been read
"As for being, the magazine has been read"
b. * Haber, Juan ha leído el libro
have.INF J has read the book
"As for having (done something), Juan has read the book"

2.2. Bare infinitive vs. full VP clefting

The examples above all feature a bare infinitive in the topic position. However, in Spanish, it is also possible for a full predicate to function as the topic of a predicate cleft, as shown in (5). Quite unimaginatively, I will refer to these two variants as *bare infinitive clefting* and (*full*) *predicate clefting*.

5) Leer el libro, Juan lo ha leído
read.INF the book J CL has read
"As for reading the book, Juan has read it"

Usually, it is only the verb that is repeated inside the clause. Nominal complements can be repeated, as in (6)a, but this is a rather marked option. Clitic doubling as in (5)b is the most usual strategy. The absence of clitic doubling or an extra copy (6)b is rather degraded.

6) a. ?? Leer un libro, Juan ha leído un libro
read.INF a book J has read a book
"As for reading a book, Juan has read a book"
b. ?* Leer un libro, Juan ha leído
read.INF a book J has read
"As for reading a book, Juan has read (it)"

Also, note that the clitic must appear in the tail, and the doubled DP in the topic. The opposite order is ungrammatical. It is possible, however, to have clitics in both the tail and the topic, provided that there is enough discourse background to infer their reference.

7) a. * Leerlo, Juan ha leído un libro
read.INF.CL J has read a book
"As for reading it, Juan has read a book"
b. Leerlo, Juan lo ha leído
read.INF.CL J CL has read
"As for reading it, Juan has read it"

Other constituents that are pied-piped under predicate clefting (e.g., PPs, adverbials…) have no correlate in the tail. They can be repeated, but this is a marginal option, on a par with (6)a.

8) a. Salir con María, Juan ha salido (??con María)
go.out.INF with M J has gone out with M
"As for dating María, Juan has dated her"

b. Leer el libro rápido, Juan lo ha leído (??rápido)
read.INF the book fast J CL has read fast
"As for reading the book fast, Juan has read it fast"

2.3. Discourse properties

2.3.1. Verum focus

Predicate cleft structures receive a verum focus interpretation, i.e., emphasis on the truth of the proposition expressed by the sentence. As discussed in detail in Lipták (2003), verum focus can be divided into two subtypes, namely, contradictory and non-contradictory. The first one emphasises the truth of the proposition in contrast to the same proposition with the opposite polarity. An English example follows, where what is focused is the fact that Peter read the book, as opposed to not reading it.

9) Peter DID read the book.

On the other hand, non-contradictory verum focus emphasises the truth of the proposition by contrasting it with an altogether different proposition. Normally, the contrasting proposition takes the form of an adversative clause, as in the following example.

10) Peter DID pay for his ticket, but he forgot to take it.

In this respect, predicate clefts belong to the non-contradictory variety of verum focus. Thus, while they emphasise the truth of the proposition, they do not contrast it against its opposite polarity, but against an independent proposition.

11) Comprar, Juan ha comprado un libro, pero no lo ha leído
buy.INF J has bought a book but not CL has read
"As for buying, it is true that Juan has bought a book, but he never read it afterwards"

Lipták claims that one further difference between contradictory and non-contradictory verum focus is that only the latter is compatible with a yes/no question. As shown below, Spanish predicate clefts can occur in yes/no questions, confirming their characterisation as non-contradictory verum focus.

12) Comprar, ¿ha comprado Juan el libro?
buy.INF has bought J the book
"As for buying, has Juan bought the book?"

In the remainder of this section, we will see that the discourse status of predicate clefts is somewhat more complicated than this, and that it interacts in interesting ways with focalisation of non-verbal constituents.

2.3.2. Adversative implicatures

Bastos (2001:58-67) observes that predicate clefts in Brazilian Portuguese usually give rise to an adversative implicature, which she refers to as a *"but* effect" ("efeito *mas*"). That is, the clause containing a fronted predicate must be contrasted with a different proposition, typically introduced as an adversative clause, in parallel to the non-contradictory verum focus cases described above. Some of her examples follow. Note that the adversative phrase may be dropped, but the adversative implicature remains present nonetheless.

13) *Brazilian Portuguese*
   a. Lavar o carro, o João lavou (mas…)
      wash.INF the car the J washed but
      "As for washing the car, João washed it (but still…)"
   b. Comprar, o João comprou as rosas (mas…)
      buy.INF the J bought the roses but
      "As for buying something, João bought the roses (but…)"

Interestingly, she also observes that this effect does not always arise. In particular, it is cancelled if something other than the verb is focused, as in the examples below.[2] Focusing can take the form of both focus *in situ* or clefting.

14) *Cancellation of adversative implicature*
   a. Vender, o João vendeu A CASA
      sell.INF the J sold the house
      "As for selling, João sold THE HOUSE"
   b. Vender, foi [A CASA] que o João vendeu
      sell.INF was the house that the J sold
      "As for selling, it was the house that João sold"

Cancellation of the adversative implicature can also be observed in negative clauses if the negative element is stressed. Thus, in (15)a, where *não* 'not' and *nunca* 'never' haven't any accentual prominence, the *but* effect arises. This contrasts with (15)b, where the same elements bear focal stress.

15) *Negative sentences*
   a. Pedir a licença medica, eu não/nunca pedi (mas…)
      apply.INF the licence medical I not never applied but
      "As for applying for a licence to practice medicine, I didn't apply (but still…)"
   b. Pedir a licença medica, eu NÃO/NUNCA pedi
      apply.INF the licence medical I not never applied
      "As for applying for a licence to practice medicine, I didn't apply"

[2] Bear in mind that this does *not* mean that it is not possible to add an adversative clause in examples like (14). What it means is that it is not necessary, as it is in (13). This also holds for Spanish.

The same situation can be observed in Spanish. Regular examples of predicate clefting do give rise to the same adversative implicature as in Brazilian Portuguese.

16) *Adversative implicatures in Spanish*
a. Leer, Juan ha leído un libro (pero…)
read.INF J has read a book but
"As for reading, Juan has read a book (but still…)"
b. Lavar el coche, Juan lo ha lavado (pero…)
wash.INF the car J CL has washed but
"As for washing his car, Juan has washed it (but still…)"

Again as in the Brazilian Portuguese case, this implicature disappears if something other than the verb is focused within the clause.[3]

17) *Cancellation of adversative implicatures*
a. Leer, Juan ha leído AKIRA
read.INF J has read A
"As for reading, Juan has read AKIRA"
b. Lavar, Juan ha lavado EL COCHE
wash.INF J has washed the car
"As for washing, Juan has washed HIS CAR"

The same effect holds for sentences with negative elements. In (18)a, where *no* 'no' and *nunca* 'never' don't bear focal stress, there is an adversative implicature. In contrast, in (18)b, where they do bear focal stress, no such implicature arises.

18) *Negative sentences*
a. Regar las plantas, Juan no/ nunca las riega (pero…)
water.INF the plants J not never CL waters but
"As for watering the plants, Juan doesn't water them (but still…)"
b. Regar las plantas, Juan NO/ NUNCA las riega
water.INF the plants J not never CL waters
"As for watering the plants, Juan does NOT water them"

Bastos explains this complementarity between adversative implicatures and focalisation by resorting to Grice's (1975) theory of conversational implicatures. To begin with, consider the following Portuguese dialogue (Bastos 2001:62).

19) a. O João comprou as rosas?
the J bought the roses
"Did João buy the roses?"
b. Comprar as rosas, o João comprou (mas…)
buy.INF the roses the J bought but
"As for buying the roses, João bought them (but still…)"

[3] Note that, even in these cases, a verum focus reading obtains, though as an entailment, i.e., if it is true that Juan washed the car, then it is true that some washing was done.

Bastos assumes that, by Grice's Maxim of Quantity (make your contribution as informative as required), every utterance must contain some non-presupposed information. Now, she claims that this is not the case in (19)b. The proposition of João buying the roses has already been established in the discourse in the question in (19)a, and the reply simply repeats this information. Therefore, the speaker is potentially violating the Maxim of Quantity, and a conversational implicature arises that the sentence contains some more extra information than what is uttered. Since (19)b emphasises the truth of João buying the roses, the additional information is construed as something that contrasts and completes the initial proposition. In contrast, in examples in (14) and (17), the focus identifies non-presupposed information, which consequently does not give rise to a conversational implicature. Bastos captures this intuition in the following descriptive generalisation.

20) *Focal information implicature*
There is some relevant, non-presupposed information about the event in question.

Bastos' analysis is crucially based on the assumption that (19)b does not contribute any non-presupposed information at all, which does not seem so straightforward to me. For one (19)a establishes the proposition that João bought the roses, but, being a yes/no question, leaves its truth value open. The reply in (19)b contributes the information that the proposition is true. Consequently, by Bastos' reasoning, it shouldn't give rise to any implicature, since it conveys some non-presupposed information. Some amendment is necessary.

Let us look a bit more closely at the type of replies that give rise to such implicatures. As can be seen in the Spanish paradigm below, they are also present with full sentential replies that don't involve predicate clefting (21)b, but not with short replies consisting only of *yes* or *no* (21)c.

21) a. ¿Compró Juan las rosas?
bought..3SG J the roses
"Did Juan buy the roses?"
b. Juan (no) compró las rosas (pero…)
J not bought.3SG the roses but
"Juan did (not) buy the roses (but still…)"
c. Sí / no
yes no

I agree with Bastos in that the adversative presupposition can be reduced to an implicature that arises from the violation of a gricean maxim. However, I don't agree with her in that the Maxim of Quantity is the relevant one. Instead, it seems to me that it is better to resort to the Maxim of Manner (be brief). Since one can answer a question like (19)a with just *yes* or *no*, there must be a reason to utter a full sentence instead, and that reason is that the speaker intends to convey something extra on top of *yes* or *no*. Here is where the implicature arises. The next issue is why this implicature is interpreted as an adversative presupposition. I would like to suggest that this is a consequence of the fact that the full sentence (or predicate cleft) represents an assertion about the truth value of the proposition it expresses. For instance, (21)b is interpreted as "in the

current universe of discourse, the proposition of Juan (not) buying the roses is true". Therefore, if there is an implicature that there is some extra (unexpressed) information, there most natural to interpret it is as a contrast to the overtly expressed proposition, i.e., as an adversative clause.

This hypothesis can also account for the cancellation of the implicature in sentences with a focused element. Once a focused (non-presupposed) element shows up, the full sentence is no longer equivalent to *yes* or *no*, but it conveys something extra. Given this difference, the implicature associated with the full sentence disappears. Now, note that this means that the relevant thing is not focal stress, but new information. This idea is supported by examples like the following, which is relatively often attested in spoken conversations.

22) a. ¿Cómo te va?
how you.DAT goes
"How is it going?"
b. Ir, me va bien
go.INF me.DAT goes allright
"As for going, everything's going fine with me"

Here, *bien* 'allright' need not bear any special accentual prominence beyond what one could expect from the regular workings of the Nuclear Stress Rule (cf. Cinque 1993, Zubizarreta 1998). Yet, in (22)b no adversative presupposition arises, indicating that something must be in focus. This is not surprising, given that (17)b is triggered as an answer to a wh- question. Therefore, the correlate in the reply of the wh- word must be interpreted as focal, even if it is not strongly stressed.

2.3.3. Conclusion

We have seen in this section that predicate clefting in Spanish serves a very specific pragmatic function, namely, that of emphasising the truth of the proposition expressed by the sentence. This property is not exclusive to Spanish, though, and we will see in chapter four that Hungarian behaves in pretty much the same way. Note, though, that I am not claiming that this property is universal. For instance, Johan Rooryck (p.c.) points out that French predicate clefts receive a different interpretation, namely, a surprise/high degree reading. A more thorough study of the typology of these readings must be deferred to future work, though.

2.4. Predicate clefting targets a topic position

The next question to be answered is what the exact position is the clefted predicate lands on. A number of tests show that Spanish predicate clefting patterns together with topics, and not with foci (as opposed to what happens in other languages, cf. Koopman 1984, Aboh 2004, Cozier 2006). For concreteness, I am going to assume throughout this dissertation that topics appear in specialised projections (TopP) in the left periphery. This assumption, though, is not crucial, and the analysis would remain the same under approaches where topics are

simply adjoined to some other XPs. Let us now examine the evidence in favour of a topicalisation analysis.

First, predicate fronting has the prototypical comma intonation of topics. Also in the same way as regular topics, it is necessarily separated from the main part of the clause by an intonational break (#), although this need not be a strong one.

23) a. Leer *(#) Juan ha leído un libro
read.INF J has read a book
"As for reading, Juan has read a book"
b. Este libro, *(#) Juan no lo ha leído
this book J not CL has read
"This book, Juan hasn't read it"

Second, clefted predicates need not be left-adjacent to the finite verb, in the same way as topics. In contrast, adjacency is required for foci (24)c/(24)d.

24) a. Leer, Juan ha leído un libro
read.INF J has read a book
"As for reading, Juan has read a book"
b. Este libro, Juan lo ha leído
this book J CL has read
"As for this book, Juan has read it"
c. * ESTE LIBRO Juan ha leído
this book J has read
"It is this book that Juan has read"
d. ESTE LIBRO ha leído Juan
this book has read J
"It is this book that Juan has read"

Third, both clefted predicates and topics can co-occur with wh- words. Foci, on the other hand, can't.

25) a. Leer, ¿qué ha leído Juan?
read.INF what has read J
"As for reading, what has Juan read?"
b. Este libro, ¿quién lo ha leído?
this book who CL has read
"As for this book, who has read it?"
c. * ESTE LIBRO ¿quién ha leído?
this book who has read
"Who has read THIS BOOK?"

Finally, clefted predicates cannot be combined with focus particles like *sólo* 'only' or *incluso* 'even'. Once again, the same restriction holds for topics.

26) a. * Incluso leer, Juan ha leído un libro
even read.INF J has read a book
"As for even reading, Juan has read a book"

b. * Sólo leer, Juan ha leído un libro
only read.INF J has read a book
"As for only reading, Juan has read a book"

27) a. * Incluso este libro, Juan lo ha leído
even this book J CL has read
"Even this book, Juan has read it"
b. * Sólo este libro, Juan lo ha leído
only this book J CL has read
"Only this book, Juan has read it"

Therefore, we conclude that clefted predicates in Spanish surface in a topic position.[4] Now, since regular nominal topics can undergo long distance movement, this conclusion predicts that predicate clefting can also span finite clause boundaries. As we shall see, this conclusion is correct, but I will defer the discussion to section 3.1, since this property is part of the argument in favour of a movement analysis of predicate clefts.

[4] As Ricardo Etxepare (p.c.) notes, there is one aspect in which predicate clefts and nominal topics differ, namely, the availability of multiple topicalisation, which is barred for predicate clefts. This is irrespective of the order of the clefted infinitives (ii)/(iii). Note also that each of the infinitives is cleftable on its own (iv)/(v), thus making the ungrammaticality of multiple clefting even the more mysterious.

i) ✓ A Mortadelo,en la cabeza, Filemón le quiere pegar
to M in the head F CL wants hit
"Mortadelo, in his head, Filemón has hit (him)"
ii) * Querer, pegar, Filemón quiere pegar a Mortadelo
want.INF hit.INF F wants hit to M
"As for wanting, and as for hitting, Filemón wants to hit Mortadelo"
iii) * Pegar, querer, Filemón quiere pegar a Mortadelo
hit.INF want.INF F wants hit to M
"As for hitting, and as for wanting, Filemón wants to hit Mortadelo"
iv) ✓ Querer, Filemón quiere pegar a Mortadelo
want.INF F wants hit to M
"As for wanting, Filemón wants to hit Mortadelo"
iii) ✓ Pegar Filemón quiere pegar a Mortadelo
hit.INF F wants hit to M
"As for hitting, Filemón wants to hit Mortadelo"

I have nothing interesting to say about why (ii) and (iii) are out, beyond two brief notes. First, (ii) and (iii) cannot be ruled out on structural grounds, so it might be that the subtleties of the semantics of this type of topics forbid multiple clefting. Second, this is not a quirk of Spanish: Anikó Lipták (p.c.) reports an identical paradigm for Hungarian. Beyond this, I will relegate this issue to future research.

2.5. Category of the topic

2.5.1. Setting the higher ground: passive morphology

In this section, I argue that Spanish predicate clefting targets *v*(P), that is, the category that introduces the external argument –also referred to as VoiceP by Kratzer (1996) and Pylkkänen (2002). This is an important conclusion, as it will help reduce the hypothesis space for the analysis of bare infinitive clefting.

The first argument is based on predicate clefting in passive clauses. We have seen so far that the topic surfaces uniformly as an infinitive. The only exception is constituted by passive clauses, in which the topic is a passive participle (28)a. If the topic of a passive clause surfaces as an infinitive, ungrammaticality obtains (28)b. Note, furthermore, that it is not enough for the topic to be a participle. It also has to agree in gender and number with the passivised internal argument, just like any other passive participle. Thus, (28)c is out due to a gender mismatch (*puerta* 'door' being feminine in Spanish).

28) a. Reparada, la puerta ha sido reparada
fixed.FEM.SG the door has been fixed.FEM.SG
"As for being fixed, the door has been fixed"

b. * Reparar, la puerta ha sido reparada
fix.INF the door has been fixed.FEM.SG
"As for fixing, the door has been fixed"

c. * Reparado, la puerta ha sido reparada
fixed.MASC.SG the door has been fixed.FEM.SG
"As for being fixed, the door has been fixed"

In order to understand this paradigm, it is necessary to ask first where agreement morphology in passive participles comes from. Nowadays there is a general consensus that passive voice (and voice in general) is encoded in a functional head external to the core VP. The exact identity of this head, though, is not clear. For instance, Kayne (1989) originally identified it as AgrO. However, more recent work (e.g., Pylkkänen 2002) has argued in favour of *v*, mainly as a consequence of the general tendency to reassign the functions of Agr heads to other functional categories. The argumentation throughout this chapter does not depend on the exact labelling of this category, as long as it is accepted that it is merged above the core VP. For concreteness, though, I will adopt the latter hypothesis.

With this much in place, consider the examples above again. The fact that the fronted verb must be a passive participle suggests that, in Spanish, predicate clefting necessarily targets a category large enough to contain the functional head responsible for passive morphology. Given that I have assumed this head to be *v*, we conclude that predicate clefting must target at least *v*(P). If it were possible to front a category smaller than *v*(P), one could expect (28)b to be grammatical. The fronted topic would contain no information about passive morphology, so therefore there would be no way to spell it out. Instead, morphology would provide an infinitive as a default. The fact that this is not a possibility strongly suggests that the clefted category is never smaller than *v*(P).

Extrapolating from this conclusion, we can generalise that, in active clauses, the fronted head is also always *v*. This is the null hypothesis, since there are no reasons to suppose that passive and active cases of predicate clefting differ in this respect. Lacking any evidence to the contrary, we can formulate the following generalisation, which will be refined in the following section.[5]

29) *Predicate clefting in Spanish (first version)*
In Spanish, predicate clefting always targets at least *v*(P).

Note also that these data can be as an argument against a phonological approach to head movement (cf. Chomsky 2000 and the Appendix to chapter one for discussion). If head movement were phonological (i.e., happening after syntax, and therefore involving no syntactic movement), *v* would never be syntactically associated to the lexical verb. That is, it would be impossible to move V and *v* together as a constituent, for the simple reason that they wouldn't form a constituent in syntax. One could move *v* alone, without any lexical content, but then one would also have to spell out the *v* head alone, without its lexical root.[6] Alternatively, one could move the lexical verb alone, without *v*. In this case, though, we wouldn't expect the topic to surface with the inflectional features associated to *v*. The only way in which the passivisation paradigm presented here can be derived is by having V and *v* move to the topic position together, and that is only possible if head movement is a syntactic operation in its full right.

2.5.1.1 Unrelated digression on the analysis of passives[7]

It has sometimes been suggested in the literature on Spanish that passive sentences should be assimilated to copulas with a predicative adjective (e.g., Hernández Alonso 1996 and references). This is based on the superficial similarities between both constructions, such as the adjectival morphology of the passive participle (including gender and number morphology), and the use of *ser* 'to be' as a verb. There are, however, various differences between passives and predicative adjectives that suggest that this analysis is wrong (see Lázaro

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[5] There is another potential argument supporting this conclusion, namely, the fact that (in the same way as in English) anaphors pied-piped under full predicate clefting can only be bound by the subject of the clause they are generated in.

i) [Reirse de sí mismo$_{f/*m}$], Mortadelo$_{m}$ cree que Filemón$_{f}$ se ha reído
laugh.INF of himself M thinks that F SE has laughed
"Laugh at himself, Mortadelo thinks that Filemón has"

Huang (1993) originally proposed that the fronted predicate is actually a *v*P, and as such it contains the *v*P-internal copy of the subject. This copy blocks binding by any higher elements. However, Idan Landau (p.c.) has pointed out to me that there are reasons to believe that Huang-effects are unrelated to the presence of a copy of the subject (cf. den Dikken 2006:18-19 and references). Thus, although (i) is compatible with the conclusion in (29), it cannot be used as a direct argument in its favour.

[6] It has been argued in recent years that light verbs, such *make* as in Persian and Basque verbal complexes (Hale & Keyser 1993, Megerdoomian 2003), or *take*/*go* in serial verb constructions (den Dikken & Sybesma 1999) are the spell out of a bare *v* head.

[7] Thanks to Lisa Cheng for raising this issue.

Carreter 1980 and Demonte 1983 for independent arguments). Here, I want to point out one further asymmetry in the domain of predicate clefting that supports a non-uniform analysis of passives and predicative adjectives. The asymmetry is the following: in a passive sentence, it is impossible to cleft *ser*. In contrast, in a copula with a predicative adjective, clefting of *ser*, although not fully perfect, is clearly much better.

30) a. * Ser, la puerta ha sido reparada
be.INF the door has been fixed
"As for being, the door has been fixed"
b. ? Ser, la puerta es roja
be.INF the door is red
"As for being, the door is red"

Example (30)a can be ruled out if *ser* here is an auxiliary. Auxiliaries have no lexical content at all, hence they cannot be felicitous topics. Consider, for instance, the impossibility of clefting the auxiliary *haber* 'have', in contrast with the licit clefting of existential *haber* 'to (there) be'.

31) a. * Haber, Juan ha leído un libro
have.INF J has read a book
"As for having done something, Juan has read a book"
b. ✓ Haber, aún hay cerveza en la nevera
be.INF still is beer in the fridge
"As for being, there is still some beer in the fridge"

In parallel with (31), the fact that clefting of *ser* in (30)b is possible suggests that it is not functioning as an auxiliary in this sentence. Rather, it is a verb with enough lexical content to constitute a well-formed topic. This contrast shows that passives cannot be equated to predicative adjectives: if *ser* in a passive is an auxiliary, then there must be a lexical verb somewhere else, and the only possibility for that is the passive participle. In contrast, in sentences with predicative adjectives, *ser* is the main verb, hence whatever form follows it must be adjectival, rather than verbal.

2.5.2. Setting the higher bound: irregular verbs

In the previous section, we have seen that predicate clefting targets at least *v*(P). In this section, I will refine that generalisation by arguing that predicate clefting targets exactly *v*(P), no more, no less. The argument is based on irregular verbs such as *ir* 'to go', where some tenses trigger suppletion of the root. The three different roots employed are *i-*, *v-* and *fu-*.[8] Consider the paradigm in (32).

32) a. **I**r → infinitive
b. **I**do → participle
c. **Y**endo → gerund

[8] The glide in the gerund (*y-endo*) can be thought of as an *i-* root that has been palatalised in the presence of a mid vowel.

d. **V**oy → present, 1sg
e. **I**ba → imperfective, 1sg
f. **Fu**i → perfective, 1sg
g. **I**ría → conditional, 1sg
h. **V**aya → present subjunctive, 1sg
h. **Fu**era → past subjunctive, 1sg
i. **V**é → imperative, 2sg

Although not in a systematic way, this pattern of suppletion is clearly conditioned by the tense specifications of the sentence. This is partially supported by the fact that all three non-finite forms in (32)a through (32)c are formed with the regular root *i-*. Now, consider the paradigm in (33), which shows that the topic must always be *ir*, irrespective of the particular morphological form the tail might take.

33) a. **I**r, Juan **v**a
go J goes.PRES
"As for going, Juan goes"
b. **I**r, Juan **fu**e
go J went.PERF
"As for going, Juan went"
c. **I**r, Juan **i**ba
go J went.IMPERF
"As for going, Juan used to go"

The examples in (34)a and (34)b below are analogous to the ones in (33)a and (33)b respectively, except for the fact that the regular infinitival root *i-* has been substituted by the suppletive root corresponding to the finite verb in the tail. The result is very ungrammatical. An equivalent to example (33)c is not included because its tail does not have a suppletive root to begin with.

34) a. * **Vi**r, Juan **v**a
go J goes.PRES
"As for going, Juan goes"
b. * **Fu**(**i**)r, Juan **fu**e
go J went.PERF
"As for going, Juan went"

This is not so straightforward as it might seem at first sight. Other languages featuring predicate clefts have a construct known as the *pseudo-infinitive*. Consider, for instance, the following Yiddish data (from Hoge 1998 and Cable 2004). In (35)a, the verb *visn* 'to know' has been clefted. However, and unlike in Spanish, the topic is not the regular infinitive *visn*. Rather, what one finds is the pseudo-infinitival form *veysn*, which doesn't exist elsewhere in the language. It is formed by taking the same suppletive stem the tail is formed with (*veys-*) and adding the infinitival suffix *–(e)n*. The result is a verb with infinitival morphology but based on a finite stem. The same effect is illustrated for *gebn/gibn* 'to give' in (35)b and *veln/viln* to want' in (35)c.

35) a. **Veys**n / * visn **veys**t zi es
know.INF know.INF knows she it
"As for knowing, she knows it"
b. **Gib**n / * gebn **gib**t zi dem kind an kikhl
give.INF give.INF gives she the child a biscuit
"As for giving, she gives the child a biscuit"
c. **Vil**n / * veln **vil**t zi an kikhl
want.INF want.INF wants she a biscuit
"As for wanting, she wants a biscuit"

Hungarian, as will be discussed in the next chapter, also has pseudo-infinitives. The infinitive of the verb 'to be' is *lenni*. However, under predicate fronting, this form only surfaces when the finite verb is formed on the root *le(sz)*, that is, in the future and in the past. When the verb is in the present tense, which is formed with the root *van-*, the topic is *vanni*. This is simply a *van-* root to which the infinitival marker *–ni* is added. This form is not found anywhere else in the language.

36) a. **Le**nni / * vanni, **le**sz étel az asztalon
be.inf be.inf be.FUT.3SG food the table.on
"As for being, there will be food on the table"
b. **Le**nni / *vanni, **le**tt étel az asztalon
be.INF become.INF become.PST.3SG food the table.on
"As for being, food came to be on the table"
c. **Va**nni / * lenni, **va**n étel az asztalon
be.INF be.INF be.PRS.3SG food the table.on
"As for being, there is food on the table

In chapter three, I will argue that pseudo-infinitives arise in Hungarian because the category that is clefted in this language is not *v*(P), but rather T(P). The consequence of this hypothesis is that the topic in Hungarian carries a tense specification. As the alternation between the *le(sz)-* and *va(n)-* roots is determined by the tense, it follows that it will also show up in the topic, giving rise to a pseudo-infinitival form.[9] In principle, one could extend this hypothesis to Yiddish, especially in the light of Cable's (2003) claim that pseudo-infinitives only arise when a finite verb is clefted, i.e., never with an infinitive or a participle. I will leave Yiddish as an open question, though, as I lack the data to make a more concrete hypothesis.[10]

[9] The presence of the infinitival marker *–ni* will be explained in terms of an elsewhere spell out rule. See chapter three, section 2.6 for details.

[10] Cable himself suggests that pseudo-infinitives arise when the topic and the tail are "too close" to each other, where closeness is defined as belonging to the same phase. He defines a PF rule whereby copies of the same lexical item that are spelled out within the same phase have to be realised with the same stem, even if they may carry different inflectional morphology. Under this analysis, the morphology of pseudo-infinitives is unrelated to the features present in the topic. This predicts that the pseudo-infinitives will not arise in cases of long-distance clefting, where topic and tail clearly surface in separate phases. I haven't had a chance to test this hypothesis for Yiddish, but –as we shall see in chapter 4- it fails for Hungarian. This suggests that pseudo-infinitives are not the consequence of a PF spell out rule, but of the actual inflectional features present in the topic.

The implication of the analysis, nonetheless, is clear: pseudo-infinitives will arise only in case the clefted category contains the inflectional features that trigger the presence of a suppletive root in the first place. For the languages considered in this section, this means tense features. Given the fact that Spanish disallows pseudo-infinitives (33), we conclude (as in the previous section) that the clefted category doesn't contain any tense features, i.e., it is lower that T. Thus, we arrived at the following revision of (29):

37) *Predicate clefting in Spanish (second version)*
Spanish predicate clefting targets a category smaller than T(P), but at least as large as *v*(P).

This generalisation reduces the hypothesis space, but still allows some room from improvement. In particular, I would like to draw attention to the fact that the topic cannot be a past participle either, as already mentioned in section 2.1.

38) * Leído, Juan ha leído un libro
read.INF J has read.PART a book
"As for reading, Juan has read a book"

Past participles appear exclusively in clauses with perfective aspect, which observation we might reasonably interpret as a hint that perfect participles spell out the projection responsible for outer aspect, i.e., AspP (cf. Zagona 2002 for discussion). Following the logic so far, the fact that perfect participles are banned in the topic position of predicate clefts suggests that predicate clefting targets a category that excludes Asp(P). Given this conclusion, we can further refine (37) as follows.

39) *Predicate clefting in Spanish (third version)*
Spanish predicate clefting targets a category smaller than AspP, but at least as large as *v*P.

This generalisation already does not leave much room to manoeuvre. Given that AspP and *v*P are usually assumed to be very close to each other, I think it is reasonable to reduce (39) to the following generalisation.

40) *Predicate clefting in Spanish (final version)*
Spanish predicate clefting targets exactly *v*(P).

This conclusion is further supported by the range of adverbials that can be pied-piped under full predicate fronting. As shown below, pied-piping of low (manner) adverbials is unproblematic. However, pied-piping of time and speaker oriented adverbials (which are adjoined higher than *v*P) is considerably worse.

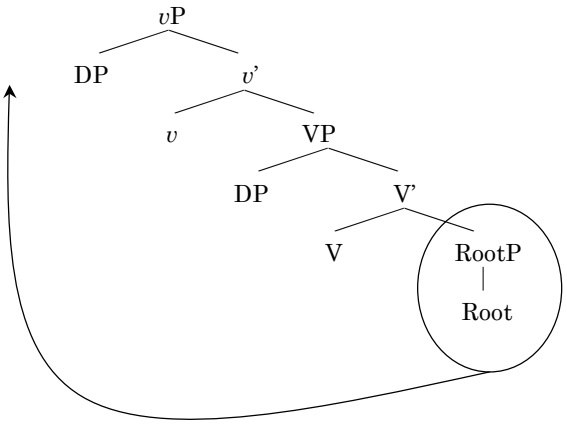
41) a. Leer el libro rápido, Juan lo leyó
read.INF the book quickly J CL read.PST.3SG
"As for reading the book quickly, Juan read (it quickly)"
b. ?* Leer el libro ayer, Juan lo leyó
read.INF the book yesterday J CL read.PST.3SG
"As for reading the book yesterday, Juan has read (it yesterday)"

c. * Leer el libro aparentemente, Juan lo leyó
read.INF the book apparently J CL read.PST.3SG
"As for reading the book apparently, Juan has (apparently) read (it)"

2.6. Conclusion

The main conclusion of this section has been to determine what exact category appears in the topic position of predicate clefts. Through the possible and impossible morphological realisations of the topic, I have argued that this category is *v*(P), i.e., the category where the external argument is merged. This is an important conclusion, as it directly excludes an analysis along the lines of Harbour (1999). Harbour's proposal is that, in Biblical Hebrew it is possible for predicate clefting to target a very small category, namely, RootP. This is a category containing only the lexical root of the verb, below the level where arguments and adjuncts are merged.

42) *Harbour's analysis of predicate clefting in Biblical Hebrew*



RootP is a phrase, hence it can undergo A-bar movement without trouble. Furthermore, since it does not contain any non-verbal material, the net result is that only a bare infinitive is fronted without invoking remnant movement. Clever though it is, Harbour's analysis cannot be extended to Spanish, where we have seen that predicate clefting targets the *v*P level. Therefore, it follows that, in Spanish, bare infinitive clefting must be either remnant *v*P movement or long-distance movement of the bare *v* head. In the rest of this chapter, I will show that the second option is the correct one. In other words, I will defend the following analysis, which is in essence an expanded version of (40).

43) *Predicate clefting in Spanish*
Spanish predicate clefting targets the *v*P level. However, there is an option between moving the entire *v*P or moving just the *v* head.

Note that this statement assumes without argument that predicate clefts are derived via movement. The next section provides support for this assumption.

3. Predicate fronting and movement

In this section, I examine the question of how the topic and the tail of a predicate fronting structure are related. A priori, there are two possibilities, both of which have been recently defended. The first possibility is that the topic and the tail are links of a movement chain, which has the rather exceptional property of permitting pronunciation of more than one of its links. Landau (2006) proposes this type of analysis on the basis of Hebrew data. The other possibility is to say that the tail and the topic stand in a construal relation, without any movement taking place. Cable (2004) argues that this is the optimal analysis for Yiddish and Brazilian Portuguese predicate fronting structures. In this section, I will go through the relevant data and show that Spanish predicate clefting (both the full *v*P and bare infinitive variants) involve A-bar movement, at least for a subset of speakers.

3.1. Arguments for movement

The claim that predicate clefts involve some kind of movement (and, in particular, A-bar movement) is easy to defend. For one, the relationship between the topic and the tail exhibits some prototypical A-bar movement properties: it can span an indefinite number of finite clause boundaries, as long as no island configuration intervenes. Once an island boundary is present, the dependency becomes impossible. Landau (2006) observes this effect in Hebrew predicate clefting. Example (44) shows a case of long distance predicate clefting. The examples in (45) illustrate the effect of island configurations –respectively, wh-islands, complex NP islands, subject islands, adjunct islands, and factive islands. Note that all these island only block cross-clausal (not intra-clausal) movement, a point we will return to in a moment.

44) *Long distance clefting*
Lekanot, nidme li še-Rina amra še-Gil kvar nika
clean.INF seems me that.R said that.G already cleaned
et ha-xacer
ACC the.yard
"As for cleaning, it seems to me that Rina said that Gil had already cleaned the yard"

45) *Island effects*
a. ?? Likro, ša'alti matay Gil kvar kara et ha-sefer
read.INF asked when G already read ACC the.book
"As for reading, I asked when Gil had read the book"

b. * Likro, Gil daxa et ha-te'ana še-hu kvar kara
read.INF G rejected ACC the.claim that.he already read
et ha-sefer
ACC the.book
"As for reading, Gil rejected the claim that he had read the book"

c. * Likro, še-yevakšu me-Gil še-yikra et ha-sefer
read.INF that.ask from.G that.read ACC that book
ze ma'aliv
it insulting
"As for reading, that Gil should be asked to read that book is insulting"

d. * Likro, nifgašnu axarey še-kulam kar'u et ha-sefer
read.INF meet after that.everybody read ACC the.book
"As for reading, we met after everybody had read the book"

e. * Le'hacbia, Gil hitcta'er še-Rina kvar hicbia la-avoda
vote.INF G regretted that.R already voted the.LP
"As for voting, Gil regretted that Rina had voted for the Labour Party"

Cable (2004) points out that Yiddish behaves in the same way in this respect. The data he provides are reproduced below.

46) *Yiddish*

a. Veysn, hostu mir gezogt az er veyst a sakh
know.INF have.2SG me told that he knows a lot
"As for knowing, you've told me that he knows a lot"

b. * Veysn, hob ikh gezen dem yidn vos veyst a sakh
know.INF have I seen the man who knows a lot
"As for knowing, I've seen the man who knows a lot"

c. * Veysn, hostu mir gezogt ver es veyst a sakh
know.INF have.2SG me told who it knows a lot
"As for knowing, you've told me who knows a lot"

Rather unsurprisingly, Spanish shows the same type of effect. In (47), we see that predicate clefting can happen long distance. In contrast, the examples below show that it is blocked in the presence of, respectively, a complex NP island (48)a, a relative clause island (48)b, an adjunct island (48)c, and a subject island (48)d,

47) *Spanish long distance predicate clefting*

a. Comprar, Juan ha dicho que María ha comprado un libro
buy.INF J has said that M has bought a book
"As for buying, Juan has told me that María has bought a book"

b. Venir, me parece que ya no vienes
come.INF me.DAT seems that already not come.2SG
"As for coming, it seems to me that you aren't coming in the end"

48) *Predicate clefting blocked across islands*

a. * Comprar, he oido el rumor de que Juan ha comprado
buy.INF have heard the rumour of that J has bought
un libro
a book
"As for buying, I have heard the rumour that Juan has bought a book"

b. * Comprar, he visto al hombre que ha comprado un libro
buy.INF have seen the man that has bought a book
"As for buying, I have seen the man that has bought a book"

c. * Comprar, he ido al cine despues de comprar un libro
buy.INF have gone to cinema after of buy a book
"As for buying, I have gone to the movies after buying a book"

d. *? Ganar, [que el Athletic ganara la Copa] nos emocionaría
win.INF that the A wins the cup us excite.3SG
"As for winning, that Athletic should win the Cup would excite us"

These locality effects suggest very strongly that Spanish predicate clefting involves movement. Nonetheless, the following successful extractions out of islands, noticed by Ricardo Etxepare (p.c.), may cast some doubts on this conclusion. Note that these examples are grammatical even for speakers who otherwise reject (48).

49) *Predicate clefting across islands*

a. ✓ Ganar, sólo he visto a uno que haya ganado
win.INF only have seen to one that has.3SG won
"As for winning, I have only seen a person who has won"

b. ✓ Vender, conozco a uno que vende un montón
sell.INF know.1SG to one that sells.3SG a lot
"As for selling, I know a person who sells a lot of things"

As Etxepare himself notes, the crucial factor is that the examples above all contain an indefinite. As soon as this is turned into a definite, ungrammaticality results. Consider the minimal pairs below.

50) *Predicate clefting across islands*

a. ?* Ganar, sólo he visto al que ha ganado
win.INF only have seen to.the that has.3SG won
"As for winning, I have only seen the person who has won"

b. * Vender, conozco al que vende un montón
sell.INF know.1SG to.the that sells.3SG a lot
"As for selling, I know the person who sells a lot of things"

Interestingly, the same effect can be observed in nominal topicalisation.

51) a. ✓ Cien carreras, sólo he visto a uno que haya ganado
hundred races only have seen to one that has.3SG won
"One hundred races, I only know a person who has won (so many)"

b. * Cien carreras, sólo he visto al que ha ganado
hundred races only have seen to.the who has won
"One hundred races, I only know the person that has won (so many)"

52) a. ✓ Merluzas, conozco a uno que vende un montón
hakes know.1SG to one that sells.3SG a lot
"Hakes, I know a person who sells lots (of them)"
b. ?* Merluzas, conozco al que vende un montón
hakes know.1SG to.the that sells.3SG a lot
"Hakes, I know a person who sells lots (of them)"

I have nothing to say about why examples with an indefinite relative head are unexpectedly grammatical.[11] Nonetheless, it is suggestive that the same restriction holds for both nominal topics and predicate clefts. Far from falsifying the hypothesis that predicate clefts are derived by movement, these data reinforce it by showing that predicate clefts are subject to exactly the same type of locality restrictions as regular topics.

3.2. Arguments for non-movement

Although the data in the previous section are quite suggestive, Cable (2004) claims that island effects are not a reflex of the relation between the topic and the tail. In his analysis, the two are generated separately and related through predication, not movement. This hypothesis is based on the so-called *genus-species effect*, whereby the topic does not consist of the same lexical item as the tail. Rather, tail and topic are separate lexical items, with the restriction that the tail must restrict the denotation of the topic. Landau (2006) claims that such constructions are ungrammatical in Hebrew (53). This constraint follows if both the tail and the topic are related by movement: the topic is a copy of the tail, and must therefore be the same lexical item (obviating inflectional morphology).

53) * Letayel, tasti le Nyu-York
travel.INF fly to N Y
"As for travelling, I've flown to New York"

Interestingly, though, Cable reports that genus-species sentences are possible in Yiddish, as shown below. Cable concludes that the examples in (54) can only be explained if the topic and the tail do not stand in a movement relation. If they did, copy-theoretic factors would force the use of the exact lexical item in both instances of the verb, as in the Hebrew example above. Since this is not the case, it follows that they must stand in a non-movement (predication) relation.[12]

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[11] Anikó Lipták (p.c.) has pointed out to me that the same restriction holds for English, attributing the observation to Robert Levine.

i) ? This is the article that I don't know anyone who read
ii) * This is the article that I don't know the person who read

[12] See section 6 for a short discussion of how this relation can be implemented.

54) a. Forn bin ikh gefloygn keyn Nyu-York
travel.INF am I flown to N Y
"As for travelling, I've flown to New York"
b. Essen fish est Max hekht
eat.INF fish eats M pike
"As for eating fish, Max eats pike"

Bear in mind that the claim that the topic and the tail in Yiddish are related through predication does not entail that movement effects are completely absent. As shown in the previous section, Yiddish predicate clefts are sensitive to islands in the same way as Spanish and Hebrew. However, Cable points out that all the islands tested in the previous section involve cross-clausal movement. On the basis of this observation, he proposes that the topic is base-generated in the specifier of the minimal CP containing the tail. From that position, it may move on to higher clauses. This derives the observation that island effects do arise in multi-clausal environments. However, given that there is no direct movement dependency between the topic and the tail, no movement effects are predicted in mono-clausal contexts.

So far, the evidence from genus-species sentences points to the conclusion that predicate clefts can be formed in two different directions: by movement (Hebrew) and by predication (Yiddish). Since the theoretical claim I am defending depends on the assumption that predicate clefts are derived through movement, it is crucial to show that Spanish patterns with Hebrew in this respect. This will be the goal of the next subsection. In fact, a close look at the Spanish data will reveal the existence of a dialectal split. In this way, we will also resolve the apparent contradiction between the Hebrew and the Yiddish data.

3.3. A dialectal split

The evidence presented above raises the question of what the proper analysis of predicate fronting is, i.e., whether it involves movement or not. The hidden assumption in both of Cable's and Landau's analyses is that one of the options ought to suffice to cover all cases of predicate clefting cross-linguistically. Here, I want to challenge this assumption. As we shall see presently, both the movement and the construal analyses are necessary.

First of all, let us consider the status of genus-species effects in Spanish. The group of speakers I have tested split with respect to whether they accept this type of sentences, as indicated by the percentage sign. For convenience, let's call those speakers who accept them Group 1, and those who don't Group 2, myself belonging to the latter one.

55) a. % Cocinar, Juan ha asado un pollo
cook.INF J has roasted a chicken
"As for cooking, Juan has roasted a chicken"
b. % Leer un libro, Juan ha leído *Akira*
read.INF a book J has read A
"As for reading a book, Juan has read *Akira*"

Interestingly, this difference in judgements can be correlated with a different effect. Recall that all the island violations noted in section 3.1 involve long distance movement. Crucially, neither Cable nor Landau test for islands that do not require cross-clausal movement, such as coordinate structures. In this light, consider the examples below, in which the tail is embedded in the second conjunct.[13] Again, we find the same split as in (55): Group 1 speakers accept the example, whereas Group 2 speakers don't. The judgements are summarised in Table 1 below.

56) % Leer, Juan ha visto una película y leído un libro.
read.INF J has watched a film and read a book
"As for reading, Juan has seen a film and read a book"

	Genus-species	Coordination
Group 1	✓	✓
Group 2	*	*

Table 1

Seth Cable (p.c.) reports an identical paradigm for Brazilian Portuguese.

57) a. Comer peixe, eu normalmente como salmão
eat.INF fish I usually eat salmon
"As for eating fish, I usually eat salmon"
*[Group 1: ✓ / Group 2: *]*

b. Ler, eu como peixe e leo romances
read.INF I eat fish and read novels
"As for reading, I eat fish and read novels"
*[Group 1: ✓ / Group 2: *]*

This clustering of judgements indicates that predicate fronting can be formed in either of two ways: by movement or by construal. For speakers of Group 2, there is a movement dependency between the topic and the tail. This entails that no genus-species sentences will be possible for them: since movement is copying, topic and tail must consist of the same lexical item. Similarly, the ungrammaticality of (56) and (57)b can be reduced to a coordinate island violation. In contrast, for speakers of Group 1, it is formed by construal, not by movement. Because of this, there is no requirement for both elements to consist of the same lexical items. There is only a semantic congruence restriction. Similarly, since no movement is involved, no violation of the CSC obtains.[14]

[13] It is important that the tail is in the second conjunct. If it was in the first conjunct, one could postulate an alternative derivation in which predicate fronting would happen entirely inside the first conjunct. This would be uninformative as it wouldn't involve movement across the island boundary.

[14] Ricardo Etxepare (p.c.) points out that examples like (i) are acceptable even for Group 2 speakers, in contradiction to my claim. Note that this example features a bare NP object (assuming that *a* is a case marker, cf. Torrego 1998, Cuervo 2003). Such examples (as also reported in Bastos 2001 for Brazilian Portuguese) are interesting in that the topic-tail

3.4. A word on reconstruction

The reader might be wondering whether it would be possible to use reconstruction effects as a test for movement. In principle, the answer is affirmative. However, there is a complication that makes me think that it is better to ignore reconstruction effects. To see that, consider the following examples, which would exemplify reconstruction effects for conditions A, B, and C, and for variable binding.

58) a. [Reirse de sí mismo$_i$] Juan$_i$ se ha reido
laugh.INF.SE of his self J SE has laughed
"As for laughing at himself, Juan has laughed"

b. * [Reirse de él$_i$] Juan$_i$ se ha reido
laugh.INF.SE of him J SE has laughed
"As for laughing at him, Juan has laughed"

c. * [Reirse de Juan$_i$] él$_i$ se ha reido
laugh.INF.SE of J he SE has laughed
"As for laughing at Juan, he has laughed"

d. [Reirse de sus$_i$ chistes] todo$_i$ mal humorista se rie
laugh.INF.SE of his jokes every bad comedian SE laughs
"As for laughing at his own jokes, every bad comedian laughs"

These sentences show the grammaticality pattern one would expect under reconstruction. However, as Huang (1993) argues, fronted predicates necessarily contain a copy of the *v*P-internal subject. Hence, it would be possible to argue that the particular binding patterns in (58) are not the consequence of reconstruction, but rather of the clefted phrases being base-generated in a topic position while containing a null representation of the subject.

Note that I am not saying that these reconstruction data argue against a movement analysis. What I am saying is that, in principle, they are compatible with both a movement and a base generation analysis. The difference relies on whether the binder is the trace of a moved subject (in which case a movement analysis would be correct) or a *pro* co-indexed with the "real" subject (which would favour a base generation account). At present, I know of no tests to tease both possibilities apart, so no definitive conclusions can be drawn from these data. All that can be said is that these data are fully compatible with the locality paradigms presented above.

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relation can cross island boundaries, even for speakers for whom island effects are otherwise present and strong. This suggests that such examples require a non-movement analysis. Although neither Bastos nor myself have anything interesting to offer in this respect (though see a similar situation in section 3.1 above), the correctness of the description is confirmed by the ungrammaticality of (ii), where the topic contains a full DP.

i) ? Ver a alguien, Juan ha visto a Maria
see.INF to someone J has seen to M
"As for seeing someone, Juan has seen María"

ii) * Ver a una persona, Juan ha visto a Maria
see.INF to one person J has seen to M
"As for seeing a person, Juan has seen María"

3.5. Conclusion

The data so far show that predicate fronting in Spanish involves movement, at least for a consistent subset of speakers. From now on, I will concentrate on the judgements of these speakers, since they are the relevant ones for the question at hand. In the next section, I will discuss in more detail exactly what kind of movement is involved in the predicate fronting construction. The main conclusion will be that, whenever a bare infinitive is fronted, it is smaller than a phrase. It is actually just a bare head *v*. As a consequence, it will turn out that Spanish predicate clefting must be analysed as movement of a head to a specifier position.

4. Phrase movement?

4.1. Setting the stage

Let us recapitulate. So far, we have established (a) that predicate clefting fronts a constituent of category *v*(P), and (b) that predicate clefting is movement, at least for a consistent subset of speakers (and, more precisely, A-bar movement). The next question is how these two properties ought to be analysed. The most intuitively appealing analysis is one in which what is fronted in all cases is a full *v*P. For the full *v*P clefting examples, this is quite obvious. For the examples of bare infinitive clefting, one could assume that we are dealing with an instance of remnant *v*P movement, as represented schematically in (59). Such an analysis is intuitive and appealing in that, first of all, it treats all instances of predicate clefting as a uniform phenomenon (i.e., movement of *v*P); second, it does not require any modifications to the standard principles of movement theory; and third, it assimilates the construction to the better studied remnant VP topicalisation structures in West Germanic (cf. den Besten & Webelhuth 1987, Müller 1998).

59) [TOP [vP V t_{OBJ}] [TP ……Obj … t_{VP}……]]

However, for all its conceptual advantages, I will argue in this section that Spanish predicate clefting is not amenable to a remnant movement analysis, the reason being that there is no plausible motivation to postulate all the movements required to create a remnant *v*P.[15] Object movement in Spanish is an operation that is rather difficult to observe.[16] For instance, Torrego (1998), in a book-length work about the syntax of Spanish objects, acknowledges that she relies "solely on theory-internal arguments to postulate overt object raising" (p. 46). Similarly, Franco & Mejías-Bikandi (1997) argue in favour of object movement on purely theoretical grounds –namely, the assumption that objective case is checked in the

[15] In fact, recall that the original remnant movement analysis (den Besten & Webelhuth 1987) was crucially based on the independent availability of scrambling in German.

[16] For the purposes of this section "object movement" will be used as shorthand for "object movement into the middlefield".

specifier of a VP-external functional head. Crucially, the evidence they provide for overt object movement only holds in clauses where the object is clitic doubled. For the rest, they are forced to resort to covert movement. Clearly, neither of these analyses provide enough motivation for the movement operations required to form a remnant *v*P. What is necessary for a remnant movement analysis is solid empirical evidence that object movement to a *v*P-external position exists in Spanish, and that it is a productive enough process. Otherwise, the reasoning becomes circular. In the following pages, I argue that, although overt object movement does exist in Spanish, it cannot be invoked in all the cases of bare infinitive fronting.

4.2. Object movement in Spanish

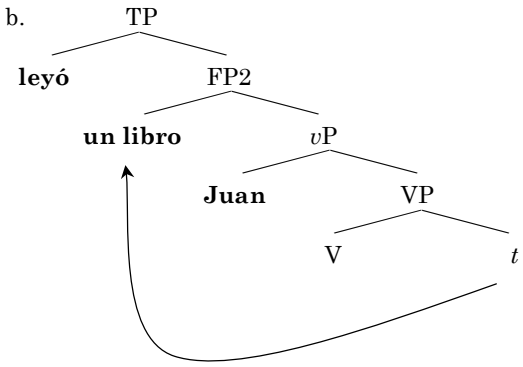
In the next few pages, I will examine what the properties of object movement in Spanish are. The logic is the same in all the cases examined: there are various environments in which an asymmetry in the behaviour of a *v*P internal argument can be reasonably attributed to whether it undergoes movement or not. When combining these environments with bare infinitive clefting, the stranded object shows the behaviour that was previously attributed to unmoved objects. From this, it follows that a remnant *v*P movement analysis is not tenable, since the object has not evacuated *v*P, and it is not possible to form a remnant *v*P to begin with.

4.2.1. The analysis

To date, the best empirical evidence in favour of overt object movement in Spanish is the work of Ordóñez (1997:II, 1998). In these two studies, he concludes that VOS orders are the result of moving the object across a low subject, as in the representation in (60).[17]

60) *VOS orders according to Ordóñez*
a. Leyó un libro Juan
read a book J
"Juan read a book"

[17] I've labelled the position the object moves to as PF2 so as to maintain Ordóñez's terminology, but its exact identity is not important here. Ordóñez is forced to postulate an independent projection because he assumes (following Kayne 1994) that multiple specifiers are not possible. However, if one drops this assumption, then it is possible to take the object to land in an outer specifier of *v*P (cf. Gallego 2006, Gallego & Uriagereka 2006).



This analysis is relevant for the purposes of this chapter because it opens a way to create a remnant *v*P. Therefore, if it could be shown that such a derivation is generally available in Spanish, the remnant movement analysis of predicate clefting would gain much support. Here, I will argue against this option. I think that Ordóñez's analysis is well motivated, and that (60) is the correct structure for the VOS cases he discusses. Nonetheless, it can also be shown that object movement in Spanish is not productive enough to license a remnant movement analysis in all cases.[18]

One final word is in order before moving on: it has also been proposed (Uribe-Etxebarria 2002, Lahousse 2004) that VOS orders are derived by phrase movement of [VO] across the subject. I think that this line of analysis is very interesting and is possibly correct for various cases that Ordóñez does not discuss.[19] Nonetheless, I will ignore it, since it is not relevant for the purposes of this section. Under this analysis, VOS orders are uninformative as to whether there is object movement in Spanish, and consequently, as to whether it is possible to create a remnant *v*P. I am focusing on Ordóñez's analysis, since it is the one that could potentially support a remnant movement analysis of bare infinitive clefting.

4.2.2. Binding

Ordóñez offers various arguments in support of his analysis. The first one is that, in VOS orders, the object can bind variables inside the subject. Clearly, this is only possible if the object moves to a position c-commanding the subject. The same effect holds in ditransitive clauses with a goal-theme order (which is the reversed order in Spanish), where the goal can bind into the theme. Moreover,

[18] A note of caution: given that I agree with Ordóñez in that object movement out of *v*P exists, it is possible that some cases of bare infinitive clefting are instances of remnant *v*P movement. The point, though is that there is a large and consistent set of cases in which such an analysis is not available.

[19] Gallego (2006) notes that, across Romance, there is a direct link between the possibility of having a VSO order and deriving VOS orders via object shift (as opposed to VP movement). If he is correct, then the VP movement option would not be available in Spanish.

the fact that these examples are not WCO violations suggests that this is not an instance of A-bar movement. The examples in (62) are given as a control to show that backward binding is not possible in sentences with an unmarked word order.

61) a. Este libro se lo regaló [a cada$_i$ niño] [su$_i$ amigo]
this book SE CL.DAT gave.3SG to each child his friend
"His friend gave each child this book"
b. Hoy ha traido [a cada$_i$ niño] [su$_i$ madre]
today has brought to each child his mother
"His mother brought each child today"

62) a. * [Su$_i$ amigo] le ha regalado un libro [a cada$_i$ niño]
his friend CL.DAT has given a book to each child
"His friend has given each child a book"
b. * [Su$_i$ madre] ha traido hoy [a cada$_i$ niño]
his mother has brought today to each child
"His mother has brought each child today"

Condition C (non-)violations also support Ordóñez's analysis in a rather straightforward way.

63) a. * El libro se lo compraron [a ella$_i$] [los hermanos de Eva$_i$]
the book SE CL.DAT bought.3PL to her the brothers of E
"Eva's brothers bought her the book"
b. [Los hermanos de Eva$_i$] le compraron el libro [a ella$_i$]
the brothers of E CL.DAT bought.3PL the book to her
"Eva's brothers bought her a book"

Now, the attentive reader might be wondering why binding is ungrammatical in the examples in (62). One could imagine a derivation like the following: first, the object moves to the left of the subject, yielding the examples in (61) as an intermediate representation. Subsequently, the subject raises further to a preverbal position, deriving the word order in (62). At LF, the subject reconstructs, licensing variable binding. Note that this last step is not easy to block by appealing to the A nature of subject raising. For one, it has been shown that A movement can reconstruct, reversing previous claims to the contrary (see Boeckx 2001 and Sauerland 2003).[20] Furthermore, Ordóñez (1997:46) provides the examples in (64) to show that a scrambled object can reconstruct to its base position. If reconstruction is available for object movement, then it also should be available for subject movement.

64) a. ¿Qué le regaló [a su$_i$ amigo][cada$_i$ niño]?
what CL gave.3SG to his friend each boy
"What did each boy gave to his friend?"

[20] Alternatively, it has been argued that preverbal subjects in Spanish are actually A-bar moved (cf. Ordóñez & Treviño 1999), in which case reconstruction should be freely available.

b. Aquí besó [a su_i amiga][$cada_i$ niña]
here kissed to her friend each girl
"Each girl kissed her friend here"

If the type derivation sketched in the previous paragraph above were possible, we would incorrectly predict (62) to be grammatical. Since it is not, then it must be the case that the availability of object movement in Spanish is quite limited.

Let us extend a bit on this point, since it will be important later on. It has been established in the literature that subject-final orders in Spanish correlate with a focal interpretation of the subject (cf. Ordóñez 1997, 1998; Zubizarreta 1998; Uribe-Etxebarria 2002; Lahousse 2004). One indication of this status is that such sentences are well-formed as replies to subject questions.

65) a. ¿Quién ha leído el libro?
who has read the book
"Who has read the book?"
b. El libro lo ha leído Juan
the book CL has read J
"JUAN has read the book"
c. Ha leído el libro Juan
has read the book J
"JUAN has read the book"

This is quite a strict correlation: if the subject is clause-final then it *must* be focused. In fact, Zubizarreta (1998) suggests that placing the subject in a clause-final position is a focalisation strategy. She builds this observation into her theory of word order variation, ensuring that subjects appear at the right edge only when there is a need to focus them, and never in other contexts.[21] In essence, her analysis is that right-edge subjects are the most embedded constituents in the clause, and therefore they receive pitch accent via the Nuclear Stress Rule. Assuming a correlation between pitch accent and focal interpretation (cf. Reinhart 1995), the paradigm in (65) follows.

The conclusion, then, is that object movement in Spanish is dependent on discourse factors, i.e., on the need to shift the focus of the sentence. If the subject is not focused, then object movement does not apply. This is a necessary hypothesis to account for the ungrammaticality of (62): as explained above, if object movement were possible in every sentence, then there would be a converging derivation for (62). The immediate consequence of this hypothesis is that one cannot resort either to object movement to create a remnant *v*P in cases of bare infinitive fronting, since in most of these cases the subject does not receive a focal interpretation. Therefore, they have to be analysed as a bare *v* head moving up and stranding material below the *v*P level. This holds not only for objects, but also for other types of *v*P internal constituents, i.e., PP complements, low adverbials, non-finite complements of modal and perception verbs, and finite complement clauses. I will return to these elements in more detail in section 4.3.

[21] Her theory is a bit different, in that she assumes phrase movement of [VO] across the subject, rather than object scrambling. However, her observations can be translated without trouble into the analysis that Ordóñez proposes.

4.2.3. Indefinites

Ordóñez also points out that certain restrictions on the interpretation of indefinites also fall out from the structure in (59). He observes that an indefinite object can be interpreted as either specific or non-specific in both the SVO and VSO orders.

66) a. [Cada agente] informó [a un espía] de los planes secretos
each agent informed to a spy of the plans secret
"Each agent informed a spy about the secret plans"
[✓ specific / ✓ non-specific]
b. Ayer informó [cada agente] [a un espía] de los planes
yesterday informed each agent to a spy of the plans
secretos
secret
"Yesterday, each agent informed a spy about the secret plans"
[✓ specific / ✓ non-specific]

However, in the VOS order, the ambiguity disappears, and indefinite objects can only be interpreted as specific.

67) Ayer informó [a un espía] [cada agente] de los planes secretos
yesterday informed to a spy each agent of the plans secret
"Yesterday, each agent informed a spy about the secret plans"
[✓ specific / * non-specific]

The same effect is found in double object constructions with an indefinite goal. In the unmarked [theme-goal] order, the indefinite is ambiguous. However, in the [goal-theme] order, only the specific reading is possible.

68) a. Los profesores le dieron [cada libro] [a un estudiante]
the teachers CL.DAT gave.3PL each book to a student
"The teacher gave each book to a student"
[✓ specific / ✓ non-specific]
b. Los profesores le dieron [a un estudiante] [cada libro]
the teachers CL.DAT gave.3PL to a student each book
"The teacher gave each book to a student"
[✓ specific / * non-specific]

These asymmetries can be easily covered by adopting Diesing's (1992) proposal that non-specific readings of indefinites are only possible if the indefinite does not move. Once it leaves its base position, the specific reading is forced. If VOS orders require movement of the object across the subject to a *v*P external position, then it follows that those objects can only be interpreted as specific. The same goes for goals moved to the left of themes in double object constructions.

Now, suppose that bare infinitive fronting were a subcase of remnant movement. If this were so, then the prediction would be that stranded indefinite objects should only have a specific reading, since they must move out of *v*P. This, however, is not correct. In the examples below, stranded indefinite objects can be

interpreted non-specifically without trouble. In fact, note that the examples are set up so that the non-specific interpretation is the only pragmatically felicitous one. Since they are grammatical and felicitous, it must be the case that the stranded object has not moved out of *v*P, which in turn falsifies a remnant movement approach, as already concluded in the previous section.

69) a. Beber, Juan siempre bebe un vaso de vino en las comidas
drink.INF J always drinks a glass of wine in the meals
"As for drinking, Juan always drinks a glass of wine during meals"
b. Fumar, todos los invitados se han fumado un puro
smoke.INF all the guests SE have smoked a cigar
"As for smoking, every guest has smoked a cigar"

4.2.4. Subextraction

Torrego (1998:37-38) gives the following paradigm of wh- extraction out of nominal objects.

70) a. ✓ El chico del que he visto [varias hermanas *t*]
the boy of.the that have seen some sisters
"The boy that I've seen some sisters of"
b. ? El chico del que he visto [a varias hermanas *t*]
the boy of.the that have seen to some sisters
"The boy that I've seen some sisters of"
c. * El chico del que han acusado [a una hermana *t*]
the boy of.the that have accused to a sister
"The boy that a sister of has been accused"

Torrego only offers relativisation data. Below, I replicate the same paradigm with wh- questions. The judgements remain the same.

71) a. ✓ ¿De qué chico has visto [varias hermanas *t*]?
of what boy have seen some sisters
"Which boy have you seen some sisters of?"
b. ? ¿De qué chico has visto [a varias hermanas *t*]?
of what boy have seen to some sisters
"Which boy have you seen some sisters of?"
c. * ¿De qué chico han acusado [a una hermana *t*]?
of what boy have accused to a sister
"Which boy has a sister of been accused?"

In Torrego's analysis, examples (70)c and (71)c instantiate object raising out of *v*P, which she motivates by assuming that definite objects are licensed in a *v*P-external position (cf. similar effects in Hindi, Turkish, Germanic, etc). As a consequence, the impossibility of extraction out of these objects is subsumed under the more general ban on extraction out of derived specifiers (cf. Müller 1998). Note that this is not a peculiarity of objects: extraction out of subjects is possible only if they do not move to a preverbal position (data from Gallego & Uriagereka 2006).

72) a. ✓ ¿[De qué oradores] crees que me van a impresionar
of what speakers think.2SG that CL go.3PL to impress
[las propuestas [*t*]]?
the proposals
"Which speakers do you think that I will be impressed by their proposals?"

b. * ¿[De qué oradores] crees que [las propuestas [*t*]]
of what speakers think.2SG that the proposal
me van a impresionar?
CL go.3PL to impress
"Which speakers do you think that I will be impressed by their proposals?"

Therefore, let us assume that we can use the impossibility of sub-extraction as a test for object movement. Under a remnant movement analysis of bare infinitive clefting, the prediction would be that wh- extraction out of stranded objects would be impossible. In reality, this is not so. The examples below, combining bare infinitive clefting and subextraction out of a stranded complement, are perfectly grammatical.

73) a. Regalar, ¿[de qué escritor] te han regalado [varios libros [*t*]]?
give.INF of what writer CL have given several books
"As for giving, which writer have you been given several books by?"

b. Querer, ¿[qué equipo] quieres [que [*t*] gane el partido]?
want.INF what team want.2SG that win.3SG the game
"As for wanting, what team do you want to win the game?"

I will ignore relativisation data. The reason is that topicalisation within a relative clause is often quite degraded by itself. Since predicate clefting is an instance of topicalisation (see section 2.4), this effect could interfere with the judgements.

74) ?? La chica a la que, este libro, Juan se lo ha regalado
the girl to the that this book J CL CL has given
"The girl to which, this book, Juan has given"

Nonetheless, the implications are clear. If predicate fronting in (73) were the result of remnant movement, we would expect extraction out of the objects to be impossible, in parallel to (70)c and (71)c. Since the examples are grammatical, the first conclusion is that these objects must be sitting in their thematic position. The more important conclusion, which follows from the previous one, is that bare infinitive fronting is not an instance of remnant movement, as I have already defended in the previous two subsections.

4.2.5. Clitic doubling

The fourth (and final) piece of evidence in favour of overt object movement in Spanish is based on clitic doubling of indirect objects, which is only optional in

certain ditransitive predicates if the indirect object stays in its canonical position (data from Ordóñez 1997:IV).

75) a. El profesor (les) entregó las notas a los alumnos
the teacher CL.DAT gave.3SG the grades to the students
"The teacher handed the grades to the students"
b. Juan (le) ofreció vino a María
J CL.DAT offered.3SG wine to M
"Juan offered María some wine"

However, if the indirect object is moved, clitic doubling becomes obligatory. This is shown below for topicalisation.

76) a. A los alumnos, el profesor *(les) entregó las notas
to the students the teacher CL.DAT gave.3SG the grades
"The students, the teacher handed the grades to them"
b. A María, Juan *(le) ofreció vino
to M J CL.DAT offered.3SG wine
"To María, Juan offered her some wine"

Similar judgements obtain for the marked [goal-theme] order in ditransitive predicates. These sentences sound somewhat better than the ones in (76), but still clearly worse than the examples in (75)

77) a. El profesor ?*(les) entregó a los alumnos las notas
the teacher CL.DAT gave.3SG to the students the grades
"The teacher handed the grades to the students"
b. Juan ??(le) ofreció a María vino
J CL.DAT offered.3SG to M wine
"Juan offered María some wine"

A remnant movement analysis would predict that clitic doubling should be obligatory, since the indirect object must move out of *v*P to create a remnant constituent. This prediction is incorrect: clitic doubling is only optional, not obligatory. As in the previous three subsections, this pattern shows that bare infinitive clefting is not reducible to remnant movement.

78) a. Entregar, el professor (les) entregó las notas a los alumnos
give.INF the teacher CL gave.3SG the grades to the students
"As for giving, the teacher gave the grades to the students"
b. Ofrecer, Juan (le) ofreció vino a María
offer.INF J CL offered.3SG wine to M
"As for offering, Juan offered María some wine"

4.2.6. Interim summary

I have presented four ways in which object movement can be detected in Spanish, and examined the extent to which they can be used to argue in favour of a remnant movement approach to bare infinitive clefting. We have seen that, in all

four cases, stranded objects show the same behaviour that has been attributed, on independent grounds, to internal arguments sitting in a *v*P internal position.[22] The obvious consequence is that a remnant movement analysis is not possible. Instead, we find support for the analysis I introduced at the beginning of the chapter, whereby the fronted bare infinitive is just that: a bare *v* head.

4.3. Non-nominal complements and extraposition

So far, I have shown that predicate clefting can strand objects that are arguably lower than the *v*P level. This is an important point, given the possibility of moving objects out of *v*P in some contexts. Here, I want to strengthen this point. The careful reader might have noticed that all the examples in this section have involved stranding of DP objects. Nothing has been said yet about the behaviour of non-nominal objects. This type of objects, in the same way as their nominal counterparts, can be stranded without trouble under bare infinitive clefting. Consider complement PPs to begin with.

79) a. Vivir, Juan vive con María.
live.INF J lives with M
"As for living, Juan lives with María (…although they barely talk to each other)"
b. Hablar, Juan habló de su infancia
talk.INF J talked of his childhood
"As for talking, Juan talked about his childhood"

Various verbs in Spanish (most notably, modals and perception verbs) can select non-finite complements. These complements can also be stranded without trouble.

80) a. Querer, Juan quiere viajar al Caribe
want.INF J wants travel to.the Caribbean
"As for wanting, Juan wants to go on a trip to the Caribbean (…but unfortunately he can't afford it)"
b. Oir, Juan oyó a María entrar en casa
hear.INF J heard to M come in home
"As for hearing, Juan heard Maria coming home"

Finite complements can also be stranded.

81) a. Pensar, yo pensaba que iba a llover
think.INF I thought.INF that went to rain
"As for thinking, I thought that it was going to rain"

[22] Note that it will not do to argue that the object undergoes a short movement within *v*P. Given that the fronted infinitive corresponds to a *v* head, any movement below the *v*P level will not suffice to create a remnant constituent.

b. Saber, nadie sabe cuándo pillará el coyote
know.INF nobody knows when catch.FUT the coyote
al correcaminos
the roadrunner
"As for knowing, nobody knows when the coyote will catch the roadrunner (…but it's still a fun show to watch!)"

Manner adverbials, which are the prototypical case of low adverbs, can also be stranded. However, it is a common assumption that adverbs might be merged countercyclically (cf. Lebeaux 1988 and much subsequent work). If such a derivation is possible, it makes adverbs uninformative for the purposes of this section, so I will ignore them in what follows.

82) a. Leer, Juan ha leído el libro rápidamente
read.INF J has read the book quickly
"As for reading, Juan has read the book quickly"
b. Cocinar, Juan cocina tortillas bien
cook.INF J cooks omelets well
"As for cooking, Juan knows how to cook omelets well"

Recall that one of the conclusions of section 4.2.2 was that object movement only happens if the subject has to be focalised. Since it seems that this is the only means of object movement in Spanish, it seems plausible to extend this generalisation to non-nominal complements as well. In fact, whenever we have a subject-final clause with any of these elements as complements, the subject is necessarily interpreted as focused. This is exactly the same situation as in (65).

83) a. Aquí vive con María JUAN
here lives with M J
"JUAN lives here with Maria"
b. Quiere viajar al Caribe JUAN
wants travel.INF to.the Caribbean J
"JUAN wants to travel to the Caribbean"
c. Pensaba que iba a llover JUAN
thought that went to rain J
"JUAN thought that it was going to rain"

However, in (79) through (81), the subjects are not in focus. Hence, following the logic so far, the conclusion is that the complements in these clauses have not raised out of *v*P, which in turn goes against a remnant movement analysis. Before concluding that remnant movement is not involved in the derivation of these examples, there is another possibility that must be excluded. One could also argue that the remnant *v*P in each case is created by extraposition of all verbal dependents.[23] If extraposition were a generally available operation, then

[23] For expository convenience, I'm subsuming Heavy NP Shift under extraposition. Also, note that I am not committed to an particular analysis of extraposition. As far as I can see, the arguments developed in this section hold irrespectively of whether extraposition is taken to be base generation, rightward movement, or a sequence of remnant movements.

the remnant movement analysis would still be plausible. In this section, as in the previous one, I want to argue that this is not the case.

It is quite standard to assume that extraposition is triggered by discourse factors, i.e., it happens so as to aid parsing by moving long constituents to the end of the sentence.[24] For instance, Ross (1967) and Postal (1974) already pointed out that extraposition (HNPS) is not possible unless the extraposed constituent is heavy enough.

84) a. Jack bought a book from Calvin
b. * Jack bought *t* from Calvin [a book]
c. Jack bought *t* from Calvin [a book that taught him organic knitting]

By this logic, it follows that extraposition will not be possible unless something is gained in terms of processing (cf. especially Hawkins 1994 for discussion of this point). If this is the case, then extraposition cannot underlie many of the examples in this chapter. Since many of the constituents stranded by bare infinitive clefting are already clause-final by themselves, any kind of rightward movement is going to be string-vacuous, therefore is going to be irrelevant for the relative parsing ease of the sentence. Consequently, extraposition would not apply here, and it wouldn't qualify as a means to move constituents out of *v*P. Hence, it can't be used to support the remnant movement approach.

However, I am going to assume, for the sake of the argument, that extraposition/HNPS can apply regardless of the size of the extraposed constituent, and even if it results in string-vacuous movement (contrary to what (84) suggests). I show that, even if such concessions are made, there are still a number of cases of bare infinitive fronting where extraposition cannot possibly have applied and are therefore not reducible to remnant movement.

4.3.1. Extraposition of non-finite complements

What I want to argue is that, even though extraposition is a plausible way of moving constituents out of *v*P, there are some cases that resist this analysis. For instance, bare *v*P complements to perception verbs cannot be extraposed across matrix manner adverbials (85). Extraposition of the same complement across a matrix time adverb (85) is comparatively better, but still quite degraded.[25]

85) a. Juan vió [VP caerse las torres gemelas] a través de internet
J saw fall.SE the towers twin through of internet
"Juan saw the WTC towers collapse through the internet"
b. *? Juan vió a través de internet [VP caerse las torres gemelas]
J saw through of internet fall.SE the towers twin
"Juan saw the WTC towers collapse through the internet"

[24] Note that a parsing trigger is perfectly compatible with HNPS having well-defined syntactic properties.

[25] Similar data have also been reported by Zagona (1988) and Koopman (1994).

86) a. Juan vió [VP caerse las torres gemelas] ayer
J saw fall.SE the towers twin yesterday
"Juan saw the WTC towers collapse yesterday"
b. ?? Juan vió ayer [VP caerse las torres gemelas]
J saw yesterday fall.SE the towers twin
"Juan saw the WTC towers collapse yesterday"

In (86)a, *ayer* 'yesterday' modifies the matrix verb. It can be uttered the day after someone who has never seen images of the 9/11 attacks is shown some footage of them. The same holds for (85)a, where it is obvious that the internet is the means of watching the event, not the means of the WTC collapsing. In neither case can the *v*P complement of *ver* 'to see' be extraposed across these adverbs. Yet, this same complement can be stranded without trouble under predicate clefting.

87) a. Ver, Juan vió [VP caerse las torres gemelas] ayer
see J saw fall.SE the towers twin yesterday
"As for seeing, Juan saw the WTC towers collapse yesterday"
b. Ver Juan vió [VP caerse las torres gemelas] a través de
see J saw fall.SE the towers twin through the
internet
internet
"As for seeing, Juan saw the WTC towers collapse through the internet"

Note that I am implicitly assuming that the adverbials above are right-adjoined to the matrix clause. An alternative analysis would have them left-adjoined. The embedded VPs would be generated in a post-adverbial position, and then raise to a higher slot to the left of the adverbs. If this slot is taken to be higher than the matrix *v*P, it could license a remnant movement analysis. Under such an analysis, the deviance of (86)b and (85)b would be a consequence of the embedded clauses failing to raise. If this analysis were correct, it would support a remnant movement analysis, since the ECM complement has to raise out of the matrix *v*P in order to precede the adverbs modifying the main verb.

There are reasons to suppose this is not so. For one, under full *v*P fronting, the matrix verb can pied-pipe the entire ECM complement along. For this to be possible, it must be the case that the ECM complement stays in a *v*P internal position.

88) Ver caerse las torres gemelas, Juan las vió (caerse)
see.INF fall.INF.SE the towers twin J CL saw fall.INF.SE
"As for seeing the WTC towers collapse, Juan saw them (collapse)"

But then, it must also be the case that this is the position of the ECM complement in all cases. If there was an option between leaving the ECM complement inside vP and raising it to the left of manner/time adverbs, we would expect (85)b and (86)b to be grammatical. Since they are not, we conclude that there is no such option: the ECM complement always stays inside *v*P. Under this analysis, the ungrammaticality of (85)b and (86)b must be attributed to adverbs being necessarily right adjoined in this construction. Why this should be so is something that I will leave as an open question.

A second argument against a left-adjunction analysis for adverbs comes from sentences with multiple adverbs. If both time and manner adverbs are combined in sentence final position, the preferred order is [manner > time]. This asymmetry follows if these adverbs are right-adjoined. In the examples below, *ayer* 'yesterday' has been changed into *hace varios días* 'a few days ago' so as to control for the effects of size in the ordering of multiple adverbs.

89) a. Juan vió [VP caerse las torres gemelas] [por internet]
J saw fall.SE the towers twin through internet
[hace varios días]
ago some days
"Juan saw the WTC towers collapse though the internet a few days ago"

b. ?? Juan vió [VP caerse las torres gemelas] [hace varios días]
J saw fall.SE the towers twin ago some days
[por internet]
through internet
"Juan saw the WTC towers collapse though the internet a few days ago"

The order in (89)b is fully grammatical under a non-neutral (comma) intonation, suggesting that [time > manner] is a marked ordering of clause-final adverbials. Under neutral intonation, it is quite degraded unless it is given an interpretation in which the time adverbial modifies the embedded clause (i.e., it is the collapse of the twin towers that happened a few days ago, not the event of watching the collapse). This suggests that a right-adjunction analysis is correct, and supports the earlier conclusion that non-finite complements cannot extrapose. In turn, this conclusion undermines a remnant movement analysis of bare infinitive clefting.

4.3.2. Complementiser drop

Spanish has a class of embedding verbs that allow their finite complements to optionally surface without an overt complementiser (see Etxepare 1999). This is only possible under certain circumstances, though. For instance, it is necessary that something be extracted from the lower clause.

90) a. Los paquetes que Juan considera / afirma [(que) perdió Correos]
the parcels that J considers claims that lost PS
"The parcels that Juan considers / claims the postal service lost"

b. ¿Cuántos paquetes considera / afirma Juan [(que) perdió
how many parcels considers claims J that lost
Correos]?
PS
"Which parcels does Juan consider / claim the postal service lost?"

c. Juan considera / afirma [*(que) Correos perdió varios paquetes]
J considers claims that PS lost some parcels
"Juan considers / claims that the postal service lost some parcels"

However, if these clauses are extraposed across an adverb, complementiser drop becomes much worse.

91) a. ¿Cuántos paquetes afirma/ asegura Juan, desafortunadamente,
how many parcels claims assures J unfortunately
[*(que) perdió Correos]?
that lost PS
"Which parcels does Juan claim/assure, unfortunately, that the postal service lost?"

b. Los paquetes que Juan afirma/ asegura, desafortunadamente,
the parcels that J claims assures unfortunately
[*(que) perdió Correos]
that lost PS
"The parcels that Juan claims/assures, unfortunately, that the postal service lost"

Now consider again an example with bare infinitive fronting, and note that the complementiser can still be dropped.

92) ¿Asegurar, cuántos paquetes asegura Juan [(que) perdió Correos]?
assure.INF how many parcels claims J that lost PS
"As for assuring, how many parcels does Juan assure the postal service lost?"

Since movement of the complement clause results in the impossibility to license a null complementiser, it must be the case that the complement clause has not moved in (92). In other words, this illustrates that bare infinitive clefting is not reducible to remnant movement.[26]

4.3.3. Interim conclusion

Spanish being an SVO language, it is difficult to observe the effects of object extraposition, at least in comparison with SOV languages, where it necessarily crosses the verb. Extraposition can only be observed whenever it crosses other material, most frequently adverbs, but in the majority of times, any instance of extraposition would be string-vacuous. On top of that, apart from word order and what has been discussed in 4.3.1 and 4.3.2, I know of no clear-cut tests that can distinguish an extraposed complement from its non-extraposed version. Thus, it

[26] Note that this argument depends on the assumption that C-drop is governed by syntactic factors. However, Boskovic & Lasnik (2003) propose an account of English C-drop in terms of prosodic phrasing (and against previous accounts based on government).

i) I bought the book (that) Peter wrote
ii) I bought the book yesterday *(that) Peter wrote

If such an analysis were extensible to Spanish, this argument would become vacuous. I believe this is not the case, though. For one, as (90) shows, C-drop is more restricted in Spanish than it is in English, and it depends on some purely syntactic conditions, such as the presence of an A-bar chain.

is quite difficult to argue either for or against whether extraposition can be used to create a remnant *v*P.

We have seen in the previous two subsections that extraposition, although existent in Spanish, cannot be used to create a remnant *v*P in all the necessary cases. For one, bare *v*P complements to perception verbs resist extraposition, yet they can be stranded under bare infinitive clefting. Similarly, complementiser drop is impossible under extraposition, but acceptable under bare infinitive fronting. These two cases show that extraposition cannot be invoked in all the cases where it is necessary to create a remnant *v*P, so some other operation (i.e., head-to-spec movement) must be invoked.

For other cases, though, the question remains open, and it depends to a large extent on whether string-vacuous extraposition is available.[27] Now, since I have already shown that some cases cannot be analysed in terms of remnant movement, it is quite straightforward to extend this approach to all cases of clause final complements that are stranded under bare infinitive clefting. In fact, given that the examples in the previous subsections must be analysed in terms of head-to-spec movement, extending this analysis to all cases seems to me to be the null hypothesis. In principle, a remnant movement analysis based on extraposition could be available, but at this point I think that the burden of proof is on whoever wants to defend such analysis.

4.4. Alternative I: scattered deletion

Before concluding that bare infinitive clefting involves movement of a bare head, it is necessary to discard a couple of alternative analyses that would maintain the XP status of the fronted infinitive. Johan Rooryck (p.c.) has pointed out that one could assume a process of scattered deletion of copies (cf. Fanselow & Ćavar 2002, Nunes 2004). In particular, his proposal is that predicate fronting is always full *v*P movement, and then one has the choice to spell out the object either in the lower or in the upper position. This is schematised below, where strikethrough marks unpronounced copies.[28]

93) a. [Leer ~~un libro~~] Juan ha leído un libro
read.INF a book J has read a book
"As for reading, Juan has read a book"

b. [Leer un libro] Juan lo ha leído ~~un libro~~
read.INF a book J CL has read a book
"As for reading a book, Juan has read it"

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[27] Although, as mentioned in passing in section 4.3, the most parsimonious hypothesis is that string-vacuous extraposition does not exist.

[28] Note, incidentally, that this hypothesis has no clear way to account for the presence of a CLLD clitic in (93)b vs. its absence in (93)a. Since both variants would be identical except for the pronunciation site of the object (by hypothesis, purely a PF matter), the availability of clitics should be identical too. In contrast, my analysis can in principle explain this difference (although at present I cannot offer a detailed account). The presence of this clitic is triggered by movement of the object to the left periphery (see Cinque 1990). Thus, if we assume that the object is not moving in (93)a, nothing would require the presence of a clitic. See section 5.1.2 below for more discussion on clitics.

It is not a straightforward task to develop a mechanism of copy deletion that can generate the structures above without overgenerating in other areas. However, for the sake of the argument, let us assume such a mechanism can be defined. This system predicts that, other things being equal, cases of bare infinitive clefting should receive exactly the same interpretation as their full *v*P clefting counterparts. This is because the proposed mechanism applies only at PF, determining which copies are pronounced and which are not. It has no influence in narrow syntax or LF. In what follows, I present three pieces of evidence that show that this prediction is incorrect.

4.4.1. Quantifier scope

The first argument is based on the scope of quantificational objects. To begin with, consider the English sentences below. Example (94)a is scopally ambiguous, as is well-known. On the hand, (94)b only has the [2 > ∀] reading.[29] This is because phrase movement creates scope islands (cf. Sauerland 1998 and references). The object quantifier is trapped inside the fronted phrase, and cannot QR out to yield the inverse scope reading. Only the direct reading is available, under reconstruction of the fronted *v*P.

94) a. Two girls have dated every boy [✓ 2 > ∀ / ✓ ∀ > 2]
b. [Date every boy], two girls have [✓ 2 > ∀ / * ∀ > 2]

Spanish shows the same asymmetry: while (95)a is ambiguous, (95)b only allows the [2 > ∀] reading.

95) a. Dos chicas han salido con todos los chicos
two girls have gone.out with all the boys
"A girl has dated every boy"
[✓ 2 > ∀ / ✓ ∀ > 2]
b. Salir con todos los chicos, dos chicas han salido
go.out.INF with all the boys two girls have gone.out
"As for dating all the boys, a girl has dated them"
[✓ 2 > ∀ / * ∀ > 2]

Interestingly, the inverse scope reading reappears if only a bare infinitive is clefted.

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[29] Rimell & Leu (2002) claim that this is factually incorrect, arguing that the inverse scope reading is available in (i). However, Bobaljik & Wurmbrand (2005) star (ii), which is apparently analogous to (i).

i) Stand in front of every tent, a soldier has [✓ ∀ > ∃] (Rimmell & Leu)
ii) Stand in front of every bank, a policeman did that day [* ∀ > ∃] (Bobaljik & Wurmbrand)

In any event, Rimmell & Leu argue that such examples don't involve movement of *v*P, but rather object topicalisation followed by remnant *v*P movement (cf. Baltin 2005 for a similar proposal). This is so because they still maintain the assumption that QR out of a moved phrase is impossible, as I am also assuming.

96) Salir, dos chicas han salido con todos los chicos
go.out.INF two girls have gone.out with all the boys
"As for dating, a girl has dated every boy"
[✓ 2 > ∀ / ✓ ∀ > 2]

This asymmetry is unexpected if (95)b and (96) differed only in their PFs. If their LFs were identical, the prediction would be that the inverse scope reading would be ungrammatical in (96) as well. In both cases, what is fronted is a full phrase, the difference being that in (96) only part of it –the verb- is pronounced. Hence, whatever blocks QR of the universal object in (95)b should also block it in (96). The only way to derive the asymmetry would be to assume that, in (96), the object is not only pronounced downstairs: it is there at all times, that is why it doesn't get trapped in a scope island. Thus, these examples show that the topic does not contain an unpronounced copy of the object, i.e., (93) is not the correct representation for bare infinitive clefting.

Under a scattered deletion approach, one could try to capture this conclusion by deleting the upper copy of the object at LF as well. However, this would result in a strange configuration, in which the object is not represented in the topic position at either LF or PF. Given that, under the current model of syntax, PF and LF are the only levels of representation, such a solution amounts to saying that the object is never in the topic position. If we accept this conclusion, then the only motivation for moving the object along with the infinitive, and then deleting it at both levels, is purely theory internal, i.e., the ban against moving bare heads to specifier positions. But, if this ban is dropped, as I have argued in the previous chapter, then there remains no motivation whatsoever for the scattered deletion analysis.

4.4.2. Idiom interpretation

The second asymmetry is based on idiom interpretation, although the logic is the same. Consider the idioms in the examples below. Under full vP clefting, both the idiomatic and the literal reading are possible. However, if only the bare infinitive is clefted, the idiomatic reading disappears and only the literal one remains.[30]

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[30] Ricardo Etxepare and Carme Picallo (p.c.) have both pointed out to me that some idiomatic readings (e.g., *tocar las pelotas*, lit. 'to touch someone's balls', id. 'to be annoying') are retained under bare infinitive clefting (i). I don't think this is a counterexample to my argument. For one, this particular idiomatic reading is also preserved under other contexts where the object is (A-bar) moved, like topicalisation (ii). In contrast, in an idiom like (97), object topicalisation destroys the idiomatic reading (iii). Thus, everything boils down to the fact that some idioms admit separation of their parts while others don't. An actual counterexample would be an idiomatic reading that is retained under bare infinitive clefting, but not under object topicalisation.

i) Tocar, Juan me ha tocado las pelotas [idiomatic reading OK]
touch.INF J me.DAT has touched the balls
ii) Las pelotas, Juan me las ha tocado [idiomatic reading OK]
the balls J me.DAT CL has touched
iii) La pata, Juan la ha estirado [idiomatic reading out]
the leg J CL has stretched

97) a. Estirar la pata, Juan la ha estirado
stretch.INF the leg J CL has stretched
✓ "Juan has stretched his leg" (as a warm-up exercise)
✓ "Juan has died"
b. Estirar, Juan ha estirado la pata
stretch.INF J has stretched the leg
✓ "Juan has stretched his leg"
* "Juan has died"

98) a. Tomarnos el pelo, Juan nos lo ha tomado
take.INF.CL the hair, J us.DAT CL has taken
✓ "Juan has taken our hair" (a scalp-cutting Indian?)
✓ "Juan has pulled our leg"
b. Tomarnos, Juan nos ha tomado el pelo
take.INF.CL J us.DAT has taken the hair
✓ "Juan has taken our hair"
* "Juan has pulled our leg"

I will adopt Landau's (2006) analysis of these alternations, which capitalises on the observation that predicate clefting is in essence a way to create alternatives to the clefted constituent (cf. section 2.3). In particular, full predicate clefting creates alternatives to VP meanings, whereas bare infinitive clefting does to verb meanings. Hence, bare infinitive clefting blocks idiomatic interpretations, at least to the extent that one cannot assign alternatives to subparts of idioms. Independently of the analysis of (97) and (98), the conclusion is the same as above: if the object were obligatorily pied-piped in (97)b and (98)b, and then deleted at PF alone, there should be no reason why the idiomatic reading is impossible in these examples. It must be the case, then, that the object is not represented upstairs at LF either. As a consequence, if the object is not present in the topic position at either PF or LF, there is no reason to move it together with the verb other than the ban on head-to-spec movement, as discussed above.

4.4.3. NPI licensing

The final asymmetry concerns the licensing of NPIs. As shown below, NPIs cannot be contained in the clefted *v*P. Topicalised material can typically reconstruct, as the examples in (100) show, so it is not plausible to posit obligatory lack of reconstruction just in this case. Rather, the ungrammaticality of (99)b is possibly due to the general cross-linguistic impossibility of topicalising NPIs, which does certainly hold for Spanish (101).

99) a. Juan no ha leído nada
J not has read nothing
"Juan hasn't read anything"
b. * Leer nada, Juan no (lo) ha leído
read nothing J not CL has read
"As for reading anything, Juan hasn't read it"

100) a. [Una foto de sí$_i$ mismo]$_j$ Juan la ha visto
a picture of his self J CL has seen
"A picture of himself, Juan has seen it"
b. * [Una foto de él$_i$]$_j$ Juan la ha visto
a picture of him J CL has seen
"A picture of him, Juan has seen it"

101) * Nada, Juan no lo ha visto
nothing J not CL has seen
"Anything, Juan hasn't seen it"

Nonetheless, NPIs are perfectly grammatical if stranded under bare infinitive clefting (102). Since NPI licensing is determined at LF (cf. Uribe-Etxebarria 1994), it follows that *nada* 'anything' must be interpreted in a low position. But then, again, if it is both interpreted and pronounced downstairs, there is no motivation for moving it along the infinitive in the first place, other than the ban on head-to-spec movement. If the ban is abolished, it is perfectly possible to move the bare *v* head without pied-piping the object.

102) Leer, Juan no ha leído nada
read.INF J not has read nothing
"As for reading, Juan hasn't read anything"

4.5. Alternative II: reiterative remnant movement

The final option I want to discuss before closing off this section is based on recent work that assumes that there is much more remnant movement in syntax than it seems at first sight (cf. Hinterhölzl 1997, Kayne 1998, Koopman & Szabolcsi 2000, Nilsen 2003, Müller 2004). Analyses of this type are extremely powerful, and so it is somewhat difficult to argue against them. For any structure that can be generated under a more conservative analysis, one can also generate an equivalent structure under a remnant movement analysis, given the appropriate sequence of movements. Note that the crucial phrase here is "given the appropriate sequence of movements", as analyses of this kind usually rely on a series of movements whose only purpose is to derive a certain surface order. As a consequence, the arguments against such approaches have always been largely conceptual (i.e., complexity, arbitrariness, non-falsifiability…). The situation in this chapter is the same, given that I do not have any direct arguments against a reiterative remnant movement approach. What I will do instead is simply to show that, in the domain of predicate clefting, a remnant movement analysis doesn't offer any advantage over the analysis I am proposing in this chapter, and therefore there is no reason internal to predicate clefts to adopt it.
Let us begin with a simple Spanish sentence like (103). Although there are several ways in which such an analysis could proceed, I believe the sequence of steps in (104) constitutes a reasonable attempt.[31]

[31] This is actually a very simplified rendering of Koopman & Szabolcsi's (2000) system. However, it still captures the essence of their hypothesis: the object (and all other verbal dependents) move out of VP, and then the remnant VP moves around them. This process is

103) Juan leyó el libro
J read.PST.3SG the book
"Juan read the book"

104) *First steps of a derivation*

a.	[VP leer el libro]	*Base structure*
b.	[[el libro] [VP leer *t*]]	*Move the object out of VP*
c.	[[VP leer][el libro] *t*]]	*Move the remnant VP*

The derivation would continue in this fashion so as to join the verb with higher inflectional morphemes (aspect, tense, agreement…). The crucial point here is that, in (104)c, the bare infinitive is not a bare head, but a remnant VP. Therefore, it is possible to move it to a topic position as a phrase, by virtue of the simple fact that it *is* a phrase. No amendments to movement theory are necessary. On top of that, the remnant VP could alternatively pied-pipe the entire phrase it is a specifier of (an option also described in Koopman & Szabolcsi 2000), giving rise to full *v*P clefting.

The question at this point is, what is really gained by this analysis? We can avoid introducing modifications in the theory of movement, but at the cost of adopting a rather baroque derivation, involving, amongst other things, multiple stacking (or "landing site") positions, order preservation constraints, and language- and construction-specific complexity filters. It is not clear that this represents an improvement over a more conservative structure augmented with a modified theory of movement (which is independently justified anyway, as I argued in chapter one).

Moreover, note that the final structure in (102)c has the same constituency relations as a more traditional analysis based on head movement. To be fair, there are more ways to analyse a sentence like (103) in terms of reiterative remnant movement. I believe, though, that, ultimately, the only plausible derivations would be the ones that result in a constituency similar to the one in (102)c. It seems to me that this is actually a very poor result, since it simply amounts to replicating the effects of head movement with XP movement tools – i.e., a reiterative remnant movement analysis becomes little more than a notational variant of the analysis I develop in this chapter. The former would only be preferable if it could be shown that, at least in some cases, the verb pied-pipes some extra non-head material.[32] At present, I know of no such cases. Thus, given that a reiterative remnant movement analysis doesn't improve our empirical coverage or understanding of this construction, I will not explore it any further.

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repeated in the higher layers of the clause. Although this system will be commented on in more detail in the following chapter, the reader is still referred to the works cited above for a full exposition of this system.

[32] See, for instance, Massam (2001) for a remnant movement analysis of Niuean in which this option is actually realised. This is also the basis for Nilsen's (2003) analysis of Scandinavian object shift and Baltin's (2003) analysis of English short verb movement.

5. The analysis of predicate clefting

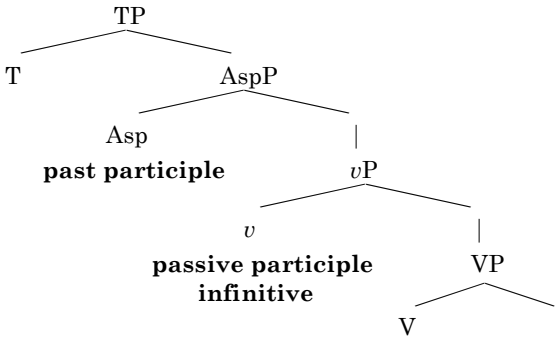
Let me quickly summarise the conclusions so far. In section 2.5, I showed that predicate clefting targets *v*, with an option of moving just the head or the entire category *v*P. In section 3, I showed that predicate clefting involves *bona fide* A-bar movement, at least for a consistent subset of speakers. Finally, in section 4, I showed that material stranded under bare infinitive fronting can be lower than the *v*P level. With all these pieces in place, we can now start developing an analysis of predicate clefting.

5.1. Derivations

5.1.1. Preliminary notes on verb movement

Before starting with the analysis proper, let me say a few words on the syntax of compound tenses in Spanish, since, in most of the examples in this chapter, the tail features a perfect tense composed of auxiliary *haber* 'have' plus a participle. The question is where participle is positioned, especially in relation to infinitives (which is the form that the topic will eventually take). I will follow Zagona (2002) and Migdalski (2006) in assuming that past participles sit in a higher position in the tree than infinitives and passive participles. More specifically, I take it that infinitives and passive participles stay in *v*, whereas past participles raise to an aspectual position above *v*P. This proposal is summarised in the following tree.

105) *The height of non-finite verb forms*

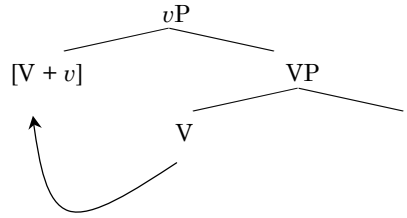


This structure entails that infinitives and passive participles, on their own, will be aspectually unspecified, whereas past participles will have an inherent aspectual specification. This seems to be correct, since, as mentioned in section 2.5.2, past participles invariably receive a perfective interpretation –hence it is plausible that they are associated to an aspectual head.

In contrast, infinitives are incompatible with a perfective reading (cf. Grohmann & Etxepare 2003). Passive participles have an inner aspect requirement, being necessarily telic (cf. Markman 2003 and Gehrke & Grillo 2007 for recent analyses of passives that build on this property). However, they

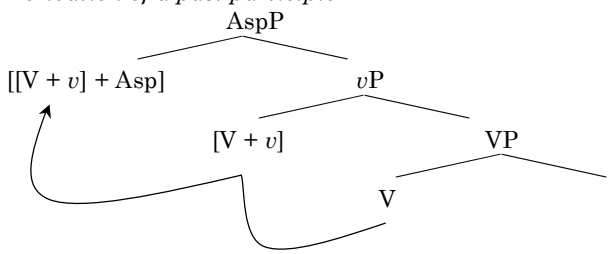
also seem to be unspecified with respect to outer aspect. In consequence, I will assume that both passive participles and infinitives are associated with a category lower than past participles (cf. Migdalski 2006). Since infinitives and passive participles only move as far as *v*, their internal structure corresponds to a combination of [V + *v*], where *v* can have a passive specification or not.[33]

106) *Derivation of an infinitive/passive participle*



In contrast, past participles raise a bit higher, so their internal structure corresponds to [V + *v* + Asp]. I provide the internal structure of the intermediate copy as that will be relevant later on.

107) *Derivation of a past participle*



In the next two subsections, I show how the analysis of predicate clefting builds on these structures.

5.1.2. Full *v*P clefting

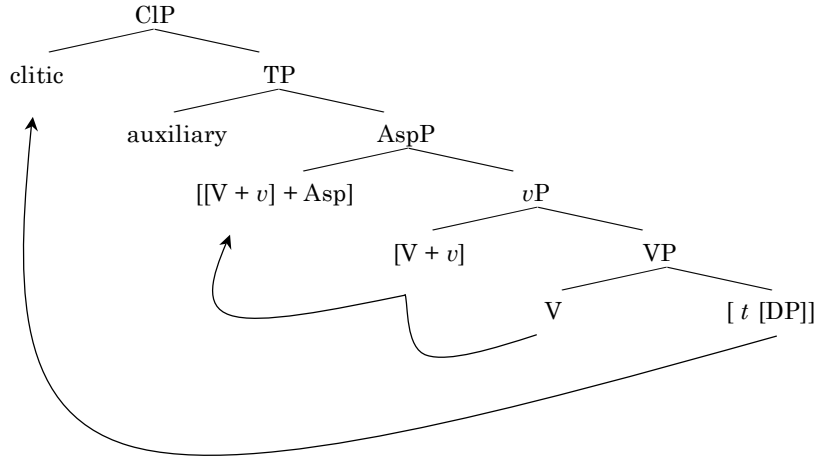
Let us work first through the derivation of a full *v*P clefting example like (108). Before starting, one word is in order regarding the issue of clitic doubling. I assume, following Torrego 1995, and Uriagereka 1995, that the clitic starts off forming a constituent with the object, and then moves up stranding the object. The landing site of the clitic is irrelevant for the argument, but for concreteness I will assume it moves to a position to the immediate left of T^0 that I will refer to as a Cl(itic) phrase. I will return to the issue of clitic doubling at the end of this section.

[33] Evidently, "passive specification" is shorthand for whatever properties of *v* will eventually result in a passive clause (cf Pylkkänen 2002 for support in favour of various types of *v*). For our purposes, though, "passive specification" is enough.

The derivation starts by raising the lexical verb up to Asp, so as to derive a past participle. I represent the auxiliary as being base generated straight in T^0, though this is purely for the sake of exposition, since its exact syntax is again orthogonal to the discussion here.[34] For the time being, I also put aside the issue of double pronunciation for the time being, so as to concentrate fully on the syntactic derivation.

108) Leer un libro, Juan lo ha leído
read.INF a book J CL has read
"As for reading a book, Juan has read it"

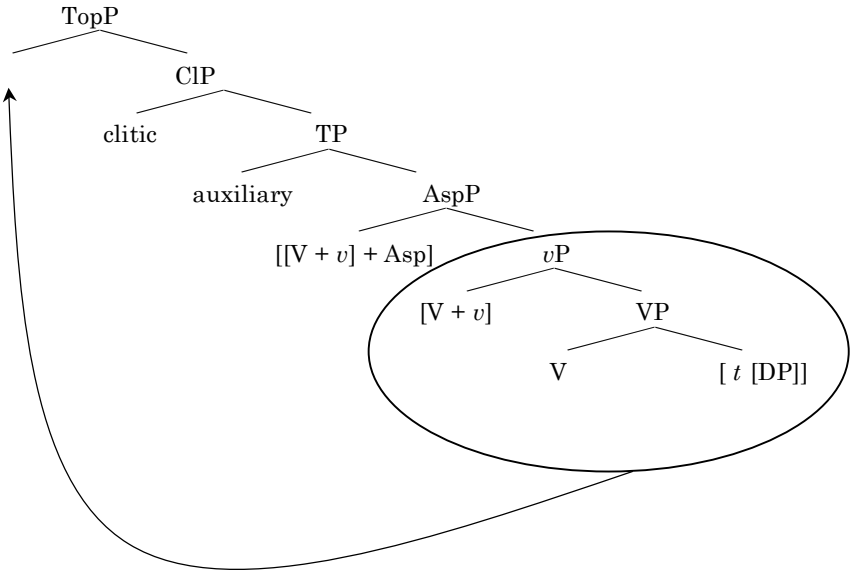
109) *Step I: verb movement*



Next, the entire *v*P is moved to a topic position.

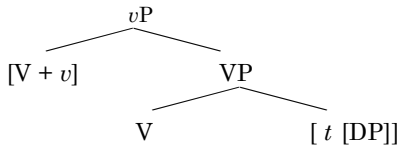
[34] Cf. Zagona (2002) for some discussion. She proposes that auxiliaries originate in a lower projection (Aux^0) and then raise to T^0.

110) *Step II: vP topicalisation*



At this point, the structure is transferred to the morphological component for the insertion of phonological matrices. As mentioned in chapter two, I am assuming a late insertion model (Halle & Marantz 1993, Harley & Noyer 1999). In this type of system, syntax only manipulates syntactic features without phonological information. The actual pronunciation of these features is determined post-syntactically, at the morphological component. Let us start from the top.[35] The fronted vP has the following structure.

111)



The object is given whatever pronunciation is appropriate, minus the clitic, which has already moved out. The interesting case here is how to spell out the verb. Assuming that V will be spelled out as a trace,[36] this structure consists essentially of a lexical root incorporated into *v*. No higher functional features (aspect, tense) are present. An infinitive is the verbal form that matches this specification of *v* most closely. For one, it has no tense specifications. Other tenseless verbal forms –i.e., past participles and gerunds- come with an aspect specification (perfective and progressive, respectively), whereas infinitives do not.

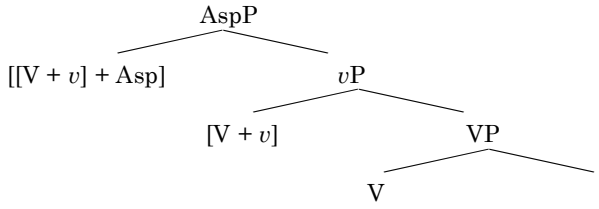
[35] I start from the top purely for expository convenience. I don't mean this to be a commitment as to whether this is actually the way spell-out works.

[36] This is expected anyway given the very strong tendency with verb movement to always spell out the highest member of a chain (cf. Julien 2002 for extensive discussion of this point).

An infinitive is, in morphological terms, the most minimal way to mark any given lexical root as a verb. Hence, according to the principles of Distributed Morphology, it is chosen over other possible exponents. Bear in mind that the topic surfaces as an infinitive because the *v* head in this example is active. If it happened to be passive, the topic would surface as a passive participle, as predicted by the tree in (105) and the discussion around it.

Moving down the tree, the auxiliary is spelled out with the appropriate tense and person specification. Next, it's the turn of the participle, whose bit of structure is represented in (112).

112)

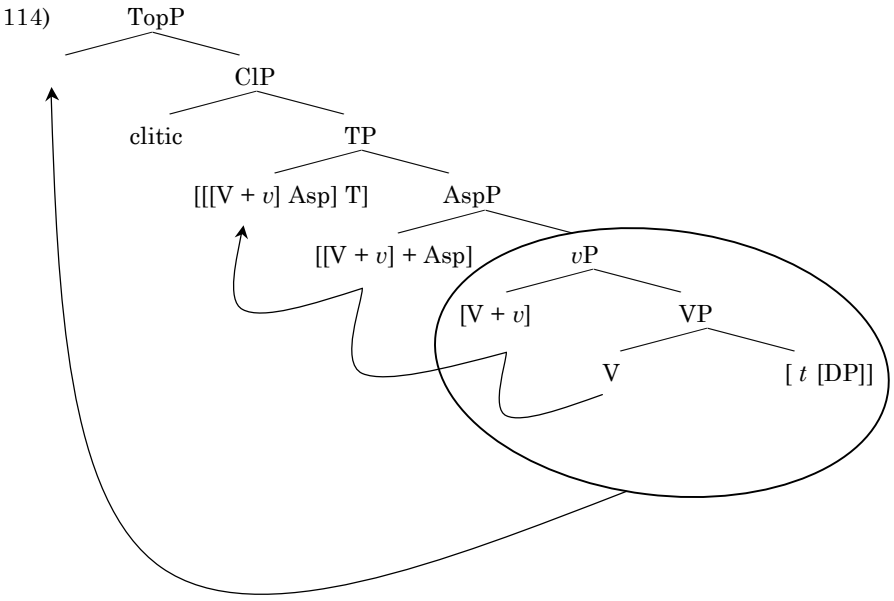


This requires some comment. For one, the [V + *v*] part of it should not receive a phonological matrix, given that it has been moved to a topic position. In other words, it should be spelled out as a trace. Now, if that was so, the aspectual morpheme should be pronounced in isolation. This, however, is not possible, because the aspectual morpheme *–ido* is a bound morpheme, and it needs a verbal stem to attach to. Following Landau (2006), we can assume that lower copies of moved elements can be pronounced in cases like this one, where necessary to avoid a morphologically ill-formed structure. Thus, the [V + *v*] bit of structure is pronounced together with the Asp head, and the result, in accordance to the tree in (105), is a participle. In this way, we can explain the fact that a participle in the base position can give rise to an infinitive in the topic.

The derivation would work the same if, instead of a complex tense, we had an example with the verb in a simple tense, such as (113). For concreteness, the derivation of this example is given in (114).

113) Leer el libro, Juan lo leyó
read.INF the book J CL read.PAST.3SG
"As for reading the book, Juan read it"

114)



The only difference between this example and (109) is that here the verb does not stop at AspP. Rather, it would move all the way up to the T head,[37] so as to pick up the relevant inflectional features (tense and agreement). Other than that, the derivation would be the same: the entire *v*P would be topicalised, and the topic would be spelled out as an infinitive, as discussed above. Downstairs, the same problem as above would arise: the inflectional features for tense and agreement correspond to bound morphemes. Hence, they require a verbal stem to attach to. The need to avoid a morphologically deviant structure licenses the exceptional spell out of [V + *v*] in the tail. In conjunction with the relevant inflectional features, this results in a finite verb form.

Before concluding, let me get back to the syntax of clitic doubling. As the reader might easily check, accounting for the placement of the clitic in a predicate cleft does not require any extra assumptions or mechanisms beyond those that are necessary anyway to account for the placement of the clitic in a regular clause. In this respect, the analysis is unproblematic. Now, as Johan Rooryck (p.c.) and Idan Landau (p.c.) both point out, what is not so clear is why there should be a clitic in the first place. This is a regular CLLD clitic which appears whenever a complement DP is topicalised. The odd thing here is that the object is not topicalised by itself, but it just part of a larger structure (*v*P) that undergoes topic movement. At present, it is unclear to me how to formalise this. One could perhaps argue that, once the entire *v*P is marked as a topic, by transitivity, so is everything contained in it. This includes the object, which would force the presence of the CLLD clitic. Johan Rooryck (p.c.) objects to this hypothesis on the grounds that it would predict (contrary to fact) that (115)

[37] Or, alternatively, to AgrS, in a split-Infl framework. Nothing of what I say here depends on this choice.

should be grammatical under the indicated coindexing. Note, though, that in this example, the larger nominal would also require its own clitic, which could be a factor contributing to the ungrammaticality of the example.

115) * [Una película con [una actriz holandesa]$_i$], Juan la$_i$ ha visto
a film with an actress dutch J CL has seen
"A film with a Dutch actress in it, Juan has seen her [=the actress]"

As an alternative, Idan Landau (p.c.) proposes an analysis along the lines of Baltin's (2005) for English VP fronting: first, the object moves to a topic position, triggering clitic doubling in a regular way. Second, the bare infinitive moves to a separate topic position. Ingenious though it is, this analysis would force one to reinterpret the scope freezing effects reported in section 4.4.1. Moreover, one would also have to explain why this derivation does not exhibit the usual intonation of multiple topicalisation structures, in which each topic is separated from the next by a prosodic break.

At this point, I must leave this problem for future research, simply reiterating that, however the presence of the clitic is triggered in examples like (108), its syntactic behaviour is nonetheless entirely unproblematic. I take this to be a point in favour of the analysis developed here.

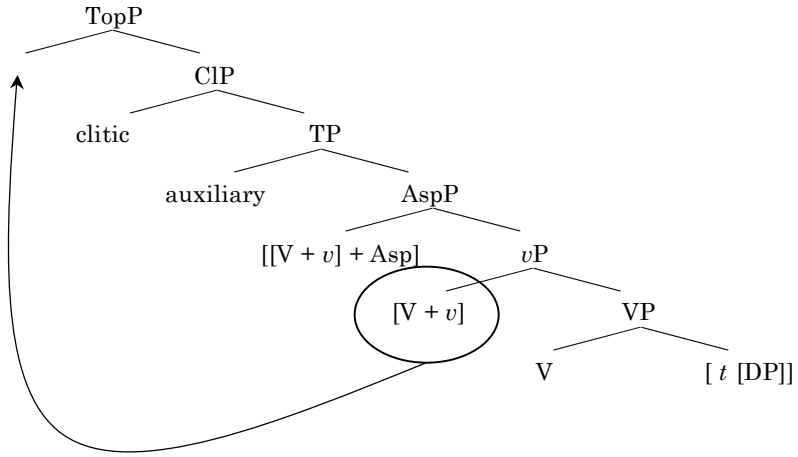
5.1.3. Bare infinitive clefting

Once the analysis of full *v*P clefting is in place, the analysis of bare infinitive clefting becomes quite straightforward: it is exactly like the derivations presented in the previous subsection, with the exception that only the *v* head is moved, instead of the whole *v*P. This is a type of movement that is standardly thought not to be possible. Nonetheless, given standard assumptions about movement and structure building, it can be excluded only by stipulation (see the discussion in chapter two). Moreover, as I have shown in this chapter, bare infinitive clefting involves movement of *v* (see section 2.5), and clefted infinitives can strand material that is lower than the *v*P level (section 4). Therefore, one must conclude that the proposed type of movement must exist.

For explicitness, let us run through the derivation of example (116). The first step, is the same as in (109), except for the absence of the clitic. The verb moves up to Asp, and the auxiliary to T. The difference comes with topicalisation: instead of moving the entire *v*P to the specifier of TopP, we only move the bare *v* head.

116) Leer, Juan ha leído un libro
read J has read a book
"As for reading, Juan has read a book"

117) *Bare infinitive clefting*



Once this structure is transferred to the morphological component, the spell out procedure is pretty much the same as in the previous section. The fronted constituent is a *v* to which a lexical verb has incorporated. Hence, as above, an infinitive is the one form that best matches this feature specification. On the other hand, what we have downstairs is the verb incorporating all the way up to Asp. Hence, in the same way as for full *v*P clefting, a participle is chosen to spell out this particular feature specification.

Lisa Cheng (p.c.) has pointed out to me that this analysis constitutes a potential violation of the A-over-A principle, a classical formulation of which follows.

118) *The A-over-A principle (Chomsky 1964)*
If a transformation applies to a structure of the form
[S … [A …]A …]S
for any category A, then it must be interpreted so as to apply to the maximal phrase of type A.

Essentially, the A-over-A principle forbids extraction of a constituent from within a larger constituent of the same type. Yet, the analysis I have proposed in (117) crucially depends on extracting *v* from within *v*P (where *v*P is the maximal A and *v* the A within it). Hence, by the logic of (118), bare infinitive clefting should, in principle, be ungrammatical.

I believe that this problem can be avoided if the A-over-A principle is relativised to features, not categories, as proposed by Fukui (1997). His reformulation of (118) follows, with my emphasis added.

119) *The A-over-A principle (Fukui 1997:58)*
If a transformation is to apply to a phrase marker Σ, which contains the following configuration, *where A ranges over a set of features*.
…[A1 …[A2 …] …] …
it must apply to A_1.

As Fukui observes, once this step is taken, it is possible to subsume the A-over-A principle under Relativised Minimality. That is, within an attraction-based theory of movement, A_1 is closer to the probe/attractor than A_2, hence movement of the latter is blocked.[38] Importantly, this reasoning only holds if A_1 and A_2 both bear the relevant feature. If A_2 does, but A_1 doesn't, there will no context for a minimality effect, and extraction of A_2 will be grammatical.[39]

Returning to the derivations at hand, suppose that *v*(P) movement is triggered through a topic feature. Now, suppose that the feature is assigned to the *v* head. An A-over-A violation will ensue if and only if the topic feature percolates to *v*P. If that is not the case, then (117) is a licit derivation, since there are no interveners between the probe and the *v* head. Therefore, let me propose that topic features on a head need not project up the XP level, unlike categorial features. Under this hypothesis, full *v*P clefting can arise in two ways: (a) by assigning the topic feature to *v* and let it percolate to *v*P, or (b) by assigning the topic feature to the *v*P constituent straight away.[40] I will not attempt to choose one option, given that there would be no empirical difference between them, and that a choice based on conceptual arguments is bound to be highly contentious.

5.2. On (verb) movement

In this section, I want to comment on a couple of problematic points in the derivations above, both concerning movement processes. I will first present the two problems in sections 5.2.1 and 5.2.2, and then suggest solution in section 5.2.3. This solution will be very tentative, and the finer details and implications will be left for future work. Before starting, let me point out that these problems are independent of the major hypothesis of this chapter (i.e., that bare infinitive clefting involves head-to-spec movement), given that they would arise anyway in any movement-based analysis of predicate clefts.

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[38] For this account to work, it must be the case (as Fukui acknowledges) that domination also counts for the computation of minimality effects, besides c-command. I will leave it as an open question whether this is desirable or not. Fukui himself actually tries to reduce c-command to domination, resorting to feature percolation through spec-head agreement. Another possibility would be to adopt Bejar's (2003) and Rezac's (2004) hypothesis that the top-down probing mechanism stops as soon as a matching feature is found (*contra* Hiraiwa 2005 and Chomsky 2005). Under this view, it doesn't matter whether A_1 c-commands or dominates A_2, since the probe will never reach the latter, to begin with.

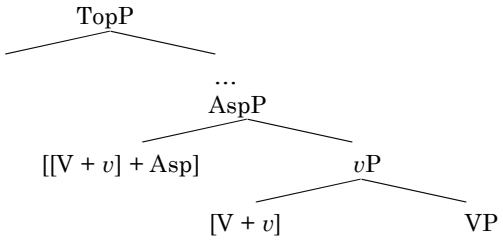
[39] Idan Landau (p.c.) has suggested a different solution, whereby a feature in a head and its projection at the XP level do not count as separate features: the A-over-A principle only applies to features contained in different XPs. For our purposes, there is no practical difference between this solution and the one proposed in the main text.

[40] Obviously, this hypothesis requires a theory of which feature may/must/mustn't percolate. One likely possibility is that features inherent to the head in question (e.g., categorial features, agreement, etc…) percolate to the phrase level. Topic and focus would not necessarily percolate, as they are not an integral part of the head: rather they are added as an extra in specific discourse environments. A stronger hypothesis would be to say that topic and focus actually never percolate, but instead one has a choice of assigning them either to the head alone or the entire phrase. This topic, however, is beyond the scope of this chapter, so I will leave it for future research.

5.2.1. Problem #1: locality

Consider again a predicate cleft structure at a point after *v*-to-Asp movement, but before anything has been topicalised (120). Lisa Cheng (p.c.) points out that if the Topic head attracts *v*, one could reasonably expect the higher copy (i.e., the one that has incorporated into Asp) to cause an intervention effect. Note that this reasoning holds for both bare infinitive and full predicate clefting.

120)



The standard assumption in the literature is that *z* intervenes between *x* and *y* if *x* > *z* > *y* (where ">" is the c-command relation), and there is a feature shared by all three elements. The question is whether the higher copy of [V + *v*] c-commands the lower one. This would not be the case under a "first node up" definition of c-command (à la Epstein et al 1998), but it would under a definition incorporating the segment/category distinction, such as the one proposed by Kayne (1994). Note, though, that even if one wanted to adopt Epstein et al's definition as being less stipulative than Kayne's,[41] one must also remember that the literature contains cases in which intervention effects arise *without* c-command. See, for instance, the Lebanese Arabic data presented in Aoun & Li (2003).[42] Finally, an intervention effect could also arise if probing operation is stopped as soon as a matching feature is encountered (as proposed by Béjar 2003 and Rezac 2004, see also footnote 38). The point here is that there are models where the higher copy of [V + *v*] would indeed cause an intervention effect, so one cannot simply wish this possibility away.[43]

I will put this problem aside for a moment while I discuss the second one, and then come back to it in section 5.2.3.

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[41] For one, recall that Epstein et al argue that c-command is not a primitive of syntax, but a by-product of merger. In contrast, Kayne is still forced to define c-command as a primitive, independent notion.

[42] Cf. also Fitzpatrick (2002) for an illuminating review of various approaches to intervention effects.

[43] Incidentally, note that a similar problem arises under analyses of ellipsis that implement PF deletion through an [E] feature on heads (Merchant 2001 and much subsequent work). If [E] resides on a head, then head movement ought to extend the domain of ellipsis. However, this is not the case, as evidenced by the cases of verb-stranding VP ellipsis discussed in Goldberg (2005). Jeroen van Craenenbroeck (p.c.) and Jason Merchant (p.c.) both inform me that, to date, the literature contains no principled way to solve this problem.

5.2.2. Problem #2: anti-freezing effects

The second problem is that, for the analysis I have proposed to work, it is necessary to assume that, after a constituent *x* undergoes movement, the lower copy it leaves behind is still accessible for later syntactic operations. This is quite evident in the trees above, especially (110), (114), and (117), where the verb moves out of *v*P, yet the copy in *v* can still be moved to a higher position later on in the derivation. This requires some comment, because, at first sight, one might think that lower copies of moved items should not be visible for higher probes. To understand this, consider the examples in (121), which exemplify the Freezing Principle. Although various formulations of this principle exist (cf. G. Müller 1998, Stepanov 2001), I believe they are all equivalent to the one given in (122). Its effect is to prevent movement out of derived specifiers.[44]

121) a. What is there [a book about *t*] on the table?
b. * What is [a book about *t*] on the table?

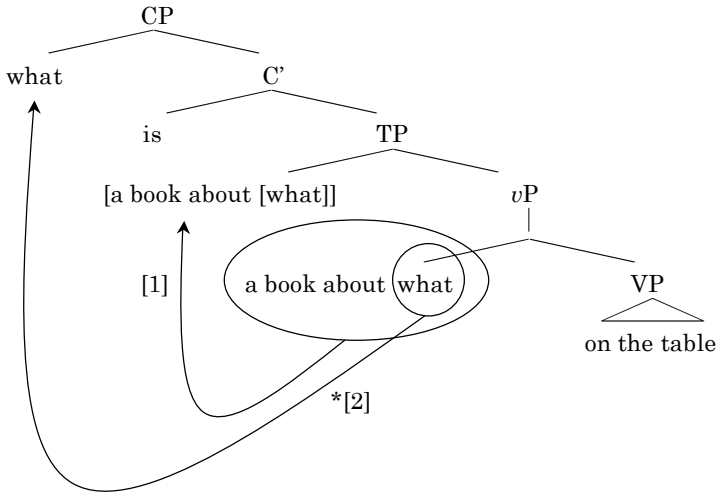
122) *The Freezing Principle (standard version)*
The internal structure of a constituent is inaccessible for movement operations if it is a derived (i.e., non-lowest) link in a movement chain.

Example (121)a is an expletive sentence in which SpecTP is occupied by *there* and the associate stays in its thematic position. Since the latter hasn't moved, extraction out of it is licit. On the other hand, in (121)b the subject has moved from its thematic position to SpecTP. Since this is a derived specifier position, extraction out of it is banned. This is the standard account of this contrast, but it is important to note that it doesn't really follow from (122). This formulation bans extraction out of derived specifiers, but it has nothing to say about the lowest link of the movement chain. Since that is a non-derived position, it is not "frozen", and therefore it ought to be possible to use it as the source of movement. If this were a possibility, the derivation in (122) should converge, contrary to fact.[45]

[44] The qualification of "derived specifiers" is crucial here, since (as both Müller and Stepanov make clear) extraction is possible out of base generated specifiers. This difference is not always acknowledged, though. For instance, the analysis developed by Uriagereka (1999) bans extraction out of all specifiers, whether derived or not.

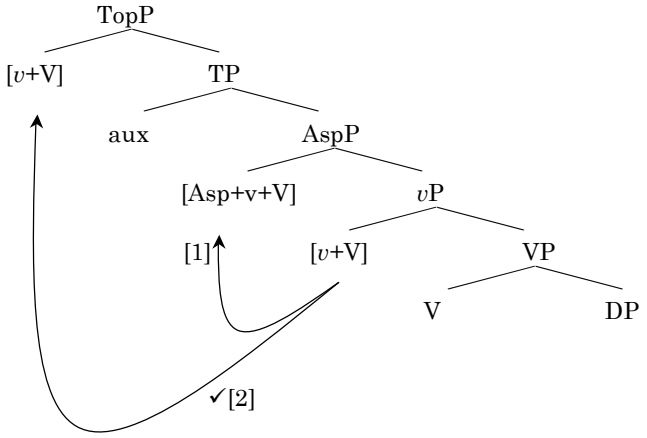
[45] One would also have to assume some specific mechanism of copy deletion (i.e., á la Nunes 1999, 2004) so as to ensure that the instance of *what* in the upper copy of the DP is realised as a gap. For the sake of the argument, I will assume that such a mechanism can be defined.

123) *Inaccessible lower copy*



Yet, this is actually what seems to be happening in the case of predicate clefting. First, the verb moves from V to *v*, and then finally into Asp. Later on, predicate clefting targets the copy left in *v*, which, by the reasoning above, should be inaccessible.

124) *Accessible lower copy*



The question is how this apparent paradox can be resolved. Note that it wouldn't do to postulate that verb movement (or head movement in general) is a morphophonological process, as suggested in various occasions in recent years.[46] As discussed in chapter one, verb movement must happen in syntax (see also

[46] This is the solution I suggested in Vicente (2005).

section 2.5.1 of this chapter). Another possibility, suggested to me by Idan Landau (p.c.) and explored by Aboh & Dyakonova (2006) builds on the proposals by Chomsky (2005) and Hiraiwa (2005) that all operations within a given phase happen simultaneously. Under this hypothesis, incorporation of *v* into higher heads and predicate clefting would happen at the same time, so neither operation would bleed the other. The problem of this account is that it would treat (123) in the same way. That is, if subject raising and wh- extraction could happen simultaneously, then one could expect (121)b to be grammatical, contrary to fact.[47] What we need here is to define a difference between (123) and (124) such that using a lower copy is only allowed in the latter case.

5.2.3. Towards a solution

I believe that a solution to both problems can be found if one considers closely the way in which movement can be restricted. Let me begin with the anti-freezing effect in (124). As mentioned at the end of the previous section, it is necessary to find a difference between this case and the one in (123), where no anti-freezing happens. I want to propose that the relevant factor is the following: in (123), the extracted constituent is a subconstituent of a larger left branch in case, whereas in (124) the lower copy constitutes a full left branch on its own. Therefore, the relevant generalisation seems to be that, once a constituent is moved, its internal structure becomes inaccessible for subsequent operations in all of its copies: one may target a copy as a whole, but not just a proper subpart of it. On the basis of these considerations, we may formulate the following version of the Freezing Principle.

125) *The Freezing Principle (revised)*
Once a constituent undergoes movement, the internal structure of all of its copies is inaccessible for subsequent movement operations. These may only target the constituent in question as a whole.

At this point, I must leave (125) as a stipulation, to which I hope to return in future work.[48] Nonetheless, I don't believe this is controversial at all, since all it does is to spell out explicitly what was already implicit in the original version of the Freezing Principle (122), as explained above. Now, this formulation captures the difference between (123) and (124) above: in (123), the phrase *a book about what* is moved from Spec*v*P to SpecTP. The consequence of this movement is that, by (125) the internal structure of this phrase becomes inaccessible in both copies, and subextraction of *what* is impossible, whether from the lower or the

[47] Note that, by Chomsky's and Hiraiwa's own assumptions, all three of C, T, and Spec*v*P are phasemates, hence one cannot try and block this derivation by assuming they belong to different phases.

[48] Van Koppen (2005:II) reaches a similar conclusion on the basis of the agreement patterns of various Dutch dialects. Her proposal, though, is slightly different, given that she is mostly concerned with Agree, not movement. In particular, she argues that the internal structure of non-topmost copies is not accessible for Agree, while the internal structure of the topmost one is. Combining her proposal and mine would result in a system in which the internal structure of the topmost copy is accessible for Agree, but not movement, while non-topmost copies are inaccessible for both Agree and movement.

higher copy.[49] In contrast, what is targeted in (124) is the entire moved constituent, not just a proper subpart of it. Since no reference is made to its internal structure, this operation is not affected by (125), and it is possible to move the entire [V + *v*] complex head to the topic position. In this way, it is possible to rule (124) in while excluding (123).[50]

Let me turn now to the first problem, namely, how to avoid an intervention effect from the copy of *v* that has incorporated into a *v*P-external head. Note, to begin with, that this would be an *atypical* intervention effect. In regular intervention effects, the intervener and the lower element are independent items. However, in this case, the intervener is a copy of the lower element, generated via movement. The question, therefore, becomes whether a constituent can cause an intervention effect for a lower copy of itself. Here, I would like to argue that this is not the case. In order to do so, I will resort to one of the major developments in syntactic theory in the last few years, namely, the dissociation of movement from feature checking/valuation. Following Chomsky (2000, 2001) and subsequent work, I will assume that the latter takes place under Agree, whereas movement happens so as to satisfy an EPP feature. Rezac (2004) correctly notes that, given this dissociation, there is nothing forcing the EPP feature on a given head to be satisfied by the exact same constituent that said head has entered into an Agree relation with.

Consider how this hypothesis can be extended to the problem in question. Suppose that the topic feature on *v* cannot be stranded, and therefore it is pipe-piped whenever *v* incorporates into a higher head. When the topic head probes its complement domain in search of a suitable feature, the first one it will encounter is the one in the moved *v* head. At this point, the question arises as to what element should satisfy the topic head's EPP feature. Recall from the previous paragraph that this need not be the moved *v* head, given that Agree and EPP satisfaction are logically independent. It is therefore possible to use a different copy of *v* to circumvent the intervention effect.

Importantly, note that this analysis does *not* cancel regular intervention effects. The crucial factor in the case above was that the two elements that could

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[49] This analysis builds rather crucially on the assumption that wh- movement happens after subject raising, not the other way around. This is ensured trivially in a bottom-up derivational system as the one I assume in this dissertation. It is not clear to me whether it would not work in a representational system (cf. Brody 1995), where there are no derivational timing asymmetries. Similarly, it might be difficult to implement it in a top-down derivational framework, such as Phillips (1996).

[50] One possible objection to this reasoning is that it could potentially license excorporation, contrary to what I have argued is the case (see chapter one). Bear in mind, though, that I have defended that incorporation (and head movement in general) is morphologically driven, i.e., it happens so as to create a larger morphological unit. Under this hypothesis, excorporation is excluded because it would leave a gap inside one of these morphological units. If the whole point of incorporation is to bring together certain pieces of morphology as a constituent that can be spelled out as a unit, then excorporation is impossible inasmuch as it removes a proper subset of the necessary pieces. Given the theory of head movement developed in chapter one, I believe this is a reasonable claim. Note, however, that such a morphological rationale only excludes the type of excorporation that leaves a gap inside a word. If the relevant morpheme(s) are pronounced in more than one position (including the canonical word-internal position), there is no reason why "excorporation" should be allowed through the roundabout in (124).

satisfy the EPP were identical (by virtue of being copies created by movement), hence it does not matter which one is moved. In regular intervention effects, though, the intervener and the lower element are independent syntactic objects, so moving one is not equivalent to moving the other, therefore causing an intervention effect.

6. Conclusion

This chapter had two different goals. The first one was to fill a gap in the literature by providing a detailed description of the predicate cleft construction in Spanish, which had received virtually no attention so far. With regard to this goal, the main result is the claim in section 3.3 that predicate clefts have two sources: for a group of speakers, the relation between the topic and the tail is one of movement; for another group, it is one of construal.

Once this division was established, I focused on the judgement of the group that employs the movement strategy, so as to tackle the second goal. This was to find support for the hypothesis advanced in chapter two that bare heads may undergo phrase movement. The argument I developed is based on the conjunction of two points that I defended separately. First, that the category undergoing movement is relatively high within the expanded VP domain. On the basis of data from predicate clefting in passive clauses, I identified it with *v*(P), the category introducing the external argument (cf. Kratzer 1996, Pylkännen 2002). Second, that the cases of bare infinitive clefting cannot be reduced to remnant movement. On the basis of the tests developed by Ordóñez (1997, 1998) to detect object movement in Spanish, I argued in section 4 that stranded verb complements do not show any signs of having been moved out of *v*P. If a bare *v* head is moving to the exclusion of its complements, and if that movement cannot be reduced to remnant *v*P movement, it follows that the bare *v* head must be moving on its own. Since this movement is clearly A-bar movement, it also follows that bare heads may undergo phrase movement. This is precisely the type of movement that the theory developed in chapter two predicted to be possible.

Still, a number of questions have been left unanswered in this chapter. Possibly the most important one, raised by Lena Ibnbari, is why subjects are banned from the topic position of predicate clefts. This question is especially intriguing given that this ban seems to extend even to unaccusative subjects that can otherwise remain in its base position. I do not have anything interesting to say about this issue (other than pointing out that the same restriction seems to hold for other languages too, cf. Lipták & Vicente to app. on Hungarian), and so I will leave it for future research.

126) a. Ha venido alguien
has arrived someone
"Someone has arrived"

b. ?? Venir alguien, me parece que ha venido (alguien)
arrive.INF someone me.DAT seems that has come someone
"As for someone arriving, it seems to me that someone arrived"

Another important question is what the proper analysis of predicate clefting is for the group of speakers that use the construal strategy. Cable (2003, 2004), who argues that Yiddish predicate clefts are also formed through the construal strategy, points out that Clitic Left Dislocation (CLD) in Greek shows identical properties. On the one hand, the relation between the dislocated nominal and the clitic doesn't seem to involve movement, as it doesn't create weak crossover effects (127)a or license parasitic gaps (127)b.

127) *Greek*

a. **Kathe pedhi**$_i$ i mitera tu **to**$_i$ agapa
every child the mother his CL love.3SG
"Every child, his mother loves him"

b. * **Afto to arthro**, i Maria **to** arxiothetise xoris na dhiavasi
this the article the M CL filed.3SG without reading
"This article, Maria filed it without reading"

Interestingly, Greek also has a left dislocation construction that doesn't involve clitics. As shown in (128), this construction differs from CLD in that it creates weak crossover effects and licenses parasitic gaps. Since these are typical movement effects, it reinforces the conclusion that Greek CLD does not involve movement.

128) *Greek*

a. * **Kathe pedhi**$_i$ i mitera tu agapa
every child the mother his love.3SG
"Every child, his mother loves him"

b. **Afto to arthro**, i Maria arxiothetise xoris na dhiavasi
this the article the M filed.3SG without reading
"This article, Maria filed it without reading"

However, CLD sentences are also sensitive to island boundaries, exemplified in with a relative clause and an adjunct island. Example (129)a is given as a control to show that long distance movement is in principle possible.

129) *Greek*

a. **Ton Kosta**, nomiza oti i Maria **ton** idhe
the K thought.1SG that the M CL saw.3SG
"Kosta, I thought that Maria saw him"

b. * **Tin efimeridha** *pro* apokimithike dhiavazondas **tin**
the newspaper fell.asleep.3SG reading it
"The newspaper, he fell asleep while reading it"

c. * **Ton Kosta**, sinandisa tin kopela pu **ton** idhe
the K met.1SG the girl who CL saw.3SG
"Kosta, I met the girl who saw him"

Iatridou (1995) solves this apparent paradox by proposing that the left dislocate is base generated at the left periphery of the minimal clause containing the clitic. This accounts for the lack of movement effects in (127). However, from that position it may move on, and it is this movement that gives rise to the island effects in (129). More technically, her proposal is that the clitic is merged in a

very high position, dominating CP.[51] As a consequence, the clause turns into a predicate, whose subject is the left dislocated argument, yielding a derivation similar to relative clauses and *tough* clauses. In principle, this same analysis could be used for the construal strategy of predicate clefts. One would have to assume that there is a silent head in the left periphery equivalent to Greek clitics. This head would somehow be related to the verb, so that the newly created predicate could only be saturated by merging an infinitive. This seems to me an interesting hypothesis to explore, but at this point I must leave it for future research.

[51] She refers to this position as DL, which stands for "D-linking". This name is, quite obviously, based on the discourse status of the construction.

Chapter three
Infinitive focalisation in Hungarian

1. Introduction

This is the first one of the two chapters that examine Hungarian data in order to support the hypothesis that bare heads may move to specifier positions. This chapter is devoted to the infinitive focalisation strategy in Hungarian, exemplified in (1)a below, where small caps indicate focal stress. Compare this example to (1)b, featuring a non-focalised infinitive.

1) *Infinitive focalisation in Hungarian*

a. ÚSZNI akart *t* János
swim.INF wanted.3SG J
"János wants to SWIM (and not to WALK)"

b. János akart úszni
J wanted.3SG swim.INF
"János wants to swim"

The main thesis of this chapter is that (1)a is derived from (1)b through A-bar movement of *úszni* 'to swim' to a focus position. Importantly, I will show that *úszni* is best analysed as a bare head (more specifically, non-finite T), and not as a remnant constituent.[1] Bear in mind, though, that (1)a is a relatively straightforward example, and that the fine data are more intricate. For one, infinitive focalisation interacts with verb cluster formation in interesting ways that can be used to test theories of head and phrase movement. Therefore, understanding the syntax of verb clusters is a prerequisite for the analysis of infinitive focalisation, and I will devote a substantial part of the chapter to this task.[2]

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[1] See Koopman & Szabolcsi (2000:24-25) for the latter claim. I will comment on this possibility in section 6.

[2] For previous work on the syntax of Hungarian verb clusters and related issues, the reader is referred to Koopman & Szabolcsi (2000), several of the papers in É. Kiss & van Riemsdijk (2004), and references therein. I will refer to these works as necessary throughout this chapter and the next.

2. Crash course in Hungarian syntax

Since both this chapter and the next examine in detail the interaction of bare infinitive fronting with the syntax of preverbs and verb clusters, I will go quickly through the main characteristics of the two latter constructions. The goal of these remarks is simply to provide a descriptive background against which the upcoming discussion can be set, not to develop an analysis. A more detailed analysis of both preverbs and verb clusters will be presented later on in this chapter and in the next one, in conjunction with the analyses of the different types of infinitive fronting.

2.1. Preverbs

Many Hungarian verbs appear accompanied by a preverb, sometimes also referred to as "verbal modifier". These are actually cover terms for a wide variety of constituents that can appear in the immediately preverbal position in neutral sentences, i.e., declarative sentences that don't have a focused constituent or negation. Particles are the most common preverbs. They have mostly adverbial meanings, though some of them, such as the perfectiviser *meg*, are purely aspectual markers (2)a. Particles of the former group typically retain their directional/locative meaning (2)b, though in some cases they form an idiom in conjunction with their selecting verb (2)c.

2) a. **Meg** írni
PV write.INF
"to write up"
b. **Ki** menni
out go.INF
"to go out"
c. **Fel** vágni
up cut.INF
"to show off"

In the absence of a particle, other predicative elements may function as preverbs. Koopman & Szabolcsi (2000:19-20) provide the following list.

3) *Bare nouns*
Újságot olvasni
newspaper.ACC read.INF
"To read newspapers"

4) *Predicative nouns and adjectives*
a. **Elnökké** választani
president.TRSL elect.INF
"To elect (someone) president"

b. **Ostobának** bizonyulni
stupid.DAT prove.INF
"To prove stupid"

5) *Directional and locative PPs*
a. **A szobába** menni
the room.into go.INF
"To go into the room"
b. **A szobában** maradni
the room.in stay.INF
"To stay in the room"

6) *Infinitives*
Úszni akarni
swim.INF want.INF
"To want to swim"

In addition, large DPs can also function as preverbs, although Csirmaz (2004) shows that, in some contexts, they behave in a different way from some of the categories mentioned above. We will examine this point in more detail throughout section 4.1.2 of this chapter.

7) *Large DPs*
[**Ósdi képes magazinokat**] olvasni
old picture magazines.ACC read.INF
"To read old picture magazines"

In neutral clauses, preverbs surface strictly left-adjacent to the verb, and no elements whatsoever can intervene between them. This restriction holds irrespective of the category and size of preverbs.[3] However, in sentences containing a focused constituent (8) or negation (9), the preverb surfaces in a postverbal position, and can be separated from its selecting verb by other elements. This pattern has usually been analysed as involving verb movement to a focus/negation related projection, stranding the preverb.

8) a. TEGNAP mentem **haza**
yesterday went.1SG home
"It is yesterday that I went home"
b. * TEGNAP **haza** mentem
yesterday home went.1SG
"It is yesterday that I went home"

9) a. Nem mentem **haza**
not went.1SG home
"I didn't go home"

[3] The only exception is constituted by infinitives (6), which may optionally surface following their selecting verb. Nonetheless, whenever they appear in a preverbal position, they are also subject to the adjacency requirement.

b. * Nem **haza** mentem
not home went.1SG
"I didn't go home"

On top of this, there is also the phenomenon of *preverb climbing* (cf. Farkas & Sadock 1989), which is named after the similar phenomenon of clitic climbing in Romance. If the verb selecting the preverb is an infinitive embedded in a verbal complex, the preverb may move to the immediate left of the finite verb heading that complex. Example (10)a shows a regular clause, with the preverb standing next to its selecting verb, whereas (10)b shows a clause in which the preverb has climbed to the left of the finite verb. Preverb climbing is subject to various restrictions that are not of relevance at this point. They will be discussed in more detail in section 3.1.3 of the next chapter.

10) a. **Haza** mentem
home went.1SG
"I went home"
b. **Haza** fogok akarni *t* menni
home will.1SG want.INF go.INF
"I will want to go home"

Finally, it should be noted that preverbs may undergo A-bar movement (topicalisation and focalisation) to the exclusion of their selecting verbs. This is exemplified below. Obviously, this is only possible with preverbs that have a lexical meaning that can make a felicitous topic or focus, such as *be* 'in'. For instance, the particle *meg*, which is a purely aspectual marker, cannot appear in these contexts.[4]

11) a. BE fog János akarni *t* menni
PV will.3SG J want.INF go.INF
"János will want to go IN (and not out)"
b. Be, JÁNOS fog akarni *t* menni
PV J will.3SG want.INF go.INF
"In, it is János that will want to go (and out, Péter)"

12) a. * MEG fog János akarni *t* enni egy almát
PV will.3SG J want.INF eat.INF an apple.ACC
"UP, János will want to eat an apple"
b. * Meg, JÁNOS fog akarni *t* enni egy almát
PV J will.3SG want.INF eat.INF an apple
"Up, it is János that will want to eat an apple"

[4] The (b) examples require a focus for independent reasons. The auxiliary *fog* is a stress avoider, and requires something to its immediate left to absorb focus. Normally, this is done through particle climbing. If the particle doesn't climb, it is necessary to have a focus or negation fulfilling the same function. In the (a) examples, it is the particle itself that is in focus, hence a separate focus is not necessary. This is not so in the (b) examples, hence the requirement of another element being in focus.

2.2. Verb complexes

Even though it might appear so at first sight, Hungarian verb complexes are subject to very strict ordering restrictions. Given a complex consisting of five members, 120 (5!) different orders are mathematically possible, but only four are actually grammatical. These are schematised as in (13) below, where the numbers represent selectional relations (throughout this chapter, the convention is that *n* selects *n*+1).

13) *Grammatical orders of a five-membered verb complex*
   a. 1-2-3-5-4 [English order]
   b. 1-5-4-3-2 [roll-up order]
   c. 1-2-5-4-3 [partial roll-up]
   d. 5-1-2-3-4 [preverb climbing]

The order in (13)d, preverb climbing, has already been discussed in the previous section, so I will not say anything else about it. The order in (13)a is called the *English* order, given that the sequence of infinitives surfaces in the same order as in an equivalent English sentence. The only exception is the preverb of the lowest infinitive, which (as shown in the previous section) necessarily inverts with its selecting verb. This is what gives rise to the 5-4 sequence. An example of a sentence in the English order is given in (14), with selectional relations marked as subscripts.

14) *The English order*
   Nem fogok$_1$ akarni$_2$ kezdeni$_3$ haza$_5$ menni$_4$
   not will.1SG want.INF begin.INF home go.INF
   "I will not want to begin to go home"

Next down in the list is the *roll-up* order (13)b, in which the order of the infinitives is the mirror image of the corresponding English sentence. Note that the finite verb is never targeted by the roll-up process, and therefore always precedes the sequence of rolled-up infinitives. Also, there is no change in meaning with respect to the same sentence in the English order. An example of the roll-up order follows.

15) *The roll-up order*
   Nem fogok$_1$ haza$_5$ menni$_4$ kezdeni$_3$ akarni$_2$
   not will.1SG home go.INF begin.INF want.INF
   "I will not want to begin to go home"

Finally, there is the *partial roll-up* order, in which only the lower part of the sequence of infinitives is inverted. The upper part appears in the regular English order. As before, there is no meaning difference with respect to the English and the full roll-up orders.

16) *The partial roll-up order*
Nem fogok$_1$ akarni$_2$ haza$_5$ menni$_4$ kezdeni$_3$
not will.1SG want.INF home go.INF begin.INF
"I will not want to begin to go home"

Note that (16)is the *only* grammatical variant of (14) and (15). There are a number of reasons why roll-up structures might be ungrammatical. First, a segment with an internal English order may not invert with its selecting verb.

17) * Nem fogok$_1$ [[kezdeni$_3$ haza$_5$ menni$_4$] akarni$_2$]
not will.1SG begin.INF home go.INF want.INF
"I will not want to begin to go home"

Second, an infinitive may not strand its preverb (or selected infinitive) while inverting across a higher verb.[5]

18) a. * Nem fogok$_1$ akarni$_2$ [menni$_4$ kezdeni$_3$] haza$_5$ t_4
not will.1SG want.INF go.INF begin.INF home
"I will not want to begin to go home"
b. * Nem fogok$_1$ [kezdeni$_3$ akarni$_2$] t_3 haza$_5$ menni$_4$
not will.1SG begin.INF want.INF home go.INF
"I will not want to begin to go home"

Finally, a segment may not invert with any verb other than its selecting verb.[6]

19) * Nem fogok$_1$ [[haza$_5$ menni$_4$] akarni$_2$] kezdeni$_3$ $t_{[5\text{-}4]}$
not will.1SG home go.INF want.INF begin.INF
"I will not want to begin to go home"

The restrictions in the ordering of verb clusters can be summarised as follows: given any sequence of verbs in the English order, a roll-up structure can be derived if (a) the roll-up process starts from the very bottom, and (b) no intermediate verb is skipped. Some extra properties of verb complexes will be examined in section 4. I will argue there that English orders represent the merged order of verbs, without any movement operations, whereas the full and partial rolled-up sequences are the result of successive incorporation operations. Importantly, I will also argue that the roll-up process is to be analysed in terms of head movement, and not as a sequence of remnant phrasal movement (as proposed in Koopman & Szabolcsi 2000).

[5] Note that the string in (18)b is grammatical under the reading in which *kezdeni* selects *akarni*, i.e., "I will begin to want to go home". This, however, would be a regular English order without inversion.

[6] The same caveat holds here as in the previous footnote. The string in (19) is grammatical under the reading where *kezdeni* selects *akarni*. This, however, would be a regular full roll-up order.

3. Main properties of the construction

3.1. Discourse status

Let me start off by showing that the construction under study here is indeed a case of focalisation. This is quite straightforward, as the fronted infinitives show the surface properties of garden-variety foci. First, there is prosody: these infinitives bear pitch accent and trigger destressing of the material following them, in the same way as regular foci.

20) *Prosody*
ÚSZNI akart Mari
swim.INF wanted.INF M
"Mari wanted to SWIM"

On top of this, word order is also an indicator of the focus status of the fronted infinitive. In the same way as with regular foci, nothing may intervene between the fronted infinitive and the finite verb. This adjacency is usually attributed to the finite verb moving up to Foc^0 (cf. Brody 1990).

21) *Word order*
ÚSZNI (*XP) akart Mari
swim.INF wanted.INF M
"Mari wanted to SWIM"

This behaviour clearly contrasts with the *azt* doubling construction (chapter one, Lipták & Vicente to app.) and the predicate cleft construction (chapter four), both of which are instances of topicalisation. In these two constructions, the fronted infinitive receives a comma intonation (22) and may be separated from the finite verb by intervening material. These are prototypical characteristics of topics.

22) *Prosody*
a. Úszni, *(#) azt akart Mari
swim.INF that wanted.3SG M
"To swim, Mari wanted that"
b. Úszni, *(#) úszott Mari
swim.INF swam.3SG M
"As for swimming, Mary swam"

23) *Word order*
a. Úszni, (XP) azt akart Mari
swim.INF that wanted.3SG M
"To swim, Mari wanted that"
b. Úszni, (XP) úszott Mari
swim.INF swam.3SG M
"As for swimming, Mary swam"

We conclude, then, that the fronted constituent occupies difference left peripheral positions in the two variants of the non-copying construction.

3.2. Restriction on non-finite verbs

As its name already indicates, Hungarian infinitive focalisation may only target non-finite verbs. Below, I provide a partial list of the verbs that embed non-finite predicates.

24) *Infinitive-embedding verbs*

Auxiliaries	fog	'future'
	szokott	'habitual'
Volitional predicates	akar	'want'
	szeret(ne)	'would like'
	kíván	'wish
	próbál	'try'
Ability predicates	tud	'be able to'
	képes	'be able to'/'want to'
Modal predicates	kell	'necessity/obligation'
	lehet	'possible'
	lehetséges (adj)	'possible'
Evaluative predicates	jó (adj)	'be good'
	butaság (n)	'be a stupidity'

As discussed in section 3 of the introductory chapter (see also Lipták & Vicente to app.), this property also holds of the *azt*-doubling construction. Importantly, it does *not* hold of the predicate cleft construction, where both finite and non-finite verbs can be fronted. We will get back to this in section 2.1 of chapter four.

3.3. Pied-piping restrictions

A very simple way of describing the infinitive focalisation construction would be to say that only bare infinitives may undergo focus movement, without pied-piping any non-verbal dependents. This generalisation is, by and large, correct, but the fine details are quite intricate, and merit some lengthy discussion. In particular, the goal of this section is to show how infinitive focalisation interacts with verb cluster formation.

Let us start with the most simple cases. As shown in (25), pied-piping of objects is ungrammatical, independently of what side of the verb they appear in.[7]

[7] Note that this doesn't mean that full predicate focus is impossible in Hungarian. Kenesei (1998) points out that it is indeed possible to focalise a full VP. Crucially, though, this is not done by moving the full VP to the focus position. Rather, only one argument of the verb undergoes focus movement while the rest of the VP-internal constituents stay in their base positions and receive focal stress (ii).

25) a. * [A MOBY DICK-ET OLVASNI] akarja Péter
the M D.ACC read.INF want.3SG P
"Péter wants to READ MOBY DICK"
b. ?* [OLVASNI A MOBY DICK-ET] akarja Péter
read.INF the M D.ACC wants P
"Péter wants to READ MOBY DICK"

This contrasts with the grammaticality of (26)a, where only the verb and its selected particle are being focalised. In this case, preverb pied-piping is obligatory (26)b.[8]

26) a. [EL OLVASNI] akarta Péter a könyvet
PV read.INF wanted.3SG P the book.ACC
"Péter wanted to READ the book"
b. * [OLVASNI] akarta **el** Péter a könyvet
read.INF wanted.3SG PV P the book.ACC
"Péter wanted to READ the book"

Importantly, particles are not the only constituents that are obligatorily pied-piped. In the absence of a particle, some other constituent may occupy the preverb position, as mentioned in section 2.1. All non-phrasal preverbs have to be pied-piped along with the selecting verb. The only exception are infinitives that

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i) a. What did Péter do yesterday?
b. (Péter) [A HAMLET-ET]$_F$ OLVASTA FEL MARI-NAK
P the H.ACC read.3SG PV M.DAT
"What Péter was doing yesterday was READING HAMLET TO MARI"

I will ignore this possibility in this dissertation. To begin with, it does not bear on the head vs. phrase movement issue that I am interested in. Further, sentences like (i) display several properties that suggest that they should be treated as a separate construction. For instance, this type of VP focus usually triggers a progressive reading, even if such reading is not forced in the non-focus counterpart. Second, these sentences are compatible with activity predicates, but not with achievements or accomplishments. Third, as (i) shows, these sentences are not subject to the non-finiteness restriction discussed in the previous section. Finally, the focalised constituent must be an argument of the verb, not an adjunct.

[8] Dutch and German show a similar behaviour, in that it is impossible to front a non-finite verb without the particle it selects. This is shown in (i) for Dutch. As far as I know, no analysis exists of this restriction, except for Hinterhölzl (1999) and Koopman & Szabolcsi (2000:VII), where it is simply stipulated. On top of this, Marcel den Dikken (p.c.) has pointed out to me that, in Dutch, this restriction also extends to secondary predicates (ii). In these examples, the fronted category is a participle, but (as den Dikken points out) the same results obtain in contexts where an infinitive is fronted. At present, I have nothing to say about this issue.

i) a. * Gebracht heb ik het boek niet **terug**
brought have I the book not back
b. ✓ **Terug**gebracht heb ik het boek niet
back.brought have I the book not
ii) a. * Gezet heb ik het boek **op de plank**
put have I the book on the shelf
b. ✓ **Op de plank** gezet heb ik het boek
on the shelf put have I the book

are acting as preverbs of a higher verb. This is shown below with the particle *be* 'in' (27), the bare noun *haza* 'home' (28), and the verb cluster *úszni kezdeni* 'to begin to swim' (29).

27) a. [BE MENNI] fogok akarni
PV go.INF will.1SG want.INF
"I will want to GO IN"
b. * [MENNI] fogok akarni *t* be
go.INF will.1SG want.INF PV
"I will want to GO in"

28) a [HAZA MENNI] fogok akarni
home go.INF will.1SG want.INF
"I will want to GO HOME"
b. * [MENNI] fogok akarni *t* haza
go.INF will.1SG want.INF home
"I will want to GO home"

29) a. [ÚSZNI KEZDENI] fogok akarni
swim.INF begin.INF will.1SG want.INF
"I will want to begin to swim"
b. [KEZDENI] fogok akarni *t* úszni
begin.INF will.1SG want.INF swim.INF
"I will want to begin to swim"

The question is whether this pattern can be linked to some other asymmetry between infinitives and other preverbs. As it happens, it can. Infinitives are the only preverbs that precede (invert with) their selecting infinitives only optionally. All other types of preverbs do so obligatorily.

30) *Obligatory inversion with non-infinitive preverbs*
a. * Menni be
go.INF PV
"To go in"
b. ✓ Be menni
PV go.INF
"To go in"
c. * Menni haza
go.INF home
"To go home"
d. ✓ Haza menni
home go.INF
"To go home"

31) *Optional inversion with infinitive preverbs*
a. ✓ Akarni úszni
want.INF swim.INF
"To want to swim"

b. ✓ Úszni akarni
swim.INF want.INF
"To want to swim"

Given this parallelism, we may formulate the correlation in (32).

32) *The inversion/pied-piping correlation (part I)*
If a preverb obligatorily inverts with its selecting infinitive, then it will also be obligatorily pied-piped under focalisation of its selecting infinitive.

This generalisation is not entirely accurate, though. For one, not all preverbs can be pied-piped. This is restricted to the preverbs that are head-like, i.e., bare nouns, bare predicative adjectives, bare infinitives, etc. Phrasal preverbs must be stranded, even if they obligatorily invert with their selecting infinitive. Consider the contrast below. In (33), we have the atomic preverb *újságot* 'newspaper', which is obligatorily pied-piped. In contrast, the paradigm in (34) features the phrasal preverb *ósdi újságot* 'old newspaper', which in regular clauses appears to have the same distribution as *újságot*, i.e., it inverts obligatorily with its selecting infinitive. Interestingly, *ósdi újságot* cannot be pied-piped under focalisation of the infinitive (34)c. Even more striking, it cannot be stranded either (34)d. It seems as though phrasal preverbs simply block focus movement of their selecting verbs.[9]

33) a. Újságot olvasni
newspaper.ACC read.INF
"To read newspapers"
b. * Olvasni újságot
read.INF newspaper.ACC
"To read newspapers"

[9] Koopman & Szabolcsi (2000:81) contest this point by pointing to example (i), which they give as perfect in spite of having a phrasal preverb. The status of such examples is not so clear, though, as some of the speakers I have consulted (but not all) find (i) quite degraded (i.e., a "??" judgement at best). On top of that, the seemingly analogous (ii), which doesn't contain negation, is ungrammatical for everybody I have asked this far. Note that *semmiképp* 'in any case' has been changed to *mindenképp* 'by all means', so one cannot attribute the ungrammaticality of (ii) to a failure to license the NPI.

i) % (Csak) [A VÁROSBAN MARADNI] nem akartam semmiképp
only the city.in stay.INF not want.1SG in any case
"The only thing that I didn't want in any case was to STAY IN THE CITY"
ii) * (Csak) [A VÁROSBAN MARADNI] akartam mindenképp
only the city.in stay.INF want.1SG by.all.means
"The only thing that I wanted by all means was to STAY IN THE CITY"

On the basis of the variability in these judgements, I will leave these examples out of the discussion. For speakers who accept (i), I would assume that they allow pied-piping of a small amount of VP internal material. Importantly, this hypothesis does *not* contradict the claim that the examples discussed in the main text involve focalisation of bare heads. They are mutually compatible claims.

c. [ÚJSÁGOT OLVASNI] fogok akarni
newspaper.ACC read.INF will.1SG want.INF
"I will want to READ NEWSPAPERS"

d. * [OLVASNI] fogok akarni újságot
read.INF will.1SG want.INF newspaper.ACC
"I will want to READ newspapers"

34) a. Ósdi újságot olvasni
old newspaper.ACC read.INF
"To read old newspapers"

b. * Olvasni ósdi újságot
read.INF old newspaper.ACC
"To read old newspapers"

c. * [ÓSDI ÚJSÁGOT OLVASNI] fogok akarni
old newspaper.ACC read.INF will.1SG want.INF
"I will want to READ OLD NEWSPAPERS"

d. * [OLVASNI] fogok akarni ósdi újságot
read.INF will.1SG want.INF old newspaper.ACC
"I will want to READ old newspapers"

This difference between atomic and phrasal preverbs can be correlated with a similar restriction in the domain of verb clustering. Csirmaz (2004) observes that atomic preverbs (*újságot*) necessarily appear inside rolled-up sequences (35)a/(35)b, whereas phrasal preverbs (*ósdi újságot*) are banned from them (35)c. However, phrasal preverbs cannot be left out of a roll-up cluster either (35)d. In the same way as in (34)d, we can say that phrasal preverbs simply block their selecting verbs from appearing in a rolled-up sequence.

35) a. Nem fogok$_1$ [**újságot**$_5$ olvasni$_4$ kezdeni$_3$ akarni$_2$]
not will.1SG newspaper.ACC read.INF begin.INF want.INF
"I will not want to begin to read newspapers"

b. * Nem fogok$_1$ [olvasni$_4$ kezdeni$_3$ akarni$_2$] **újságot**$_5$
not will.1SG read.INF begin.INF want.INF newspaper.ACC
"I will not want to begin to read newspapers"

c. * Nem fogok$_1$ [**ósdi újságot**$_5$ olvasni$_4$ kezdeni$_3$ akarni$_2$]
not will.1SG old newspaper.ACC read.INF begin.INF want.INF
"I will not want to begin to read old newspapers"

d. * Nem fogok$_1$ [olvasni$_4$ kezdeni$_3$ akarni$_2$] **ósdi újságot**$_5$
not will.1SG read.INF begin.INF want.INF old newspaper.ACC
"I will not want to begin to read old newspapers"

Taking these paradigms into account, the correlation in (32) can be augmented with (36).

36) *The pied-piping/inversion correlation (part II)*
The constituent fronted under predicate focalisation must be a licit roll-up sequence.

This formulation predicts that it should also be possible to focalise large verbal complexes, as long as their order parallels the one of a licit roll-up sequence. This

is correct, as shown below. The focalised chunks in (37) all display roll-up orders, and are consequently grammatical. As soon as this order is changed into an English order, as in the examples in (38), ungrammaticality results.

37) a. [BE$_5$ MENNI$_4$] fogok$_1$ kezdeni $_2$ akarni$_3$
PV go.INF will.1SG begin.INF want.INF
"I will begin to want to GO IN"
b. [BE$_5$ MENNI$_4$ AKARNI$_3$] fogok$_1$ kezdeni$_2$
PV go.INF want.INF will.1SG begin.INF
"I will begin to WANT TO GO IN"
c. [BE$_5$ MENNI$_4$ AKARNI$_3$ KEZDENI$_2$] fogok$_1$
PV go.INF want.INF begin.INF will.1SG
"I will BEGIN TO WANT TO GO IN"

38) a. * [MENNI$_4$ BE$_5$] fogok$_1$ kezdeni$_2$ akarni$_3$ [≈(37)a]
go.INF PV will.1SG begin.INF want.INF
"I will begin to want to GO IN"
b. * [AKARNI$_3$ BE$_5$ MENNI$_4$] fogok$_1$ kezdeni$_2$ [≈(37)b]
want.INF PV go.INF will.1SG begin.INF
"I will begin to WANT TO GO IN"
c. * [KEZDENI$_2$ AKARNI$_3$ BE$_5$ MENNI$_4$] fogok$_1$ [≈(37)c]
begin.INF want.INF PV go.INF will.1SG
"I will BEGIN TO WANT TO GO IN"

One further restriction, not covered by (36), is that it is not possible to front a proper subpart of a rolled-up sequence. For instance, the example in (39) can only receive an interpretation in which *akarni* 'want' selects *kezdeni* 'to begin', but not the other way around.

39) [HAZA$_5$ MENNI$_4$] fogok$_1$ akarni$_2$ kezdeni$_3$
home go.INF will.1SG want.INF begin.INF
✓ "I will want to begin to GO HOME"
* "I will begin to want to GO HOME"

This is not such an obvious restriction. Consider the following way of deriving the unavailable reading of (39): starting from a base structure like (40)a below, one can roll-up the entire sequence of infinitives and derive (40)b. This step is independently attested and unproblematic. Now, if one could focalise a proper subpart of the rolled-up sequence, it would be possible to derive (40)c, which represents the unavailable reading in (39). Since this results in ungrammaticality, it must be the case that step (40)c is illicit. Thus, (36) is revised to (41)

40) a. will begin want home go *Base structure*
b. will [home go want begin] *Full roll-up*
c. [home go] will [want begin] *Predicate focalisation*

41) *The pied-piping/inversion correlation (part II revised)*
The constituent fronted under predicate focalisation must be a *complete* licit roll-up sequence. The stranded part of the predicate must be a licit English order sequence.

To complete the description, it is still necessary to mention a few extra examples. Consider first the sentences in (42).

42) a. [AKARNI$_2$] fogok$_1$ *t* kezdeni$_3$ haza$_5$ menni$_4$
want.INF will.1SG begin.INF home go.INF
"I will WANT to begin to go home"
b. [KEZDENI$_2$] fogok$_1$ akarni$_3$ *t* haza$_5$ menni$_4$
begin.INF will.1SG want.INF home go.INF
"I will want to BEGIN to go home"

What these two examples show is that it is possible to take a bare infinitive from the middle of a verbal complex and focalise it to the exclusion of the rest of the complex. In this case, it is not necessary to pied-pipe anything else, as infinitival preverbs invert only optionally with their selecting verbs (cf. the correlation in 32). Regarding the order of the stranded infinitives, observe that, in both examples in (42), they all appear in the English order, in apparent compliance with the second clause of the correlation in (41). However, this is not the entire story. Example (43)a is parallel to (42)a, but exhibiting a rolled-up order of the stranded infinitives. This example is grammatical, contrary to what (41) would predict. This is not so in (43)b, though, which is the rolled-up counterpart of (42)b.

43) a. ✓ [AKARNI$_2$] fogok$_1$ *t* haza$_5$ menni$_4$ kezdeni$_3$
want.INF will.1SG home go.INF begin.INF
"I will WANT to begin to go home"
b. * [KEZDENI$_3$] fogok$_1$ haza$_5$ menni$_4$ *t* akarni$_2$
begin.INF will.1SG home go.INF want.INF
"I will want to BEGIN to go home"

These examples suggest the following generalisation, which is to be added to (32) and (41).

44) *Order of stranded verbs*
If a bare infinitive is focalised, the stranded members of the complex that are higher than its source position must obligatorily appear in the English order, but those that are lower can appear in either the roll-up or the English order.

In short, once the roll-up process applies, focalisation must target the entire rolled-up sequence. Focalisation of a proper subpart of it is ungrammatical. However, infinitives that lie outside the roll-up sequence can still be focalised on its own. Since roll-up order formation is strictly cyclic, it follows that infinitives generated higher than the focalised cannot be affected by the roll-up process, and therefore must appear in the English order. For reference, the full set of

focalisation possibilities is given below as (45), with the bracketed underscore representing the source position of the fronted constituent.

45) *Exhaustive list of infinitive focalisation possibilities*
a. [5] 1-2-3-4 [_]
b. [5-4] 1-2-3 [_]
c. [5-4-3] 1-2 [_]
d. [5-4-3-2] 1 [_]
e. [3] 1-2 [_] 5-4
f. [2] 1 [_] 3-5-4
g. [2] 1 [_] 5-4-3

Having completed the description of the data, let me put together all the generalisations that I have discussed in this section.

46) *Infinitive focalisation in Hungarian*
In Hungarian, focalisation may target either:
a. a bare infinitive
OR
b. a complete licit roll-up sequence
COROLLARY I: if a preverb obligatorily inverts with its selecting infinitive, then it must also be obligatorily pied-piped under focalisation of its selecting infinitive. [=(32)]
COROLLARY II: if a bare infinitive is focalised, the stranded members of the complex that are higher than its source position must obligatorily appear in the English order, but those that are lower can appear in either the roll-up or the English order. [=(44)]

The disjunctive formulation of (44)a and (44)b –"a bare infinitive or a rolled-up sequence"- is rather interesting, as it implies that rolled-up sequences are, in some sense, like bare infinitives. In the analysis of roll-up orders to be developed in section 4.2 below, I formalise this intuition by proposing that these orders are the result of incorporation. Therefore, (46) can be condensed to (47).

47) *Infinitive focalisation in Hungarian (short version)*
In Hungarian, focalisation may target a bare infinitive plus the material incorporated into it.

According to the analysis of reiterative incorporation proposed in chapter one, movement of a complex head is actually movement of a bare head pied-piping some extra material. Therefore, we gain some insight into this parallelism: we can say that what is attracted to the focus position in all cases is a bare head: the difference between focalising a bare infinitive and a roll-up sequence is whether some other material is also pied-piped.[10]

[10] In fact, Koopman & Szabolcsi's theory is tailored so as to give the same result. However, as Williams (2004) observes (cf. also section 6.2 below), a remnant movement analysis doesn't provide a natural way in which these two notions can be conflated.

4. Verb complexes in Hungarian

4.1. Main properties

4.1.1. Adjacency

One of the current debates in the Hungarian literature is whether verb complexes (especially roll-up orders) are to be considered lexical or phrasal units.[11] The degree of cohesion between the different parts of a verbal complex has been traditionally taken as an indicator of this status. This is a point in which English and roll-up orders behave differently. In sequences with the roll-up order, the verbs form a very tight unit that cannot be broken up by anything (48). Note that intervention is possible between the finite verb (in this case, *fog* 'will') and the linearly first element of the cluster (*haza* 'home'), suggesting that finite verbs are not targeted by the cluster formation process.

48) *Adjacency in the roll-up order*
Nem fog$_1$ (Mari) haza$_5$ (*Mari) menni$_4$ (*Mari) kezdeni$_3$ (*Mari) akarni$_2$ (Mari)
not will.3SG home go.INF begin.INF want.INF
"Mari will not want to begin to go home"

However, the adjacency restriction does not hold for the English order. Here, the different verbs of a cluster can be happily separated by all sorts of adverbs and arguments. The only exception in this respect is the unit formed by the lowest infinitive and its preverb, which must be adjacent. This is expected, though, given that the preverb obligatorily precedes the lowest infinitive, as mentioned in section 2.1.

49) *Non-adjacency in the English order*
Nem fog$_1$ (Mari) akarni$_2$ (Mari) kezdeni$_3$ (Mari) haza$_5$ (*Mari) menni$_4$ (Mari)
not will.3SG want.INF begin.INF home go.INF
"Mari will not want to begin to go home now"

Partial roll-up orders behave in the way one would expect given the data above: adjacency effects are only observed for the rolled-up sequence, but not for the one with the English order.

[11] Here, "lexical" ought to be interpreted as "a zero-level category", with all the associated properties. Whether these are formed in the lexicon or in syntax is a different matter, though I take it that they are syntactically derived.

50) *Partial roll-up orders*
Nem fog$_1$ (Mari) akarni$_2$ (Mari) haza$_5$ (*Mari) menni$_4$ (*Mari)
not will.3SG want.INF home go.INF
kezdeni$_3$
begin.INF
"Mari will not want to begin to go home now"

The conclusion is that rolled-up sequences form a very tight syntactic unit, which cannot be interrupted by anything. On top of that, as we saw in section 3.3 above (example (39) plus the correlation in (41)), roll-up sequences cannot be broken up either by movement of one of their subparts. This contrast with the much looser status of sequences in the English order.

4.1.2. Size effects

Csirmaz (2004) establishes a distinction between "light" and "heavy" preverbs, which is, quite transparently, based on the size of the preverbs: light preverbs are syntactically atomic, whereas heavy preverbs are phrases. This is exemplified below, with *újságot* 'newspaper' being a light preverb (51)a, and *ósdi képes magazinokat* 'old picture magazines' being a heavy one (51)b.

51) *Light and heavy preverbs*
a. Nem fogok akarni **újságot** olvasni
not will.1SG want.INF newspaper.ACC read.INF
"I will not want to read newspapers"
b. Nem fogok akarni **ósdi képes magazinokat** olvasni
not will.1SG want.INF old picture magazines.ACC read.INF
"I will not want to read old picture magazines"

As mentioned in section 3.3 above, Csirmaz shows that the heavy vs. light status of any given preverb affects its ability to be a part of a roll-up structure. In particular, light preverbs must be included in rolled-up clusters (52), whereas heavy preverbs block roll-up sequences altogether (53).[12] Bear in mind that, as shown in (51) above, both light and heavy preverbs are licit in English order sequences.

[12] Koopman & Szabolcsi (2000:19-21) claim that syntactic category also affects the ability of preverbs to appear in rolled-up sequences. Thus, they claim that this option is banned for predicative adjectives, citing the following example.

i) * Nem fogok [**ostobának** bizonyulni akarni]
not will.1SG stupid.DAT prove.INF want.INF
"I will not want to prove stupid"

The status of such examples is not clear. For instance, one of my informants finds it somewhat degraded but still reasonably acceptable. I will ignore this issue, though, since it is unrelated to phrase structure configurations. Rather, it seems to depend on the inherent properties of different categories, which topic I am not concerned with here.

52) *Roll-up structures with a light preverb*
a. Nem fogok [**újságot** olvasni akarni]
not will.1SG newspaper.ACC read.INF want.INF
"I will not want to read newspapers"
b. * Nem fogok [olvasni akarni] **újságot**
not will.1SG read.INF want.INF newspaper.ACC
"I will not want to read newspapers"

53) *Roll-up structures with a heavy preverb*
a. * Nem fogok [**ósdi képes magazinokat** olvasni akarni]
not will.1SG old picture magazines.ACC read.INF want.INF
"I will not want to read old picture magazines"
b. * Nem fogok [olvasni akarni] **ósdi képes magazinokat**
not will.1SG read.INF want.INF old picture magazines.ACC
"I will not want to read old picture magazines"

Csirmaz argues that this difference follows if light preverbs have the status of heads, while heavy preverbs are phrases. The former, being heads, may incorporate into their selecting infinitive. If the roll-up process itself is based on successive incorporation, then it is expected that light preverbs should be allowed inside a rolled-up sequence (52)a. In contrast, heavy preverbs, being phrases, cannot incorporate into any higher head. Consequently, they are also left out of the roll-up process (52)b. Note that this reasoning, in and of itself, does not rule (53)b out. It is necessary to add a further statement to the effect that the roll-up process must start with the lowest member of the verb cluster (typically, the preverb). I will return to this issue is sections 4.2.1 and 4.2.2 below. For the time being, these data allow us to formulate the following generalisation.

54) *Roll-up sequences*
The derivation of a roll-up sequence must always start by incorporating the preverb into its selecting infinitive, and then proceed cyclically. If the first step of incorporation is independently excluded, then roll-up is also banned.

This hypothesis also bears on the restriction mentioned in (17) in section 2.2 – repeated here as (55)a- that it is not possible to have a substring with an internal English order inside a roll-up sequence (compare with the licit full roll-up sequence in (55)b). If English order strings qualify as phrases, then the ungrammaticality of (55) can be explained in the same way as the ungrammaticality of (53)a.

55) a. * Nem fogok$_1$ [[kezdeni$_3$ haza$_5$ menni$_4$] akarni$_2$]
not will.1SG begin.INF home go.INF want.INF
"I will not want to begin to go home"
b. Nem fogok [[haza$_5$ menni$_4$ kezdeni$_3$] akarni$_2$]
not will.1SG home go.INF begin.INF want.INF
"I will not want to begin to go home"

The importance of size is also supported by the generalisation (Koopman & Szabolcsi 2000:22) that, if the preverb has dependents of its own, they must be

left behind (56)c. That is, once again, only small constituents can undergo roll-up movement.[13]

56) a. János szét fogja akarni kezdeni szedni **a rádiót**
J apart will.3SG want.INF begin.INF take.INF the radio.ACC
"János will want to begin to take the radio apart"

b. Csak János fogja [szét szedni kezdeni akarni]
only J will3.SG apart take.INF begin.INF want.INF
a rádiót
the radio.ACC
"Only János will want to begin to take the radio apart"

c. * Csak János fogja [szét **a rádiót** szedni kezdeni
only J will3.SG apart the radio.ACC take.INF begin.INF
akarni
want.INF
"Only János will want to begin to take the radio apart"

4.1.3. Stress distribution

Farkas & Sadock (1989) argue that stress distribution also supports the complex head status of rolled-up chunks. They base their claim on the observation that Hungarian lexical stress always falls on the first syllable of the word, indicated on the examples below with a stroke (') before the stressed syllable. In the case of inverted orders, stress falls on the first verb of the cluster, and the rest remain unstressed (57)b. It is not possible to stress both verbs (57)c, or to place stress on any verb other than the linearly first one (57)d. The same effect holds for other expressions that invert with their selecting infinitives, like particles (58) and bare nouns (59). Thus, one can generalise that, for the purposes of stress assignment, infinitives form a unit with the preverb that precedes them.

57) a. 'akarni "to want"
b. **'úszni** akarni "to want to swim"
c. * **'úszni** 'akarni "to want to swim"
d. * **úszni** 'akarni "to want to swim"

58) a. 'szalad "to run"
b. **'ki**-szalad "to run out"
c. * **'ki**-'szalad "to run out"
d. * **ki**-'szalad "to run out"

---

[13] Hegedűs (2006) claims that particle preverbs with a directional/locative meaning (e.g., *be* in the example below) actually start off as the head of the PP that complements the verb. To the extent that her analysis is correct, it fits Koopman & Szabolcsi's claim, i.e., only the head of the PP (*be*) can incorporate into the selecting infinitive. The derivation of (i) would be as in (ii).

i) Mari **be**-futott a szobá-ba
M PV.ran.3SG the room.into
"Mari ran into the room"
ii) Mari [**be**]$_k$ futott [$_{PP}$ t_k a szobába]

59) a. 'olvas "to read"
b. **'regényt** olvas "to read a novel"
c. * **'regényt** 'olvas "to read a novel"
d. * **regényt** 'olvas "to read a novel"

Crucially, sequences of infinitives in the English order do not behave in this way. In these cases, each infinitive in the sequence bears its own stress, as shown in (60). If any infinitive appears unstressed, ungrammaticality results.

60) a. 'akarni 'úszni "to want to swim"
b. * 'akarni úszni "to want to swim"
c. * akarni 'úszni "to want to swim"

Farkas & Sadock point out that stress in compounds shows a same distribution parallel of the paradigms in (57), (58), and (59). Take the word *varos* 'city', for instance, which bears its own stress when in isolation. However, when it appears as part of a compound (e.g., *fő-varos* 'main city', lit. 'capital'), it becomes unstressed.

61) a. 'város "city"
b. 'fő-város "capital"
c. * fő-'város "capital"
d. * 'fő-'város "capital"

In contrast, English orders such as the ones in (60) pattern with sequences that are unambiguosly phrases. Consider, for instante, the complex noun phrase *a nagy színes holland újság* 'a big colourful Dutch newspaper', which is functioning as a complex specifier in (62).[14] As can be seen, this noun phrase contains four stressed syllabes, corresponding to the three adjectives plus the noun.

62) [A 'nagy 'színes 'holland 'újság] az asztalon feküdt
the big colourful dutch newspaper the table.on lied
"The big colourful Dutch newspaper lied on the table"

In short, in terms of stress distribution, rolled-up sequences pattern with compounds, whereas sequences with an English order pattern with regular phrases. Farkas & Sadock argue that this asymmetry suggests a different structural status for the two types of verb clusters: while roll-up clusters are structurally words, clusters with an English order are phrases.

This parallelism is quite attractive, but nonetheless, I believe it is best to keep this as secondary evidence. For one, a closer inspection of the data reveals that this is actually only a one-way generalisation –i.e., while it is true that every word-sized unit has the stress distribution described by Farkas & Sadock, it is not the case that we are dealing with one single word every time we witness that particular stress distribution. We will see in section 3.1.3 in chapter four that preverb climbing (movement of a preverb from the domain of its selecting infinitive to the left of a higher finite verb) is an instance of phrase movement to a specifier position immediately to the left of the higher verb. Nonetheless, those

[14] Thanks to Anikó Lipták for constructing this example for me.

[preverb-verb] combinations show the same stress pattern as lexical units, even though their constituent parts are syntactically independent.[15]

63) a. 'Be akarok *t* menni
PV want.1SG go.INF
"I want to go in"
b. * 'Be 'akarok *t* menni
PV want.1SG go.INF
"I want to go in"

4.2. An incorporation analysis of verb complexes

4.2.1. The derivations

The table below summarises the discussion in section 4.1 above. As already hinted at, this particular distribution of properties suggests that rolled-up sequences are to be considered complex heads (in the sense discussed in chapter one), whereas English orders are regular phrases.

	Roll-up orders	**English orders**
Non-verbal material can intervene between the members of the cluster	no	yes
Movement processes can target a proper subpart of the cluster	no	yes
Feeds further roll-up	yes	no
Internal stress distribution	one stress	multiple stresses

Table 2: properties of Hungarian verb clusters

The most common way to implement this distinction is to consider that English orders represent the merged order of the infinitives, without any movements having taken place. From this base, roll-up orders are derived by cyclically incorporating each infinitive into the higher one.[16] The analysis is technically extremely simple, although it must be coupled with a few stipulations to make it work, mostly having to do with look-ahead. I don't see this as a specific weakness of this analysis, though. For one, equivalent stipulations are necessary for *any* current analysis of Hungarian verbal complexes (see the discussion in section 4.2.2 below). Therefore, I take them to represent unsolved problems for Hungarian syntax at large, not for particular analyses. I believe that to acknowledge this point explicitly (something that is not always done) is the best option, since, in this way, it is possible to determine what the best directions for future research are.

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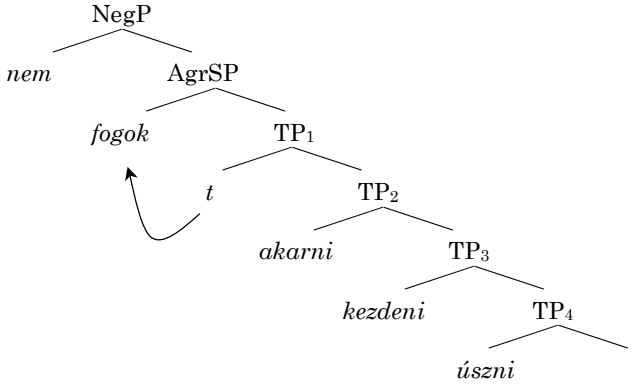
[15] Some Hungarian auxiliaries, like *fog* 'will' or *szokott* 'habitual', resist bearing stress in any context. Crucially, though, *akar* 'want' is not one of these verbs, and can independently bear stress.

[16] Note that different analyses propose different ways to implement incorporation. The underlying intuition, though (that the resulting constituent qualifies as a complex head) is always there.

To be more explicit about the analysis, I assume that English orders consist of a TP-embedding predicate that takes its complement to the right, and so on recursively. I assume, following Koopman & Szabolcsi (2000), Tóth (2000), and Kenesei (2001), that infinitives project up to the TP level. This assumption is based on the hypothesis that the infinitival marker *–ni* is actually an instantiation of tense –more specifically, the spell-out of non-finite T (see chapter four, section 2.6, for extra discussion). For finite verbs, I will assume an extra step of movement to AgrSP. This is schematically represented below. For simplicity, I have chosen a verb (*úszni* 'to swim') which doesn't select a preverb. [17]

64) a. Nem fogok$_1$ akarni$_2$ kezdeni $_3$ úszni$_4$
not will.1SG want.INF begin.INF swim.INF
"I will not want to begin to swim"

b.

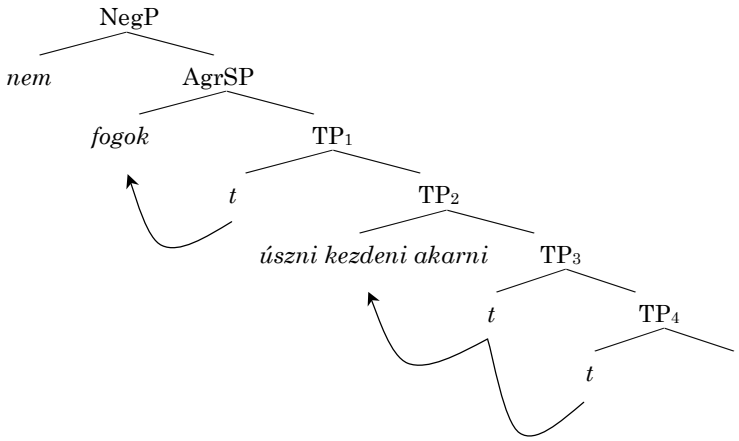


Taking (64)b as the base structure, a rolled-up variant of (64)a requires successive incorporation of each infinitive into the immediately higher one.

65) a. Nem fogok$_1$ [úszni$_4$ kezdeni $_3$ akarni$_2$]
not will.1SG swim.INF begin.INF want.INF
"I will not want to begin to swim"

[17] In the trees below, I do not include any projections below the TP level. This is purely for clarity of exposition, and it should not be interpreted as a claim on my part that these projections are absent.

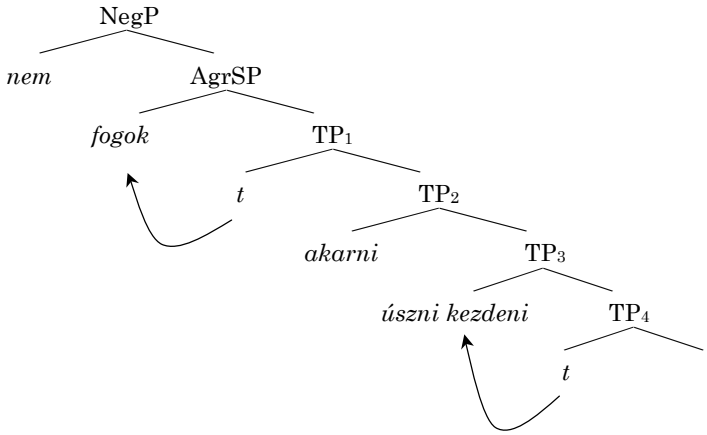
b.



Finally, partial roll-up orders are simply the result of the incorporation process stopping before reaching the highest infinitive.

66) a. Nem fogok$_1$ akarni$_2$ [úszni$_4$ kezdeni $_3$]
not will.1SG want.INF swim.INF begin.INF
"I will not want to begin to swim"

b.



This analysis captures the main properties of English and (partial) roll-up orders, namely, adjacency effects (section 4.1.1), size effects (section 4.1.2) and stress distribution (section 4.1.3). However, as mentioned above, two stipulations are necessary to block various ungrammatical orders. The first one ensures that the roll-up process will always start with the lowest infinitive/preverb available. The second one ensures that the roll-up process will never include the finite verb.

67) *Lowest start*
The roll-up process must always start at the very bottom of the infinitival sequence. Roll-up orders that start at the middle of the sequence and strand lower infinitives are ungrammatical.

68) *No finite verbs*
Finite verbs cannot be hosts of incorporation.

4.2.2. A note on the trigger of roll-up formation

In this section, I have discussed the derivations that create Hungarian verb clusters, and how the proposed structures can account for the properties of the different orders can be derived. However, I have not said anything about the trigger that creates a roll-up sequence from an English order base. To be fair, this is mostly because I have very little to say about this topic. Before moving on to the next section, though, I would like to offer some considerations on this issue.

Implementing roll-up formation can be done in a number of different ways. In the present approach, head movement is triggered by a requirement to form a larger morphological unit (see chapter one), therefore roll-up would correspond to an optional specification that the verbs in question can be spelled out as one unit. Note that the use of the word "optional" in the previous sentence is not accidental. As far as I have been able to determine, for any given verb complex, the choice between the different orders is truly free. The literature does not mention any significant asymmetries between the different orders: the scope relations between verbs remain stable, and there are no discourse effects that could favour one order over the others in specific contexts. If these observations are correct, and roll-up formation is a truly optional process, then it must be modelled so in the implementation by allowing whatever rule forces roll-up formation to apply freely.[18] As mentioned right above, in the analysis I have developed in chapter one, this is done at the level of the morphological specifications on what morpheme sequences can be spelled out as a unit. Brody (1997) views roll-up movement pretty much in the same way as me (namely, as formation of a larger spell-out unit) would have to take an approach similar to mine. Other analyses would require comparable stipulations. For instance, Williams (2004), who analyses roll-up orders as cases of compounding, proposes that his FLIP and REASSOCIATE rules apply freely. Analyses based on feature checking would be forced to accept that the relevant features can be freely distributed in the relevant ways. To the best of my understanding, these are simply equivalent ways to implement the same underlying intuition.

Once we accept that optionality (however modelled) is an integral part of the analysis, the next step is to determine whether it is possible to rationalise the stipulations in (67) and (68). Some attempts have been made to do so, but in the end they amount to framework-specific rewordings of the stipulations

[18] I am aware that true optionality is difficult to model in the context of the Minimalist Program, where everything happens for a reason. In the past, other cases of putative optionality have been argued to represent the output of different numerations. I am not convinced by this alternative, though. Saying that one can freely choose between different inputs for one derivation is not any less stipulative than saying there is only one input and then a certain operation can apply freely.

themselves. For instance, Koopman & Szabolcsi (2000) derive them through the way in which the features triggering movement are distributed throughout the structure. It is interesting to note, though, that if this distribution were even slightly different, their account of (67) and (68) would totally break down, suggesting that it is little more than a technical trick. In a different vein, Williams (2004) proposes to capture (67) and (68) by restricting the way in which his FLIP and REASSOCIATE rules apply. In particular, he stipulates (i) that, in opposition to infinitives, finite verbs don't have the inherent properties that allow them to be inputs to these rules, and (ii) that these rules, when applied in a certain way, may disrupt the selectional relations between the verbs, but not between verbs and nominal complements. The point I am trying to make here is that none of these analyses offer any additional insights on the derivation of roll-up sequences beyond what is already stated in (67) and (68). Therefore, while acknowledging that these two restrictions represent valid generalisations about Hungarian syntax, I must leave them as an unsolved problem.I believe this is a better alternative than to try and hide this deficiency under a fragment of formalism.

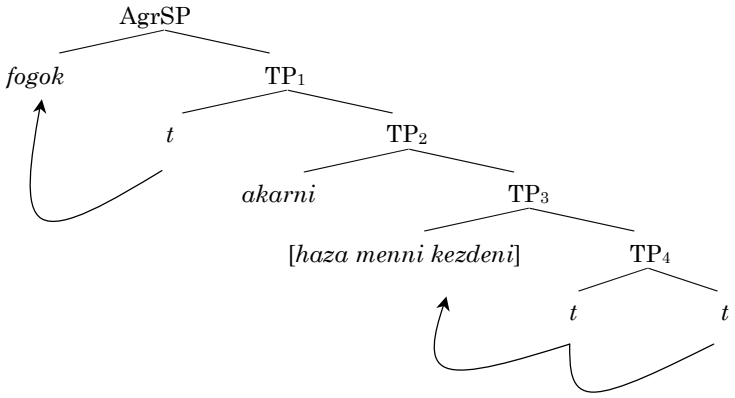
5. The analysis of infinitive focalisation

At this juncture, the analysis of the infinitive focalisation construction is simply a matter of putting together the conclusions of the previous sections. In section 3.3, we saw that the focalised constituent must be either a bare infinitive or a complete licit roll-up sequence. In addition, we saw in section 4 that roll-up sequences are best analysed in terms of complex head formation. Therefore, it follows that infinitive focalisation involves movement of an infinitival head to a focus position in the left periphery.

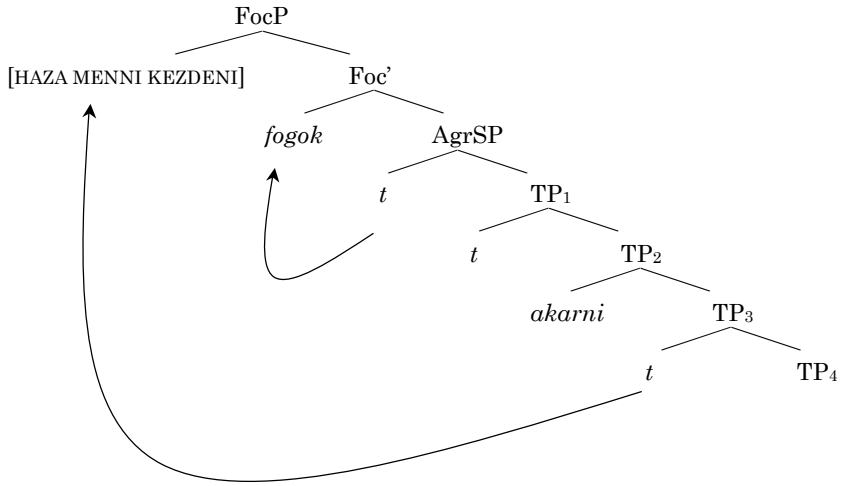
This intuition can be easily implemented through the theory of movement developed in chapter one, which allows a bare head to undergo long-distance movement to a specifier position. The first step in deriving an example like (69) is to derive the rolled-up sequence *haza menni kezdeni* via incorporation, as explained in the previous section (70). Next, this complex head undergoes A-bar movement to the focus position, and the finite verb moves to the Foc^0 head (71). This last step is the regular verb movement observed in all instances of focus/wh-movement (cf. Brody 1990). This derivation is fully consistent with the theory of movement developed in chapter one, and it captures the properties of the construction in a straightforward way.

69) [HAZA MENNI KEZDENI] fogok akarni
home go.INF begin.INF will.1SG want.INF
"I will want to BEGIN TO GO HOME"

70) *Step I: roll-up cluster formation*



71) *Step II: roll-up cluster focalisation*



In the remainder of this chapter, I want to focus on an alternative analysis of infinitive focalisation that doesn't resort to head-to-spec movement, namely, the one proposed by Koopman & Szabolcsi (2000). Their analysis is based on the rejection of the hypothesis that roll-up cluster are formed through successive incorporation. Their main reason for taking this position is the seemingly ambiguous status of verb clusters. [19] They write:

[19] There are other reasons, which they specify in their chapter three, but which do not seem compelling to me. For instance, in pages 20 through 23, they show that all preverbs (including the ones that may incorporate) can undergo phrase movement. I will come to this issue in section 3.3 in chapter four, where I will develop a mixed theory of preverb movement that can account for this behaviour. Obviously, this analysis requires some stipulations about when a preverb may incorporate and when it may undergo phrase

> "On the head movement analysis, these strings are complex heads. But […] each of them also has a life as an XP" (Koopman & Szabolcsi 2000:24-25)

Koopman & Szabolcsi are correct in pointing out that this conclusion is problematic under a traditional theory, where heads and phrases are subject to different conditions on movement. Their intuition is that the theory of movement should not be modified, and that what should be challenged instead is the assumption that verb clusters involve heads. They propose that verb clusters (whether roll-up sequences or bare infinitives in the English order) are uniformly XPs, formed through a series of remnant phrase movements. Therefore, since these constituents constitute phrases, they can move as such without trouble.

Obviously, Koopman & Szabolcsi's analysis depends crucially on there being a well-defined sequence of movements that can create the relevant remnant XPs, and they indeed devote a large part of their book to exploring this issue. However, as we shall see in section 6 below, a closer inspection reveals that this analysis does not constitute a viable alternative to the analysis I have developed in the preceding sections.

6. A remnant movement alternative?

Koopman & Szabolcsi (2000) develop a very detailed analysis of Hungarian verbal complexes based on the assumption that only overt (remnant) XP movement is available in syntax. They observe that

> "… an important line of research in the 1980s led to the conclusion that syntactic representations are large structures, much larger than previously thought on the basis of the actual lexical material in a particular sentence" [Koopman & Szabolcsi 2000:3].

To this, they add that

> "… large structures go against the intuition, shared by many linguists, that silent structure is very costly and should be avoided. […] We do not share this intuition. […] We propose to accept, rather than fight, large structures, and to turn them to our advantage" [Koopman & Szabolcsi 2000:37].

---

movement (cf. page 26 of Koopman & Szabolcsi, and section 4.2). However, Koopman & Szabolcsi's analysis requires similar stipulations regulating when a preverb is pied-piped under movement of its verb: see especially statements 25 through 28, 30, and 32 in the Reference Guide in page 192 of their book. Since both the incorporation and the remnant movement approaches require similar stipulations, the quote in the main text remains as the only point in which a remnant movement approach could potentially be superior to an incorporation analysis. However, this extra difficulty is removed by the modified theory of movement I am proposing. This places the two analyses on an equal footing at least. On top of this, see section 6.2 below for a critical discussion of a remnant movement analysis.

If Koopman & Szabolcsi's analysis were correct, it would not be necessary to modify the theory of movement in the way I have proposed. In their analysis, each infinitive, as well as each sequence of rolled-up infinitives, constitutes a remnant XP. Hence, it can undergo phrase movement without trouble by the simple fact that it *is* a phrase. In the following pages, though, I show that Koopman & Szabolcsi's analysis, however ingenious, misses some generalisations that are captured without trouble by the incorporation analysis developed above. Therefore, by eliminating this alternative, the incorporation analysis will gain extra support, and so will in turn the theory of movement I have proposed in chapter one.[20]

6.1. The analysis

6.1.1. Roll-up orders

Let me begin by going through the derivation that Koopman & Szabolcsi (2000:45-53) offer for a roll-up sequence such as (72). For clarity of exposition, I follow their practice of using English words in the derivation, and abbreviating 'the radio' to just 'radio'.[21]

72) Szét szedni kezdeni a rádiót
apart take.INF begin.INF the radio.ACC
"To begin to take the radio apart"

73) a. Base structure
[VP apart [take radio]]

b. Move *apart* to the preverb position (VP+)
[VP+ [apart][VP [*t*] take radio]]

c. Move *radio* to a licensing position (LP)
[LP [radio][VP+ apart [take *t*]]]

d. Move VP+ to InfP to pick infinitival morphology (*-ni*)
[INFP [VP+ apart take][LP radio][*t*]]

e. Move LP(*radio*) to a higher LP
[LP [LP radio][INFP [VP+ apart take][*t*]]]

---

[20] Nonetheless, Koopman & Szabolcsi's analysis is still worth going through in detail, as it still raises several questions that are relevant for any analysis of Hungarian verbal complexes and that can help sharpen our understanding of Hungarian syntax.

[21] A note of clarification: the derivation offered on pages 45-53 of Koopman & Szabolcsi contains no mention of PredP, as in step (73)f. They introduce this projection later in the book, as part of the derivation of English orders. At that point, they argue that, on conceptual grounds, it is desirable to have a PredP in roll-up orders as well, even though its presence doesn't affect the eventual linear order of the rolled-up output. The actual incorporation of PredP to the roll-up derivation, nonetheless, is mostly left as an exercise to the reader. For explicitness, though, I have included PredP derivation in (73), so in this respect it does differ from the one developed in the quoted pages of Koopman & Szabolcsi. Other than this detail, though, it is identical to the original.

f. Move VP+ (pied-piping InfP) to PredP
[[PREDP[INFP [VP+ apart take]][LP radio][*t*]]

g. Move LP(*radio*) to a higher LP
[LP [LP radio][PREDP [INFP [VP+ apart take][*t*]]]]

h. Move VP+ (pied-piping InfP) to CP to mark the clause as infinitival
[CP [INFP [VP+ apart take]][LP radio] [PREDP [*t*]]]

i. Move LP(*radio*) to a higher LP
[LP [LP radio][CP [INFP [VP+ apart take]]] [*t*]]

j. Merge *begin*
[VP begin [LP radio][CP [INFP [VP+ apart take]]]]

k. Move VP+ (pied-piping InfP) out of CP to the preverb position VP+
[VP+ [INFP [VP+ apart take]][VP begin [LP radio][CP [*t*]]]]

l. Move LP(*radio*) to a higher LP
[LP [LP radio][VP+ apart take begin][*t*]]

m. Move VP+ to InfP to pick infinitival morphology (*-ni*)
[INFP [VP+ apart take begin][LP radio] [*t*]]

After this last step, the derivation is at the same point as in (73)d, and the whole process is repeated. As more verbs are added, the eventual result is a fully rolled-up structure, in which the verb cluster forms a complex specifier. From this, it follows that (a) a rolled-up sequence cannot be separated by movement processes, since extraction out of derived specifiers is taken to be impossible (cf. Müller 1998, Stepanov 2001), and (b), by the same reasoning, that nothing may intervene between the members of a rolled-up sequence.

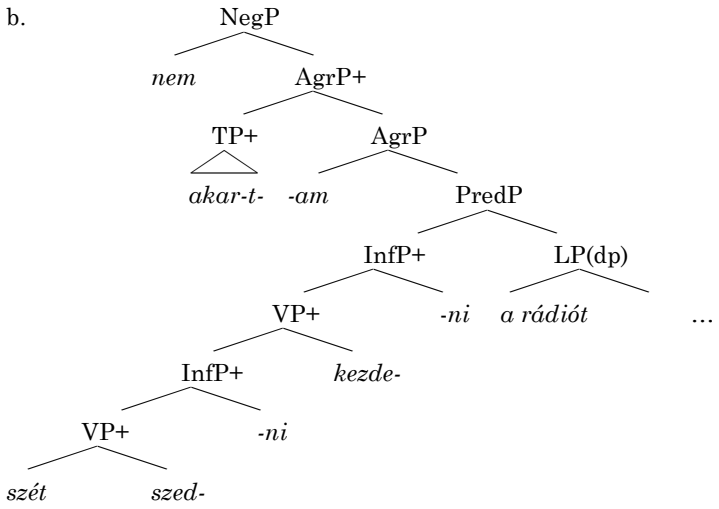
To finish the analysis, it is necessary to say something about why finite verbs are not targeted by the roll-up process. Koopman & Szabolcsi (2000:50) argue that, in finite clauses, VP (containing the root of the finite verb) moves out of VP+ to the specifier of TP+ (TP hosts the tense morphology of finite verbs). In this way, they ensure that subsequent movements of VP+ will only affect the rolled-up sequence of infinitives, and not the finite verb.[22] With respect to this step they acknowledge that "it might seem arbitrary", but they defend it on the basis that "whether VP splits out of VP+ cannot be predicted on the basis of theoretical considerations: it seems like a microparameter responsible for much cross-linguistic and cross-constructional variation". This is their equivalent to the stipulation I proposed in (68).

To ease visualisation, I reproduce below the final representation they provide in their page 79. For ease of exposition, the parts of the structure without overt material are omitted from this tree. I also use Hungarian words so as to show better where the different pieces of morphology are assumed to sit.

74) a. Nem akar-t-am szét szed-ni kezde-ni a rádiot
not want.PST.1SG PV take.INF begin.INF the radio.ACC
"I didn't want to begin to take the radio apart"

[22] A further series of movements raises the <TP, TP+> sequence to AgrP+. AgrP is the projection hosting agreement morphology. The mechanics are the same, though.

b.



6.1.2. English orders

The derivation for an English order is identical to the one for roll-up orders all the way up to step (73)g above. In the roll-up order, step (73)h consists of extracting InfP out of PredP and moving it to CP. Later, InfP extracts out of CP and moves to the higher VP+. In contrast, in the English order, the entire PredP is moved to CP, and then the entire CP moves to the higher VP+. As a final step, CP extracts from VP+ and moves to LP(cp) –a licensing position for embedded CPs.[23] This last step ensures that, when VP+ is moved to InfP, only *begin* is moved, and the *apart take* string is left behind. The derivation of the English order is schematised in (76), starting from the step where it differs from a roll up derivation.

75) Kezdeni szét szedni a rádiót
begin.INF apart take.INF the radio.ACC
"To begin to take apart the radio"

76) h. Move VP+ (pied-piping PredP) to CP to mark the clause as infinitival
[CP [PREDP [VP+ apart take]][LP radio][*t*]]]
i. Move LP(*radio*) to a higher LP
[LP [LP radio][CP [PREDP [VP+ apart take]]][*t*]]
j. Merge *begin*
[VP begin [LP radio][CP [PREDP [VP+ apart take]]]]
k. Move VP+ (pied-piping CP) out of CP to the preverb position VP+
[VP+ [CP [VP+ apart take]] [VP begin [LP radio] [*t*]]]]

[23] Presumably, LP(cp) is also present in roll-up order. However, since all overt material has extracted out of CP, movement of the latter to LP(cp) won't affect linear order. Alternatively, one may follow Koopman & Szabolcsi (2000:48) in assuming that XPs from which all overt material has been removed need not be licensed.

l. Move LP(*radio*) to a higher LP
[LP [LP radio][VP+ [CP apart take] [VP begin]][*t*]]
m. Move CP to LP(cp)
[LP(CP) [CP apart take]] [LP radio] [VP+ [*t*][VP begin]]]
n. Move VP+ to InfP to pick infinitival morphology (*-ni*)
[INFP [VP+ [VP begin]] [LP(CP) apart take] [LP radio] [*t*]]

Thus, the entire difference between English and roll-up orders reduces to whether step (76)m, movement of the preverb out of VP+, takes place or not. Importantly, this is in turn dependent on the following rule.

77) *Koopman & Szabolcsi (2000:57)*
When the specifier of VP+ is a small preverb or an inverted sequence, VP+ [pied-piping InfP – LV] optionally extracts from PredP. Otherwise, VP+ cannot extract from PredP.

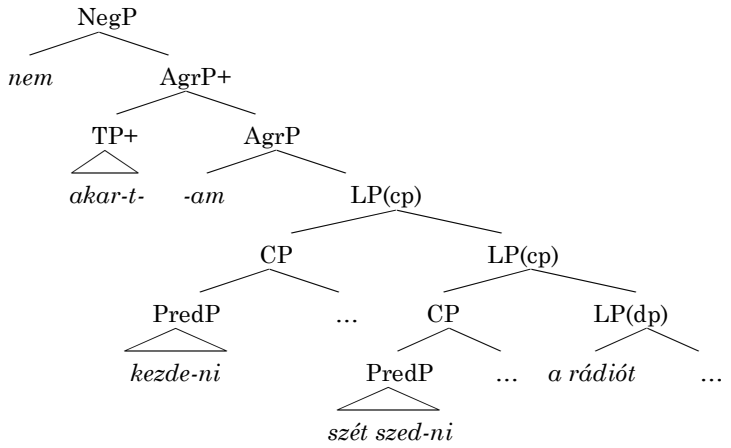
In less cryptic terms, the *intended* effect of this rule is to force an English order in case the preverb is phrasal. Without it, phrasal constituents could appear in rolled-up sequences, contrary to fact (cf. section 4.1.2). Now, the *real* effect of this rule is simply to ensure that, whenever a preverb is phrasal, the constituent moving to a higher VP+ is CP, as opposed to InfP. To derive the intended effect, Koopman & Szabolcsi couple (77) with the stipulation that there is an LP(cp) projection above every VP+, which extracts CP out of SpecVP+. On top of this, there is the extra assumption (noted by Barbiers 2003) that there is no equivalent licensing position for InfPs. If LP(infp) projections existed, it would be impossible to derive roll-up orders, since then the preverb position would also be evacuated out of VP+ in these cases.

Further, Williams (2004) points out Koopman & Szabolcsi's implicit assumption that, for any infinitive in a sequence, InfP cannot extract from PredP and CP unless the extraction option has also been taken in the derivation of all the lower infinitives. Without a stipulation like this, there is no way to ensure that roll-up always starts from the bottom of the clause. This is their equivalent to my stipulation in (67).

Also as in the previous section, let me finish by reproducing the (simplified) final structure that Koopman & Szabolcsi provide in their page 80.

78) a. Nem akar-t-am kezde-ni szét szed-ni a rádiót
not want.PST.3SG begin.INF PV take.INF the radio.ACC
"I didn't want to begin to take the radio apart"

b.



6.1.3. Predicate focalisation

Given the structures in (74)b and (78)b, the analysis of predicate focalisation is quite straightforward. One simply needs to take the relevant pieces of structure containing bare infinitives or rolled-up sequences and move them to the specifier of FocP, in the same way I proposed in (71) above.[24] In this respect, the major advantage of Koopman & Szabolcsi's analysis is that it doesn't require any modifications to the standard theory of movement. That is, bare infinitives and roll-up sequences can move as phrases by virtue of the simple fact that they *are* phrases. For instance, we can easily see in (74)b that the rolled-up sequence *szét szedni kezdeni* 'to begin to take apart' corresponds to an entire PredP+. Similarly, in (78)b the bare infinitive *kezdeni* 'to begin' corresponds to an entire PredP (or, alternatively, to an entire CP, given that the complement of C contains no overt material). Nonetheless, we will see in section 3.4.2.4 below that it is necessary to make some extra stipulations to make this analysis work.

6.2. Discussion

A reiterative remnant movement analysis faces an initial problem: rolled-up sequences are assumed to be complex specifiers, but still they show a stress pattern quite different from constituents that are clearly complex specifiers (see section 4.1.3). This much should be enough to raise suspicions about the correctness of this analysis. In this subsection, I will show that there are a number of other deep problems other than stress distribution, suggesting that verbal complexes are not derived via remnant movement.

[24] An extra sequence of operations would also be necessary to raise the finite verb to the focus head, or equivalent position. This issue is orthogonal to our discussion, though.

6.2.1. Formation of remnant XPs

As is obvious from the presentation in the previous subsections, Koopman & Szabolcsi's analysis requires the creation of remnant constituents at multiple times during the derivation. Such an analysis requires a plausible trigger for all the movements that must be postulated in order to create a remnant constituent. Let me emphasise that this is really an indispensable condition. Without a reasonable theory regulating remnant formation, there is a high risk of ending up with a circular and unfalsifiable analysis.

Koopman & Szabolcsi try to develop such a theory. They motivate all the movements necessary to derive remnant constituents through the following constraint.

79) *Koopman & Szabolcsi (2000:43)*
Mechanics of movement: by default, move only one category at a time.

Unfortunately, Koopman & Szabolcsi do not explain what they mean by "one category", thus making (79) a rather criptic statement. Here, I will adopt Thiersch's (2005) interpretation of it, which I find reasonable enough. Thiersch takes (79) to mean that, in a structure of the form [XP…[YP]…[ZP]…], movement of the entire XP would violate (79), since it contains two categories, namely YP and ZP. Importantly, (79) is violated only if both YP and ZP are phonetically realised. If one of them extracts out of XP and leaves a trace, the resulting remnant XP counts as containing only a category, and movement is possible. To that end, Koopman & Szabolcsi posit a number of stacking positions (which they refer to as LPs, where L stands for "landing site"), whose exclusive goal is provide landing positions for the constituents that extract from XP.[25]

Nonetheless, this principle is too strong, and they are required to postulate exceptions to account for the various cases where pied-piping is necessary. The exception that they devote most attention to states that sequences of categories <YP+, YP> may move together if necessary. This allows them to move preverbs and verbs together, since they are moving a <VP+, VP> sequence (see above).[26,27,]

[25] As Koopman & Szabolcsi mention in their page 44, the principle in (79) must be augmented with an order preservation constraint (cf. Müller 2004) to the effect that, when multiple constituents move to LPs above XP, their linear order must be identical to the one before movement.

[26] A YP+ projection is defined as "a projection required by the modified LCA", which in turn is defined (page 4) as a requirement that, by the end of the derivation, no single projection has its head and specifier simultaneously overtly filled (i.e., a doubly-filled COMP filter generalised to every projection). That is, YP+ projections provide a landing site for specifiers where a potential violation of the modified LCA could ensue. Note that, under this definition, the preverb position (VP+) should not be a YP+ projection, as its existence is arguably motivated independently, and not just as a means to satisfy the modified LCA. If this is correct, movement of <VP+, VP> sequence ought to be treated as a separate exception.

[27] Interestingly, VP and VP+ need not always move as a unit. Koopman & Szabolcsi postulate that, under certain conditions, VP may move out of VP+ prior to movement of the latter. The surface effect of this operation is that the preverb is separated from its selecting verb, as does happen in, e.g., sentences with focus or negation (they also postulate a rule defining which contexts VP/VP+ splitting is possible). However, note that other such

A second exception they mention are sequences containing the projection that hosts the verb and an operator projection (RefP, DistP…), which is required for their analysis of foci in sequences of infinitives (cf. section 6.2.3 below). On top of these two configurations, they also mention (p. 190) "others, not discussed in this book" as possible exemptions to (79). In reality, they also assume at least three other such configurations. To begin with, left branches seem to be allowed to contain several different categories, and still move without violating (79). Second, full DPs (including DPs containing various adjectives or PP complements) are also quite happy to move as a unit, even though their internal syntax clearly contains more that one category.[28] Third, in their discussion of Dutch finite particle verbs (e.g., *op-bel-de* 'up.call.PST'), they claim that a PredP whose specifier contains the particle (*op*) obligatorily pied-pipes its complement TP, which is filled with the verb (*bel-de*).[29] Finally, there is an extra configuration not discussed in their book where (79) needs to be obviated. These are the cases of full VP topicalisation discussed in detail in Lipták & Vicente (to app.). In this construction, a fronted verb obligatorily pied-pipes all of its subcategorised complements, again in violation of the constraint in (79).

The point here is that, for a general principle like (79) is intended to be, there seem to be too many exceptions to it: at least six (maybe seven, see footnote 26), and possibly even more if one considered more data. On top of this, the exceptions don't seem to form any natural class, and are sometimes language and construction specific. Without a reasonable theory of the domain of application of (79), this principle stands in a delicate situation –i.e., it looks like an *ad hoc* device to force evacuating movements whenever a remnant constituent needs to be created, but which can be obviated whenever pied-piping is necessary.

Furthermore, it should be noted that the evacuating movements required to form a remnant constituent have no detectable effects other than to form a remnant constituent, which gets this theory dangerously close to circularity. In fact, Koopman & Szabolcsi postulate an order preservation constraint on LP projections (see footnote 25) whose exclusive goal is precisely to ensure that multiple evacuating movements have no detectable surface effects. Similarly, no semantic effects of these movements seem to exist either. Given that constituents are moving across each other constantly, one would reasonably expect that some semantic effects show up at some point (for instance, in terms of scope, binding, or crossover effects). The fact that none of these are reported is quite striking.[30]

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sequences (InfP/InfP+, or TP/TP+) cannot split in this way. If they could, a verb stem could be separated from its corresponding inflectional morphemes. This might be reducible to a morphological well-formedness condition (e.g., the Stray Affix Filter), though they are not explicit about it.

[28] It is not clear to me that one could appeal to an independent property of DPs to explain this exception. For one, their phase status wouldn't do, since that would also allow CPs to move as a whole. In reality, Koopman & Szabolcsi apply (79) to force evacuation out of CP in the derivation of English orders.

[29] This is discussed on their pages 135-137. Note that this is a language-specific exception, as in Hungarian PredP may not pied-pipe its complement if the latter has any overt material left in it.

[30] One could still postulate an "LF preservation constraint" (parallel to the order preservation constraint), which would ensure that evacuating movements have no semantic impact. Although technically feasible, I believe it is obvious that this would not be a serious solution.

In contrast, this inertness follows trivially from a head movement analysis: the stranded constituents are expected to show no signs of having been moved, simply because they have not been moved.

6.2.2. Formation of roll-up orders

Let me turn now to the derivation of roll-up orders (cf. section 6.1.1 above). Although the analysis Koopman & Szabolcsi offer correctly derives the surface order and constituency of these sequences, I believe it also misses some significant generalisations. I think this point is best explained in the passage below (from Williams 2004). Here he discusses the rule in (77), which regulates the derivation of English and roll-up orders.

77) *Koopman & Szabolcsi (2000:57)*
When the specifier of VP+ is a small preverb or an inverted sequence, VP+ [pied-piping InfP – LV] optionally extracts from PredP. Otherwise, VP+ cannot extract from PredP.

> "First, there is the fact already noted that "small" is never defined. […] But the worse problem with [(77)] is with the phrase "or an inverted sequence", the most unhappy phrase in the whole treatment. The reason such a phrase is required is because, once you start to roll-up, you can continue, and the rolled-up sequence gets bigger and bigger. In a theory where roll-up is lexical,[31] it is no surprise that it is cumulative. […] But certainly not in Koopman & Szabolcsi's proposal. […] To explain why roll-up is cumulative, Koopman & Szabolcsi are forced to disjoin the description "an inverted sequence" with "a small preverb". How is "an inverted sequence" like something "small"? Inverted sequences are no smaller than uninverted sequences. And how are they to be identified? It is instructive to unpack this term explicitly – I think the simplest formulation is something like "a cluster of verbs in whose derivation the non-pied-piping option in [(77)] has been taken every time". But why should such a beast have any special standing, especially in the specification of [(77)] itself?" [Williams 2004:196-197]

Or, in other words: Koopman & Szabolcsi's analysis of roll-up orders is simply a way of replicating exactly the output of an incorporation analysis with XP movement tools, which is a pretty uninteresting result. Given this situation, one might as well stick to a head movement analysis and just trade in some stipulations for others.

In fact, a look at other languages reveals that roll-up orders cannot possibly be the result of remnant movement. I believe it is actually quite illuminating to compare Koopman & Szabolcsi's theory to Massam's (2001) analysis of object pseudo-incorporation in Niuean. Massam argues that cases where an object appears to incorporate into a verb are actually best analysed in terms of phrase

[31] Where "lexical" means "forming a complex head", not "done in the lexicon" [LV].

movement of the verb pied-piping the object. This analysis is embedded within her more general proposal that the verb initial order of Nieuan is not derived via verb movement, but via phrase movement of a remnant VP (for which she offers independent evidence, see Massam 2000, 2005). Under this hypothesis, the apparent cases of incorporation are actually cases in which the object has failed to evacuate VP prior to movement of the latter. Therefore, it is pied-piped along with the verb. The major piece of evidence that Massam offers is that the "incorporated" object can be unambiguously phrasal, including even relative clauses and coordinate structures.[32] Massam provides convincing evidence that the boldfaced strings in (80) form a constituent with the verb, and are pied-piped when the verb moves. This property is totally unexpected under a head movement account of incorporation, but easy to account for if what looks like incorporation is actually phrase movement.[33,34]

80) *Niuean*

a. Ne [VP kai **sipo mo e ika mitaki**] a Sione
PST eat chip and ABS fish good ABS S
"Sione ate chips and good fish"

b. Ne [VP kumi **motu ke nonofu ai**] ni a lautolu
PST seek island SUBJ settle there just ABS they
"They just looked for an island where they could settle"

In any analysis where phrase movement is the norm, one can reasonably expect examples analogous to (80) to show up with relative frequency. The fact that such cases are categorically impossible in Hungarian roll-up orders is striking, and suggests quite strongly that these orders are not derived through remnant phrase movement.

6.2.3. Intervention effects with low foci

Koopman & Szabolcsi (2000:118) note that a sequence of infinitives in the English order may contain a low focus, as in (81).[35] In order to analyse examples like this, they assume that Hungarian infinitives come with a left periphery of their own –that is, each infinitive is associated to a sequence of projections capable of accommodating foci, topics, negation, and various quantifiers, in the same way as a "real" (CP-domain-related) left periphery.[36] Here, however, I will only concentrate on focalised phrases.

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[32] Moreover, the objects that "incorporate" are those that typically fail to move out of VP, such as non-specific indefinites (cf. Diesing 1992). This lends extra support to her hypothesis.

[33] Bear in mind that these are not isolated exceptions. Massam makes a very strong point that "incorporation" of phrasal complements is a fully productive aspect of Niuean syntax.

[34] Similar pied-piping effects also form an integral part of other remnant movement analyses like Nilsen (2003) for Scandinavian object shift, or Baltin (2002) for English short verb movement.

[35] One important restriction on low foci is that they are only licensed if there is a higher focus or negation in the sentence. In the examples in this subsection, I use negation.

[36] Note that this assumption is independent of whether one adopts their analysis or not. Since all these constituents can appear accompanying infinitives in the structure, one has

81) Péter nem fog akarni MARIVAL beszélni
P not will.3SG want.INF M.with talk.INF
"It is Mari that Péter will not want to talk to"

Interestingly, low foci are not possible in roll-up orders. For instance, in (82), it is not possible for the focused modifier *egy órát* 'one hour' to modify the lower infinitive alone (this would result in a reading in which there is a wish to have a one-hour-long nap). The only possible reading is the one in which *egy órát* modifies the entire roll-up sequence *aludni akarni* 'to want to sleep' –i.e., there is a one-hour-long wish to sleep.

82) Nem fogok EGY ÓRÁT aludni akarni
not will.3SG one hour.ACC sleep.INF want.INF
* "I will not want to have a one-hour-long sleep"
✓ "I will not have a one-hour-long wish to sleep"

Koopman & Szabolcsi (2000:121) account for this pattern by assuming that, in the unavailable reading, roll-up movement of the lower infinitive *aludni* doesn't involve just movement of InfP, as in (73)k above. Rather, InfP piedpipes the entire FocP (containing *Marival* 'with Mari') to the SpecVP+ of the higher infinitive *akarni*. At this point, a crucial part of their analysis is the following filter.

83) *Hungarian complexity filter (Koopman & Szabolcsi 2000:108)*
At the end of the derivation, VP+ may not contain both a category more complex than InfP in its specifier and overt material in its complement VP.

Abstracting away from the restriction on the content of the complement VP, what matters here is that FocP is larger than InfP. Consequently, it may not stay in SpecVP+, lest it violates (83). However, it cannot move out either, given the stipulated absence of an LP(infp) projection above VP+.[37] Consequently, movement of FocP into the higher VP+ violates the complexity filter, correctly ruling out the low reading of *egy órát*. In contrast, no such violation ensues in the available reading. Since the lower infinitive has no focus associated to it, only InfP is moved to the SpecVP+ of *akarni*. This is a regular roll-up movement, and the derivation is predicted to converge.

In contrast, recall from (76) that English orders involve movement of an entire CP to the higher SpecVP+. Now, CP is also larger than InfP, so this should also result in a violation of the complexity filter. However, Koopman & Szabolcsi postulate that there *is* an LP(cp) projection above VP+. Consequently, CP extracts out of SpecVP+, and the filter in (83) is respected. In short, the

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to find a way to accommodate them, and postulating a set of operator projections is a pretty obvious one. See Szécsényi (2006).

[37] Given the nearly completely free availability of LP positions, it is extremely odd that this particular projection does not exist. Koopman & Szabolcsi try to rationalise it by drawing a distinction between "licensing" and "stacking" positions. The missing LP(infp) would be a licensing position, and its absence would be due to the fact that InfP does not have to be licensed. I don't believe this improves the situation, as it still begs the question of why virtually every other category needs to be licensed but InfP does not. It is in fact little more than saying the same thing with different words.

difference between (81) and (82) lies on what category is pied-piped to the higher VP+ in each case: CP in (81), but FocP in (82).

However, a closer look at the analysis reveals that it is flawed. For one, note that, for Koopman & Szabolcsi's account of (82) to work, it is imperative that InfP pied-pipes FocP. Suppose that such a requirement did not exist, and InfP could move without pied-piping FocP. If this were possible, one could derive the unavailable reading of (82) in the following way.

84) a. *Base structure*
[VP want [FOCP for one hour [INFP sleep]]]

b. Move InfP to SpecVP+ so as to form a roll-up cluster
[VP+ [INFP sleep] [VP want [FOCP for one hour [*t*]]]]

c. Move FocP to a stacking position above VP+
[LP [FOCP for one hour] [VP+ [INFP sleep] [VP want [*t*]]]]

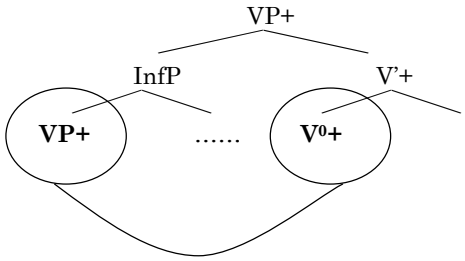
Note that all the steps are independently justified on Koopman & Szabolcsi's own assumptions. Step (84)b, movement of InfP to the higher VP+, is independently required to derive roll-up orders. Step (84)c is analogous to the one postulated in (73)l: its goal is to remove whatever overt material is left in the complement domain of VP so as to comply with the second part of (83). From this point, the derivation could continue without trouble, and the unavailable reading of (82) would be derived. In order to avoid this result, Koopman & Szabolcsi must postulate that InfP must always pied-pipe FocP, if there is one.

Is this restriction justified? Recall that one of their exceptions to the principle of "move only one category at a time" is precisely the combination of a category containing the verb plus an operator projection –in this case, FocP.[38] However, I want to argue that, even within Koopman & Szabolcsi's own assumptions, it simply cannot be the case that InfP pied-pipes FocP. To see why this is so, it is necessary to start by considering a different question, namely, what motivates movement of InfP to VP+ in the first place. Koopman & Szabolcsi argue that it is a matter of feature checking: each VP+ category comes with a feature that is satisfied by attracting the immediately lower VP+ to its specifier – call it a [+vp] feature. Importantly, when undergoing this movement, the lower VP+ may pied-pipe some higher categories, such as InfP, as long as the lower VP+ can still enter a checking relation with the higher VP+. To this end, Koopman & Szabolcsi define the relation of *specifier, which is the transitive closure of the specifier relation,[39] and claim that it constitutes a licit configuration for checking and licensing purposes. In short, what is required is that the lower VP+ stands in a *specifier relation to the higher V+ head, so that the [+vp] feature can be checked. This is the case in the roll-up derivation, as shown in the tree in (85) -cf. also section 3.4.1.1 above. Since the lower VP+ moves into the specifier of InfP, when InfP itself moves to the higher SpecVP+, the relevant *specifier relation is established

[38] Nonetheless, remember that <VP, VP+> sequences, which are also exempt from the "move one category at a time" restriction, can in fact be split under certain circumstances. Given this possibility, it would be surprising if sequences involving FocP never could.

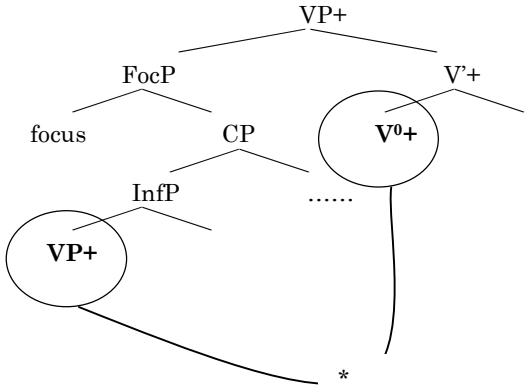
[39] That is, the specifier of the specifier, the specifier of that specifier, and so on.

85) *A *specifier relation*



Now, is this relation established in cases where InfP pied-pipes FocP? I believe not. For one, note that InfP cannot raise to the specifier of FocP (or a higher category), as that would entail an [infinitive > focus] order, contrary to fact. Therefore, it must be the case that InfP pied-pipes FocP while remaining in the complement domain of the latter. However, if this is the correct structure, then the [+vp] feature of the higher VP+ cannot be checked, as the required *specifier relation cannot be established.

86) *No *specifier relation*



Since InfP cannot pied-pipe FocP, it follows that InfP should raise on its own, as in the derivation in (84), so as to be able to check the [+vp] feature of the higher VP+. However, we have already seen that this derivation gives an incorrect empirical result, which leads us to a paradox. One could still try to salvage this analysis by strengthening the requirement that InfP pied-pipe FocP, so that pied-piping takes place even if it doesn't lead to a licit feature checking configuration. Under this alternative view, then, the deviance of the low reading of the modifier in (82) would not be attributed to the size of the constituent sitting in the higher SpecVP+, but rather to the fact that the [+vp] feature fails to be checked.

There is a major empirical reason not to follow this idea, though. If we look again to example (81), a low focus in an English order cluster, we see that the order of the focus and its associated infinitive is [focus > infinitive]. By the same

reasoning as above, this order entails that the moving category cannot be CP, as Koopman & Szabolcsi claim. Rather, it has to be a FocP with a CP in its complement domain. Under the alternative hypothesis just sketched, this should be an illicit structure in the same way as (86). The logic is correct, but it runs against the problem that (81) is grammatical. In order to rule (81) in, one would have to assume a derivation along the lines of (87), where CP and FocP move independently.

87) *A derivation for (81)*

a. Base structure
[VP want [FOCP with Mari [CP talk]]]

b. Move CP to the higher SpecVP+ to check the [+vp] feature
[VP+ [CP talk][VP want [FOCP with Mari [*t*]]]]

c. Extract CP to an LP(cp) position above VP+
[LP(CP) [CP talk] [VP+ [*t*] [VP want [FOCP with Mari]]]]

d. Move FocP to a stacking position
[LP [FOCP with Mari] [LP(CP) [CP talk] [VP+ want] [*t*]]]]

e. Move VP+ to InfP, as in regular English orders
[INFP [VP+ want] [LP [FOCP with Mari] [LP(CP) [CP talk] [*t*]]]]

This analysis derives (81) correctly, but at the cost of acknowledging that FocP and CP may move independently of each other. In fact, note that (87) is analogous to (84). Now, recall that we had already concluded that (84) should be ruled out, lest we derive the unavailable reading of (82). However, if (87) is a licit derivation –as seems to be necessary in order to derive (81)- then (84) should also be licit, contrary to our earlier conclusion. By *reductio ad absurdum*, we conclude that Koopman & Szabolcsi's analysis of (81) vs. (82) is incorrect.

Consider how the contrast between (81) and (82) can be accounted for under the analysis I developed in section 4.2. To begin with, let us assume that low foci somehow block movement of infinitives. This hypothesis is supported by the following paradigm, where an infinitive cannot be focus fronted across a low focus.[40]

88) a. * [BE MENNI] fog János (csak) A SZOBÁBA
PV go.INF will.3SG J only the room.into
"It is (only) into the room that János will want to GO IN"

b. [BE MENNI] fog János a szobába
PV go.INF will.3SG János the room.into
"János will want to GO IN into the room"

Although I cannot explain it at this moment, it seems to be correct to assume that infinitive movement is blocked if it crosses over a low focused category. Granting this much, the availability of low foci interspersed with infinitives in English orders (81) is something that follows trivially from the analysis in section

[40] Note that Hungarian allows the combination of a low and a fronted focus (cf. Surányi 2003), so the ungrammaticality of (88)a cannot be directly attributed to the incompatibility of two foci.

4.2. I argued there that English orders don't involve movement of infinitives. What we see is the merged order of infinitives, unaltered by movement operations. Since there is no movement, no blocking effects arise either, and the grammaticality of (81) is derived without further stipulation. By extension, this reasoning also provides evidence against Koopman & Szabolcsi's analysis of English orders (cf. section 6.1.2), which is based on reiterative infinitive movement.

6.2.4. Focalisable categories

Koopman & Szabolcsi (2000:82) propose the following constraint on the set of categories that may undergo focus movement.

89) *Focus movement in Hungarian*
In addition to the well-known focalisable categories (DP, PP, etc.), PredP can also be focalised (but CP, LP(cp), InfP+, etc., cannot).[41,42]

A constraint like this is necessary to prevent focalisation of categories larger than what is observed. For instance, given the structure in (78)b above, if a full LP(cp) category were allowed to undergo focus movement, we would predict that it should be possible to focalise a sequence of infinitives in the English order (including non-preverb complements). In reality, though, this is incorrect (90), as already explained in section 3.3. The goal of (89) is to rule out examples like this one.

90) * [KEZDENI$_3$ HAZA$_5$ MENNI$_4$] fogok$_1$ akarni$_2$
begin.INF home go.INF will.1SG want.INF
"I will want to BEGIN TO GO HOME"

At first sight, it might seem that (89) is a complexity filter parallel to (83) above. However, on closer inspection, it is not so. Koopman & Szabolcsi (2000:4) define a complexity filter as an algorithm that "specifies the maximum size of a structure in a particular position at the end of the derivation". Note thay this definition creates entailment relations. That is, for any given selectional hierarchy, a complexity filter targets a category *x* and states that any category higher in the

[41] Note that this constraint, as it stands, is descriptively incorrect in caracterising CP as a non-focalisable category. In Koopman & Szabolcsi's analysis, bare infinitives in the English order are CPs (see section 6.1.2), and since these infinitives can be focalised without trouble (section 3.3), it follows that CPs must be focalisable. I don't believe this point compromises their analysis, though, as the data they discuss in this respect probably involve focalisation of a category larger than CP anyway (i.e., FocP or similar).

[42] Another problem with this formulation is that DPs and PPs themselves cannot be focalised, under Koopman & Szabolcsi's assumptions. Given the amount of remnant movement they postulate, PPs and DPs invariably get trapped inside left branches dominated by LP(dp) and LP(pp) nodes. Thus, it is those LP projections that must be moving to the focus position, lest one violates the ban on extraction out of left branches. This might raise the question of why LP(dp) and LP(pp) can be focalised but LP(cp) cannot. However, I believe this not a question particular to their analysis, as in an incorporation analysis one also needs to stipulate that full VPs may not undergo focus movement (though see Kenesei 1998 for some thoughts).

hierarchy than *x* cannot appear in a certain environment. This is not what (89) states: this constraint simply gives a series of categories that cannot appear in SpecFocP. Crucially, there is no hierarchical implication between them. For instance, the focalisable category PredP is higher in the structure than the non-focalisable one InfP+, but also lower than the non-focalisable one CP. In other words, (89) doesn't make any predictions about what categories may or may nor appear in a focus position.

In contrast, the generalisation in (47), repeated below, can offer some such implicational predictions. This generalisation states that only bare infinitives and elements incorporated into them can undergo focalisation. Anything verbal element larger than that is ineligible for focus movement.

47) *Infinitive focalisation in Hungarian (short version)*
In Hungarian, focalisation may target a bare infinitive plus the material incorporated into it.

6.3. Summary

Koopman & Szabolcsi (2000) is an ingenious analysis of Hungarian verb clusters. However, I believe I have shown here that it has a number of shortcomings. Possibly, the major conceptual objection one could raise is the fact that it doesn't really offer anything different from a head movement analysis –it simply replicates it with XP movement tools. The only potential advantage would be that it explains the possibility of bare infinitives undergoing focus movement. Under a classical theory of movement, this is unexpected if bare infinitives are just heads, as heads are not able to undergo A-bar movement. In contrast, it is expected under Koopman & Szabolcsi's analysis, where bare infinitives are actually phrases (properly, remnant CPs). Nonetheless, this potential advantage goes away under the theory of movement proposed in chapter one, where I argued that bare heads may indeed undergo A-bar movement.

In terms of implementation, their analysis is also less than satisfactory. To begin with, the creation of remnant constituents is a rather *ad hoc* mechanism. They try to present it as a general rule ("move only one category at a time"), but in reality this rule can be obviated without trouble whenever pied-piping is required. We saw in section 6.2.1 that there are quite a few of these environments. On top of that, it is surprising that pied-piping of unambiguously phrasal constituents is categorically impossible in the one environment where it could lend the strongest support to a remnant movement analysis, namely, rolled-up verbal complexes (see section 6.2.2). To this one must add the strangeness of some constraints regulating movement, such as (i) the order preservation property of LP projections; (ii) the baroque formulations of some complexity filters, such as (83)[43]; and (iii) the crucial absence of certain

[43] Another such example is the rule regulating preverb climbing, which I haven't discussed here as it is not relevant for the purposes of this section. In essence, they implement preverb climbing by forcing VP to move out of VP+ before the latter moves to InfP, which rule they refer to as "VP/VP+ splitting". Therefore, when VP+ moves, it only contains the preverb, and the verb is stranded. The formulation of the rule is as follows (their pages 119-120).

stacking/licensing positions, unexpected in a system where they can be generated with nearly total freedom. All in all, I don't think Koopman & Szabolcsi's analysis represents a viable way of accounting for Hungarian verbal complexes.

Bear in mind, though, that this doesn't mean that remnant VP movement analysis should be universally excluded. In fact, in chapter five we will review some recent analyses of verb initial languages, which are based not on regular verb raising, but on remnant VP movement to a clause initial position. We will see that in some of these cases, this type of analysis is justified. However, my point here was to show that Hungarian verbal complexes cannot be reduced to remnant movement.

7. Chapter conclusion

In this section, I have provided some extra evidence for the claim in chapter one that bare heads may undergo phrase movement. I began by observing that bare infinitives and rolled-up clusters may undergo A-bar movement (focalisation). The properties of these elements suggest that they constitute complex heads. I also showed that an analysis in terms of remnant movement (Koopman & Szabolcsi 2000) is not viable. Therefore, the simplest hypothesis is that those bare heads must be undergoing A-bar movement on their own, as predicted by the theory of movement developed in chapter one.

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i) *VP/VP+ splitting*
Within the domain of NeutP, VP splits out of VP+, where the domain of NeutP is its c-command domain, delimited by any NegP, FP, and the infinitival complement of a non-auxiliary infinitival complement taker.

Note that this definition is defective in that it doesn't capture the fact that preverb climbing is triggered by stress-avoiding auxiliaries, and blocked by stress-taking ones (cf. Szendroi 2004 and section 3.1.3 in chapter four). Koopman & Szabolcsi try to implement this observation by defining the class of "non-auxiliary infinitival complement taker", which contains stress-taking verbs exclusively (cf. their page 104). Although this does derive the distribution of preverb climbing correctly, it has nothing to say as to why the stress-taking/avoinding status of auxiliaries should be relevant at all.

Chapter four
Predicate clefting in Hungarian

1. Introduction

This chapter continues the study of infinitive fronting in Hungarian. The main focus here is on the predicate cleft construction, which we shall see is rather similar to the Spanish case examined in chapter two. In spite of their parallelisms, though, Hungarian predicate clefts present challenges of their own, mostly having to do with particle verbs. Therefore, a sizeable part of this chapter will be devoted to developing a proper analysis of these verbs, in a way that complements the analysis of roll-up orders in the previous chapter.

As in the previous chapters, I begin in section 2 with a detailed description of the main properties of the construction. Special attention will be given to the pied-piping properties of clefted predicates. Section 3 will be a rather lengthy detour through the properties and analysis of preverbs, which we will see pose some interesting problems. In this section, I will propose that the best way to analyse preverb placement is to adopt a hybrid approach along the lines of Csirmaz's (2004): some preverbs incorporate into their selecting verb, whereas some others move to a specifier position. On the basis of this conclusion, I will develop an analysis of predicate clefting in section 4. For non-particle verbs, I will propose a head-to-spec movement analysis parallel to the one in chapter two. For particle verbs, I will argue in favour of a parallel movement analysis: first the bare verb undergoes head-to-spec movement to a topic position, followed by an independent movement to the preverb to a separate topic position. The chapter concludes in section 5 with a critical discussion of other potential analyses of this construction.

2. Properties of the construction

2.1. A finiteness restriction on double pronunciation

As we saw in chapter two, a defining characteristic of Spanish predicate clefts is that the verb is pronounced twice, once in the topic position, and once in the tail. At first sight, this is also the case in Hungarian, though with one interesting restriction: double pronunciation is only triggered if the verb in the tail is a finite form. If the tail is a verb selected by an infinitival-embedding element (a modal, an auxiliary, or a restructuring verb), then the clefted verb simply leaves a gap, exactly as in the case of focus movement of infinitives discussed in the previous chapter. This asymmetry is shown through the minimal pairs in (1) and (2) below. In both cases I provide the non-clefted base for ease of comparison.

1) *Clefting of finite verbs: double pronunciation*
   a. Nem olvasta el a könyvet
      not read.3SG PV the book.ACC
      "He didn't read the book"
   b. * Elolvasni, nem [*t*] a könyvet
      PV.read.INF not the book.ACC
      "As for reading, he didn't the book"
   c. ✓ Elolvasni, nem olvasta el a könyvet
      PV.read.INF not read.3SG PV the book.ACC
      "As for reading, he didn't read the book"

2) *Clefting of non-finite verbs: no double pronunciation*
   a. Nem fogom elolvasni a könyvet
      not will.1SG PV.read.INF the book.ACC
      "I will not read the book"
   b. ✓ Elolvasni, nem fogom [*t*] a könyvet
      PV.read.INF not will.1SG the book.ACC
      "As for reading, I will not read the book"
   c. * Elolvasni, nem fogom elolvasni a könyvet
      PV.read.INF not will.1SG PV.read.INF the book.ACC
      "As for reading, I will not read the book"

Note that inflected infinitives (which appear embedded under predicates like *important*, *necessary*, or *unpleasant*) also leave a gap under predicate clefting, in the same way as their uninflected counterparts (3)b. Pronunciation of the tail leads to ungrammaticality (3)c. Note, furthermore, that it is not possible either to replicate the pattern observed with finite verbs, namely, [bare infinitive - inflected form] (3)d. This paradigm shows that finiteness (and not agreement) is the crucial factor determining whether the tail is pronounced or not.

3) a. Nem fontos nekem itt maradnom
      not important DAT.1SG here stay.INF.1SG
      "It is not important for me to stay here"

b. Maradnom, nem fontos nekem itt [*t*]
stay.INF.1SG not important DAT.1SG here
"As for staying, it is not important for me to stay here"
c. * Maradnom, nem fontos nekem itt maradnom
stay.INF.1SG not important DAT.1SG here stay.INF.1SG
"As for staying, it is not important for me to stay here"
d. * Maradni, nem fontos nekem itt maradnom
stay.INF not important DAT.1SG here stay.INF.1SG
"As for staying, it is not important for me to stay here"

The patterns above can be accommodated under the following descriptive generalisation.

4) *The finiteness restriction on double pronunciation*
In Hungarian predicate clefts, the tail is pronounced only if it corresponds to a finite verb. If it corresponds to a non-finite verb, it is realised as a gap.

The obvious question is why this split should obtain. Now, the attentive reader might have noticed another difference between (1) and (3): clefting of finite verbs can strand subject agreement morphology in the tail position, thus giving rise to an uninflected form in the topic. In contrast, this type of stranding is barred in clefting of inflected infinitives. This asymmetry can be expressed in technical terms as follows (see section 2.6 for additional discussion).

5) *Stranding of agreement morphology*
Predicate clefting of finite verbs targets a proper subpart of the verb (i.e., to the exclusion of subject agreement morphology). Predicate clefting of infinitives (whether inflected or not) targets the entire verb.

It seems to me that this is an accurate way to categorise the data. I must admit, though, that I have no explanation as to why such a split should exist, and therefore, (5) will remain an underived generalisation. However, if we accept that (5) holds, then it becomes possible to subsume (4) under the hypothesis that double pronunciation is a morphological repair strategy, as discussed in the introductory chapter (cf. Abels 2001, 2003, Kandybowicz 2006, and Landau 2006 for additional discussion). Consider first double pronunciation under clefting of finite verbs. Suppose that clefting targets a category that doesn't include the subject agreement morphemes. If the clefted category were not pronounced in the tail, the agreement morphemes would lack a stem to attach to. In order to avoid a morphologically deviant structure, double pronunciation is licensed as a last-resort mechanism. In contrast, in both bare and inflected infinitives, the entire verbal form is moved, and no morphemes are stranded. As a consequence, double pronunciation is unnecessary and we observe a gap.[1]

[1] See also section 2.5.5 below for an additional (more complicated) paradigm that can also be accommodated under this hypothesis.

2.2. Discourse effects

Lipták (2003) observes that Hungarian verum focus (i.e., emphasis on the truth of a proposition) can be divided into contradictory and non-contradictory focus.[2] Contradictory verum focus emphasises the polarity of the clause by contrasting it against the same clause with the opposite polarity. In these sentences, the verb must be stressed and it is usually accompanied by the focus particle *igenis*. An example is given below. One property of this type of verum focus is that it can't be part of a yes/no question, as shown in (6)b –note also the oddness of the English translation.

6) *Contradictory verum focus*
   a. Péter (igenis) ELMENT az iskolába
      P yes.PRT PV.went the school.to
      "Péter DID (in fact) go to school"
   b. * Péter (igenis) ELMENT az iskolába?
      P yes.PRT PV.went the school.to
      "DID (in fact) Peter go to school?"

In contrast, non-contradictory verum focus emphasises the truth of a proposition by contrasting it with a different proposition (which may or may not have the opposite polarity). In contrast to (6), this type of focus is admissible in yes/no questions.

7) *Non-contradictory verum focus*
   a. A jegyét KIFIZETTE, de nem vitte el
      the ticket.ACC PV.paid.3SG but not took.3SG PV
      "He PAID for his ticket, but he didn't take it"
   b. Péter nem vitte el a jegyét, de azért KIFIZETTE?
      P not took.3SG PV the ticket.ACC but nonetheless PV.paid.3SG
      "Péter didn't take his ticket, but did he PAY for it?"

Given these considerations, predicate fronting in Hungarian is clearly an instance of non-contradictory verum focus, as it is compatible with yes/no questions. Furthermore, note that, in the same way as in Spanish, Hungarian predicate clefts give rise to an adversative implicature (i.e., a *but* effect, see chapter two, section 2.3 for discussion).

8) a. Kifizetni, KIFIZETTE Péter a jegyét (de…)
      PV.pay.INF PV.paid.3SG P the ticket.ACC but
      "As for paying, Péter did pay for his ticket (but, in the end, he might not have taken it).
   b. Kifizetni, KIFIZETTE Péter a jegyét?
      PV.pay.INF PV.paid.3SG P the ticket.ACC
      "As for paying, did he PAY for his ticket?"

[2] She further subdivides non-contradictory verum focus into *contrastive* and *modal* emphasis, but this refinement is not relevant here.

In these sentences, it is the finite verb that is focused. This is a very strong tendency, but not an exceptionless one. In a small set of cases, verum focus proper may be missing from the sentence. In this case, however, some other constituent in the tail must be in focus. The truth of the event denoted by the verb is then entailed as part of the focal presupposition (i.e., if it is true that Kristóf read Hamlet, then it follows that some reading was done). Again in the same way as in Spanish, focusing something other than the finite verb cancels the adversative implicature.

9) [Elolvasni], A HAMLET-ET olvasta el Kristóf (és nem
PV.read.INF the H.ACC read.3SG PV K and not
A MACBETH-ET)
the M.ACC
"As for reading, it is Hamlet that Kristóf read (and not Macbeth)"

In short, the function of Hungarian predicate clefts is to assert the truth (or falsity) of the proposition in question. Importantly, note that this is the case only if the tail is a finite verb.[3] If the tail is generated as a non-finite form selected by either one of a modal, an auxiliary, or a restructuring verb (i.e., a verb embedding an infinitival complement), then the construction does not receive a verum focus interpretation, but rather a regular (contrastive) topic interpretation. Note that, as discussed in section 2.1, in this case the tail is realised as a gap.

10) Úszni, nem fog *t* János
swim.INF not will J
"As for swimming, János will not swim (as opposed to walking)"

2.3. Structural position

In the previous section, I have assumed without discussion that the clefted infinitive in these structures is a topic. This is an easy point to defend, though, since clefted infinitives show the prototypical distribution of topics. In the past decade, a consensus has been reached that the Hungarian left periphery can be divided in three different fields (cf. É. Kiss 2001 and references).[4] The lowest one is a focus/wh- field, located right on top of the inflectional area. Above it there is a field for quantifiers (universals, distributives, and so on). Finally, the topmost field hosts topics. This is schematised below.

11) *The Hungarian left periphery*
[**topics** [**quantifiers** [**focus/wh-** [IP .....]]]]

If clefted infinitives are topics, one would expect that, given this structure, they should necessarily precede foci, wh- words, and quantifiers, and be in a

[3] Thanks to Anikó Lipták (p.c.) for pointing out this difference.

[4] The internal structure of each field is still a matter of debate (see, e.g., Beghelli & Stowell 1997 and Surányi 2003:IV for discussion of the quantifier field). However, the three-way division outlined here is enough for our purposes.

somewhat free distribution with other topics. This is indeed the case. As shown below, a clefted infinitive cannot follow a focus or a wh- word.

12) a. Elolvasni, **ki** olvasta el?
PV.read.INF who read.3SG PV
"As for reading, who read (it)?"
b. Elolvasni, **A MOBY DICK-ET** olvasta el
PV.read.INF the M D.ACC read.3SG PV
"As for reading, it is Moby Dick that he read"

13) a. * **Ki** elolvasni, olvasta el?
who PV.read.INF read.3SG PV
"As for reading, who read (it)?"
b. * **A MOBY DICK-ET** elolvasni, olvasta el
theM D.ACC PV.read.INF read.3SG PV
"As for reading, it is Moby Dick that he read"

Similarly, clefted infinitives precede the verum focus particle *igenis*, which presumably occurs in the focus field.

14) Énekelni, **igenis** énekelt Mari (de senki nem hallotta, mit)
sing.inf EMPH sang.3sg M but nobody not heard.3SG what
"As for singing, Mari DID sing! (though nobody heard what)"

Clefted infinitives must also precede quantifiers. This is exemplified here with the universal *minden* 'everything'.

15) a. Elolvasni, **mindent** elolvasott
PV.read.INF everything.ACC PV.read.3SG
"As for reading, he/she read everything"
b. * **Mindent** elolvasni, elolvasott
everything.ACC PV.read.INF PV.read.3SG
"As for reading, he/she read everything"

Finally, clefted infinitives may both precede and follow topics, suggesting that both types of elements land in the same general area of the left periphery. Some speakers report a slight preference for other topics to follow clefted infinitives, but in any event not strong enough to compromise the grammaticality of the sentence.

16) a. Elolvasni, **tegnap**, elolvasta Péter
PV.read.INF yesterday PV.read.3SG P
"As for reading, yesterday, he read (it)"
b. (?) **Tegnap**, elolvasni, elolvasta Péter
yesterday PV.read.INF PV.read.3SG P
"Yesterday, as for reading, Péter read (it)"

In conclusion, fronted infinitives in the predicate cleft construction sit in a topic position high within the left periphery.

2.4. Evidence for movement

The next question to be answered whether predicate clefting in Hungarian is an instance of movement, as I showed in chapter two is the case for Spanish. The data in this case are rather straightforward, and show clearly that Hungarian predicate clefts are indeed derived by movement. In (17), we can see that predicate clefting is blocked in the presence of standard island configurations, such as complex NP islands and adjunct islands. Example (17)c is given as a control to show that long distance clefting is possible if no island boundaries are present.

17) a. ?* Úszni, a hírt hallottam, hogy úszott Péter
swim.INF the news.ACC heard.1SG that swam.3SG P
"As for swimming, I've heard the news that Péter swam"
b. * Úszni, elolvastam a könyvet miután úszott Péter
swim.INF PV.read.1SG the book.ACC after swam.3SG P
"As for swimming, I read the book after Péter swam"
c. Úszni, hallottam, hogy úszott Péter
swim.INF heard.1SG that swam.3SG P
"As for swimming, I've heard that Péter swam"

Moreover, in (18) we can see that clefting out of a coordinate structure is not possible. Similarly, Hungarian does not allow genus-species sentences (19).[5] As discussed in the previous chapter in relation to Spanish and Brazilian Portuguese, the ungrammaticality of these sentences follows if the topic and the tail are related via movement. Example (18) would amount to a CSC violation, and (19) is straightforwardly excluded if, adopting the copy theory, movement involves identical copies.

18) * Olvasni, ettem egy szendvicset és olvastam a könyvet
read.INF ate.1SG a sandwich.ACC and read.1SG the book.ACC
"As for reading, I ate a sandwich and read the book"

19) * Utazni, repültem New York-ba
travel.INF flew.1SG N Y.into
"As for travelling, I flew to New York"

Reconstruction effects would be one further potential test for movement. However, this test is inapplicable, since (as we shall see in section 2.5 below), pied-piping of verbal complements is quite systematically disallowed in Hungarian predicate clefting. Therefore, the topic position may never contain material that can be tested for reconstruction purposes, such as anaphors or

[5] For the time being, I haven't found any speakers that disagree with these data, although I do not exclude the possibility that some speakers might accept the sentences in (18) and (19). For such speakers, I would appeal to an analysis in which the topic is base generated in the left periphery and linked to the topic by construal, not by movement (cf. the discussion in the previous chapter). As in the previous chapter, I will only consider the judgements of the speakers who find (18) and (19) ungrammatical, since they are the relevant ones for the issue at hand.

bound pronouns. Nonetheless, I believe that evidence presented here shows quite clearly that Hungarian predicate fronting involves movement, in the same way as Spanish.

2.5. Pied-piping constraints

2.5.1. Restriction on bare infinitives

One of the most notorious properties of Hungarian predicate clefting is that the topic must be a bare infinitive. If a verb takes a DP complement, the latter must be obligatorily stranded. Pied-piping it along with the infinitive results in ungrammaticality, independently of the word order in the topic and whether the object is repeated downstairs or not (20)a/(20)b. The only grammatical option is to leave the DP object in the tail, as in (20)c.

20) a. * Elolvasni a Moby Dick-et, elolvasta (a Moby Dick-et)
PV.read.INF the M D.ACC PV.read.3SG the M D.ACC
"As for reading Moby Dick, he read it"
b. ?* A Moby Dick-et elolvasni, elolvasta (a Moby Dick-et)
the M D.ACC PV.read.INF PV.read.3SG the M D.ACC
"As for reading Moby Dick, he read it"
c. ✓ Elolvasni, elolvasta a Moby Dick-et
PV.read.INF PV.read.3SG the M D.ACC
"As for reading, he read Moby Dick"

The same holds for PP complements: they cannot be pied-piped along with the verb, irrespective of whether they are repeated downstairs or not. The only grammatical option is to strand them (21)c.

21) a. * A szobába menni, a szobába ment tegnap Péter
the room.into go.INF the room.into went.3SG yesterday P
"As for going into the room, Péter went into the room yesterday"
b. * A szobába menni, ment tegnap Péter
the room.into go.INF went.3SG yesterday P
"As for going into the room, Péter went into the room yesterday"
c. ✓ Menni, ment a szobába tegnap Péter
go.INF went the room.into yesterday P
"As for going, Péter went into the room yesterday"

Similarly, adverbials and other modifiers, such as the negative particle *nem*, cannot be pied-piped alongside the infinitive.

22) a. * Szépen énekelni, énekelt Mari
nicely sing.INF sang M
"As for singing nicely, Mari sang"
b. * Kész lenni, kész lett a vacsora 8 órára
ready be.INF ready was the dinner eight hour.for
"As for being ready, dinner was ready by eight o'clock"

c. * Nem érdekelni, nem érdekelte Palit a munka
not interest.INF not interested.3SG P.ACC the work
"As for not interesting, work didn't interest Pali"

Finally, in the case of sentences with verbal complexes, it is impossible for the finite verb to pied-pipe any of the other verbs.

23) a. Akarni, akart úszni Pisti (de egyszerűen nem tudott)
want.INF wanted swim.INF P but simply not could.3SG
"Pisti wanted to swim, but he wasn't able to"
b. * Úszni akarni, akart úszni Pisti
swim.INF want.INF wanted swim.INF P
"To want to swim, Pisti wanted to swim"

Example (24)a might seem to falsify this generalisation. Here, the verb complex *úszni akarni* 'to want to swim' is fronted, and only *akart* 'want.3SG' is repeated downstairs. The difficulty is only apparent, though: this example can only be interpreted as having two independent instances of *akar* 'to want'. Thus, it stems from a clause like (24)b, with fronting of the complement of *akart*. It is therefore an instance of the pronominal doubling construction discussed in Lipták & Vicente (to app.).

24) a. Úszni akarni, akart Pisti
swim.INF want.INF wanted.3sg P
* "Pisti wanted to swim"
✓ "Pisti wanted to have a desire to swim"
b. Pisti akart akarni úszni
P wanted.3SG want.INF swim.INF
"Pisti wanted to have a desire to swim"

2.5.2. Obligatory particle pied-piping

The generalisation so far is that nothing may appear in the topic position of a predicate cleft other than a bare infinitive. There is, however, a very systematic exception to this rule: if a verb selects for a particle (in this case, the perfectiviser *el*), then the particle *must* be pied-piped *and* repeated downstairs (25)a. It cannot be left behind (25)b, or pied-piped but not repeated (25)c. Even more strikingly, the finite verb and the particle need not even form a continuous string in the tail, since the particle may be separated from the verb in the usual contexts where this happens –i.e., sentences with negation (25)d or focus (25)e. However, within the topic, the [particle-verb] order is the only grammatical one, irrespective of the relative order of particle and verb in the tail (25)f/(25)g.

25) a. **El**-olvasni, **el**-olvasta
PV.read.INF PV.read.3SG
"As for reading, he read (it)"
b. * Olvasni, **el**-olvasta
read.INF PV.read.3SG
"As for reading, he read (it)"

c. * **El**-olvasni, olvasta
PV.read.INF read.3SG
"As for reading, he read (it)"
d. **El**-olvasni, ki olvasta tegnap **el**?
PV.read.INF who read.3SG yesterday PV
"As for reading, who read (it) yesterday?"
e. **El**-olvasni, nem olvasta János **el**
PV.read.INF not read.3SG J PV
"As for reading, János didn't read (it)"
f. * Olvasni **el**, **el**-olvasta
read.INF PV PV.read.3SG
"As for reading, he read (it)"
g. * Olvasni **el**, ki olvasta **el**
read.INF PV who read.3SG PV
"As for reading, who read (it)?"

This is quite a strange exception, since other types of constituents that we saw in the previous section are obligatorily stranded (DP and PP complements) show the same behaviour as particles in other areas, as noted in Koopman & Szabolcsi (2000:III). Therefore, it is surprising to find such a sharp split between particle and non-particle preverbs. We may express this behaviour as the following generalisation.

26) *Pied-piping in the predicate cleft construction*
No constituent may be pied-piped along with the verb, except for particle preverbs, which are obligatorily pied-piped and repeated in the tail.

2.5.3. A note on bare nouns

Before going ahead, let me make a small digression. The data discussed so far are pretty straightforward, and all the speakers I have consulted so far agree on the judgements. However, this consensus breaks down in the case of bare nouns, which seem to have a rather blurry status with respect to (26). For instance, example (27), featuring the bare noun *haza* home, is judged as grammatical by nearly everybody. Also, for most of the speakers consulted, stranding of *haza* is not possible (27)b. Compare this contrast to the one in (21) above, where the judgements are the opposite.

27) a. ? **Haza** menni, ment János
home go.INF went.3SG J
"As for going home, János went"
b. ?* Menni, **haza** ment János
go.INF home went.3SG J
"As for going, János went home"

In contrast to (27), pied-piping of *könyvet* 'book' is perceived as considerably worse (though some speakers still find it reasonably acceptable). However, if *könyvet* is stranded (28)b, the example becomes grammatical for everybody.[6]

28) a. *? **Könyvet** olvasni, olvasott **könyvet** János
book.ACC read.INF read.3SG book.ACC J
"As for doing some book reading, János did some"
b. ✓ Olvasni, olvasott **könyvet** János
read.INF read.3SG book.ACC J
"As for reading, János did some book reading"

Other examples are less clear-cut. For instance, out of four speakers, two found (29)a nearly fully grammatical, while the other two considered it fully ungrammatical. The split in judgements is replicated if *zenét* 'music' is repeated downstairs (29)b, although this example is nearly unanimously considered somewhat worse than (29)b.[7] Note that all four speakers found the stranding variant (29)c to be impeccable.

29) a. % **Zenét** hallgatni, hallgatott tegnap János
music.ACC listened.INF listen.3SG yesterday J
"As for listening to music, János listened yesterday"
b. % **Zenét** hallgatni, hallgatott **zenét** tegnap János
music.ACC listened.INF listen.3SG music.ACC yesterday J
"As for listening to music, János listened yesterday"
c. ✓ Hallgatni, hallgatott **zenét** tegnap János
listen.INF listened.3SG music.ACC yesterday J
"As for listening. János listened to music yesterday"

There are also cases in which the possibility of pied-piping a bare noun is dependent on the verb used in the clause. Anikó Lipták (p.c.) provides the pair in (30), with pied-piping of *fát* 'wood'. If the clefted verb is *vágni* 'to cut', pied-piping is possible. However, if we change the verb to *venni* 'to buy', the example becomes much more degraded.

30) a. ✓ **Fát** vágni, vágott **fát** János
wood.ACC cut.INF cut.3SG wood.ACC J
"As for cutting wood, János cut wood"
b. *? **Fát** venni, vett **fát** János
wood.ACC buy.INF bought.3SG wood.ACC J
"As for buying wood, János bought wood"

---

[6] Note that the difference cannot be attributed to the phonological characteristics of the bare noun, as both *haza* and *könyvet* are bisyllabic and bear stress on the first syllable. It is also irrelevant that *könyvet* is morphologically marked for case, but *haza* is not, as other case-marked bare nouns, such as *fát* 'wood; in (30)a can be pied-piped.

[7] One of the speakers who starred (29)a gave a "??" judgement for (29)b, while the other found both examples equally ungrammatical. The two speakers who accepted (29)a marked (29)b as "??".

As we can see, the judgements are too imprecise to make a generalisation regarding pied-piping of bare nouns.[8] I will leave these data as an open issue, and for the rest of this chapter, I will simply assume that the grammatical examples can be derived in the same way as the particle pied-piping cases introduced in section 2.5.2 above (see also sections 2.5.4 and 2.5.5 below). This is a quite reasonable assumption, as the bare nouns that can be pied-piped show otherwise the same behaviour as particles.

2.5.4. Pied-piping of a non-preverbal particle

After the detour on bare nouns, let me return to the behaviour of particles. Recall from section 2.5.2 that, in contrast to everything else, particles are obligatorily pied-piped and repeated. This exceptional behaviour also holds for the class of verbs that Csirmaz (2004) refers to as *Pred verbs*. These are particle-taking verbs in which the particle does *not* function as the preverb. Rather, it is some other argument of the verb (which Csirmaz refers to as the *designated argument*) that occupies the preverb position to the exclusion of the particle. For instance, *el terül* 'to lie/stand' takes its locative argument as its preverb.[9] The particle must stay in a postverbal position. Using the particle as a preverb (31)b, which would otherwise be the regular situation, is ungrammatical.

31) *A verb with a designated argument*
   a. Az erdő **a folyón túl** terül el
      the forest.NOM the river.on beyond lies PV
      "The forest lies beyond the river"
   b. * Az erdő el terül **a folyón túl**
      the forest.NOM PV lies the river.on beyond
      "The forest lies beyond the river"

The [XP-verb-preverb] order in (31)a is reminiscent of sentences in which the preverbal constituent is in focus. Importantly, this is not the case here. Csirmaz (2004:234-237) provides various arguments to show that designated arguments of Pred verbs are not in focus –i.e., (31)a is a neutral sentence. I only reproduce one of her arguments here: a well-known characteristic of Hungarian focus fronting is the obligatory exhaustive reading of the focused constituent. In (32)a below, *találni* 'to find' is a non-Pred verb with an argument (*az ismeretlen állatokat* 'the unknown animals') in focus. This sentence receives the exhaustive reading that János didn't find anything beyond the unknown animals. In contrast, in (32)b, *bukkanni* 'to stumble' is a Pred verb. In contrast to (32)a, this sentence is

[8] Anikó Lipták has suggested to me that the relevant factor is whether the verb and the noun form a collocation. In cases where they do (and assuming that these may vary from speaker to speaker), pied-piping will result. Although this is an attractive hypothesis, confirming it would require a much more extensive study of bare nouns than I can undertake in this chapter.

[9] The unifying property of Pred verbs seems to be that they subcategorise for a locative internal argument. Thus, on top of *lie*, one finds *stand*, *spread*, and *be* in this class. Thanks to Anikó Lipták for discussion on these verbs. Nonetheless, the discussion here is independent of the existence of a reliable criterion to predict whether a given verb will be a Pred verb.

compatible with a situation where, on top of the unknown animals, János stumbled on something else.[10]

32) *Focus and exhaustivity*

a. János [AZ ISMERETLEN ÁLLAKOTAT] találta meg
J the unknown animals.ACC found.3SG PV
"It is only the unknown animals (and nothing else) that János found"
[exhaustive reading only]

b. János [az ismeretlen állatokra] bukkant
J the unknown animals.on stumbled.3SG
"János stumbled upon the unknown animals"
[non-exhaustive reading possible]

Thus, Pred verbs simply move a pre-specified argument to the preverb position instead of the particle. The latter simply sits in a lower position. Now, consider the following predicate fronting paradigm with a Pred verb.

33) *Predicate fronting with a Pred verb*

a. * [A folyón túl terülni], az erdő a folyón túl terül **el**
the river.on beyond lie.INF the forest the river.on beyond lies PV
"As for lying beyond the river, the forest lies beyond the river"

b. ?* [A folyón túl terülni **el**], az erdő a folyón túl
the river.on beyond lie.INF PV the forest the river.on beyond
terül **el**
lies PV
"As for lying beyond the river, the forest lies beyond the river"

c. [**El** terülni], az erdő a folyón túl terül **el**
PV lie.INF the forest the river.on beyond lies PV
"As for lying, the forest lies beyond the river"

We see that pied-piping of the designated argument to the topic position is ungrammatical, independently of whether the particle is also pied-piped (33)a or not (33)b. The only grammatical possibility is to pied-pipe the particle and leave the designated argument downstairs (33)c. This is a rather unexpected pattern. Since the particle doesn't seem to move to the preverb position, it is surprising that it should move to the topic position together with the verb. The crucial issue, though, is what the position of the particle is in (33)c.A fuller set of data may shed some light on this question. Consider a regular sentence in which the predicate *el terül* is embedded under an auxiliary like *fog* 'will', which forces the designated argument to climb. What we find is that, in this context, *el* must necessarily *precede* the infinitival form of *terül*, in contrast to the original paradigm in (31).

[10] This string can also receive a focus (exhaustive) reading if the preverbal constituent is assigned focal stress. The point, though, is that this example also exhibits a non-focal, non-exhaustive reading, in contrast to (32)a.

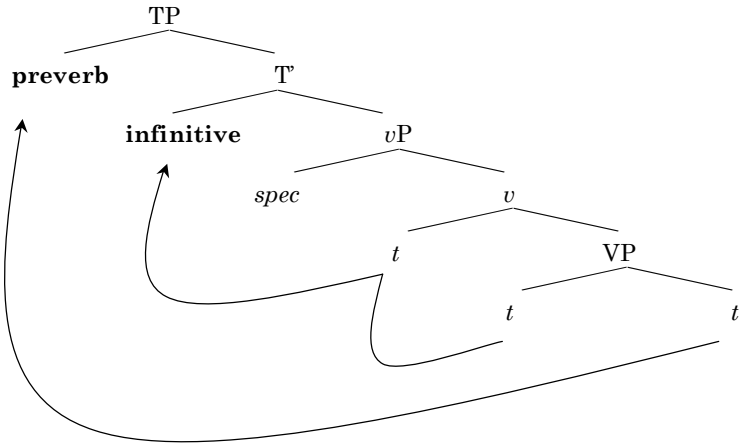
34) *An infinitival Pred verb*

a. Az erdő a folyón túl fog **el terülni**
the forest.NOM the river.on beyond will.3SG PV lie.INF
"The forest will lie beyond the river"

b. * Az erdő a folyón túl fog **terülni el**
the forest.NOM the river.on beyond will.3SG lie.INF PV
"The forest will lie beyond the river"

What these examples suggest is that the preverb position in infinitival clauses is possibly not the same one as in main clauses. In particular, suppose that particles always move to a position to the immediate left of the infinitive (35). For reasons that will become clear in sections 2.6 below, I assume that infinitives move up to T, whereas preverbs move to SpecTP.[11,12] I will return to the motivation for preverb movement in section 3.1 below.

35) *Preverb movement in infinitival clauses*



In addition, let me propose that the verb moves a bit higher in finite clauses, up to $AgrS^0$ –cf. Kenesei (2001) for some discussion.[13] This creates a different preverb position in finite clauses, to the left of $AgrS^0$. In normal circumstances, the preverb that occupies SpecPredP would move to the higher preverb position,

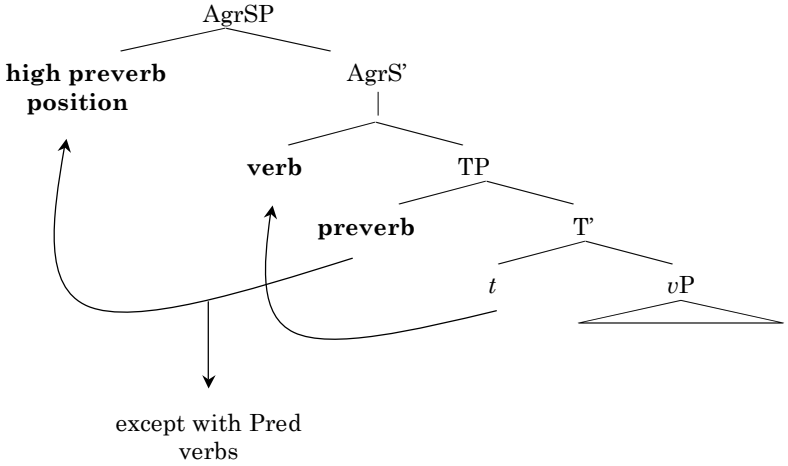
[11] The assumption (also standard in the literature) that particle starts in a postverbal position is one that lacks much empirical support, as far as I know. It is usually motivated by the generalisation that all the elements that can function as preverbs are predicative. However, as long as we accept that the preverb ends up in a preverbal position, the discussion here is independent of whether it moves or it is base generated there.

[12] This entails that subjects raised out of *v*P should land on a second SpecTP.

[13] This assumption is supported by the observation that Hungarian verbs have a dedicated slot for subject agreement morphology, separate from the slot for tense. Therefore, one may take this as an indication that the Agr and T heads are syntactically independent, each projecting its own phrase (cf. Thráinsson 1996 and Bobaljik & Thráinsson 1998 for extra arguments in favour of this hypothesis).

replicating the same configuration. Under this view, the peculiarity of Pred verbs is that they select a different constituent (the designated argument) to occupy the higher preverb position, while the particle stays in TP. If the verb moves out of TP, the result is a [verb-preverb] order that gives the impression that the particle has never moved to the left of the verb. However, if the verb stays within TP, as in (34), then the order is [preverb-verb]. This shows that the particle *always* undergoes some movement, even though it is sometimes masked by subsequent movement of the verb.

36) *The preverb position in finite clauses*



Therefore, the paradigm in (33) can be accounted for if the category targeted by predicate clefting is TP. I will justify this claim in more detail in section 2.6.1 below. Since the designated argument is not contained in this category, it is not pied-piped either. I will offer a more formal version of this analysis in section 4. I ask the reader to bear with this rudimentary approach until that point, as I believe that right now it is more important to continue with the description of the predicate cleft construction.

2.5.5. Pied-piping of climbed particles, non-finite verbs

To finish off this part of the descriptive section, it is necessary to mention two extra (and rather striking) patterns in which particles can appear in the topic position of a predicate fronting construction. The first one, originally described by Burányi (2003), involves cases in which predicate clefting targets a particle-taking infinitival verb embedded in an environment that licenses particle climbing –i.e., a clause with a stress-avoiding finite verb and without negation, foci, and wh- words. This is exemplified here in (37)a, where the particle *el* is originally selected by the verb *olvasni* 'to read', and then moves to the left of the future auxiliary *fogom*. Consider now what happens if *olvasni* is clefted. Given that it is a non-finite verb, it leaves a gap in the tail, as discussed in section 2.1. The fate of its selected particle *el* is more intriguing though. For one, on top of

being pronounced in its climbed position to the left of the auxiliary *fogom*, it is also pied-piped to the topic position (37)b. This is rather surprising, given that climbing separates the two elements. Note that this is the only acceptable variant of the sentence. Ungrammaticality results if the particle doesn't move to the topic position (37)c, if it is not repeated downstairs (37)d, or if it is repeated in a position other than it climbed position (37)e.

37) *Clefting of a non-finite verb plus a climbed particle*

a. ✓ El fogom olvasni a könyvet
PV will.1SG read.INF the book.ACC
"I will read the book"

b. ✓ Elolvasni, **el** fogom [*t*] a könyvet
PV.read.INF PV will.1SG the book
"As for reading, I will read the book"

c. * Olvasni, **el** fogom [*t*] a könyvet
read.INF PV will.1SG the book
"As for reading, I will read the book"

d. * Elolvasni, fogom [*t*] a könyvet
PV.read.INF will.1SG the book
"As for reading, I will read the book"

e. * Elolvasni, fogom **el** [*t*] a könyvet
PV.read.INF will.1SG PV the book
"As for reading, I will read the book"

Let me reiterate that examples such as (37)b arise only in the environments that license particle climbing. Compare the paradigm above with (38) below. These three examples all block particle climbing for different reasons: in (39)a, the clause contains a focalised constituent; in (39)b, it contains negation; and in (39)c, the stress-taking verb *probál* 'to try'. In all cases, the particle still needs to be pied-piped along with *olvasni*. However, unlike in (37)b, double pronunciation of the particle is categorically banned, independently of its position.

38) *Clefting of non-finite particle verbs*

a. Elolvasni, HOLNAP (***el**) fogom (***el**) [*t*] a könyvet
PV.read.INF tomorrow PV will.1SG PV the book
"As for reading, it is tomorrow that I will read the book"

b. Elolvasni, nem (***el**) fogom (***el**) [*t*] a könyvet
PV.read.INF not PV will.1SG PV the book
"As for reading, I will not read the book"

c. Elolvasni, (***el**) próbálom (***el**) [*t*] a könyvet
PV.read.INF PV try.1SG PV the book
"As for reading, I try to read the book"

These paradigms look more complicated than they actually are. First, obligatory particle pied-piping in all cases can be directly subsumed under the generalisation that a clefted verb obligatorily pied-pipes its selected particle (section 2.5.2). The fact that the clefted verb leaves a gap has also been shown in section 2.1 to be a general property of clefting of non-finite verbs. This much fits without trouble within what has already been said in this chapter. The challenge lies in explaining why environments that trigger particle climbing force double

pronunciation of the particle –and vice versa, why environments that block preverb climbing also block double pronunciation.

This generalisation can be reduced to the hypothesis that double pronunciation is a last resort mechanism to salvage an otherwise deviant structure (cf. section 2.1 and references therein). As we shall see in section 3.1.3, preverb climbing happens for purely prosodic reasons, i.e., as a last resort mechanism to remove stress from a stress-avoiding finite verb in cases where no other element (such a negation, foci, or wh- phrases) can fulfil that function. If so, one can hypothesise that double pronunciation of the particle is forced in (37)a because otherwise a prosodically ill-formed structure would result –i.e., a structure with stress falling on the stress-avoiding future auxiliary *fogom*. In the examples in (38), double pronunciation of the particle is unnecessary because either (i) some other element is removing stress from *fogom* (38)a/(38)b, or (ii) the finite auxiliary is not a stress-avoider (38)c. Thus, Burányi's paradigm supports the idea that double pronunciation in Hungarian predicate clefts is a repair strategy to avoid morphologically and prosodically deviant structures.

2.5.6. Pied-piping of climbed particles, finite verbs

The second case of pied-piping of a climbed particle is more intriguing, as it doesn't involve a selectional relation between the clefted verb and the particle. As an illustration, consider first the following pair of sentences.

39) a. **El** akarni, **el** akart menni Mari
PV want.INF PV wanted.3SG go.INF M
"As for wanting, Mari wants to go (away)"
b. Akarni, **el** akart menni Mari
want.INF PV wanted.3SG go.INF M
"As for wanting, Mari wants to go (away)"

In example (32)a, the fronted particle hasn't been selected by the finite verb *akar* 'want', but by the embedded infinitive *menni* 'go', and then it has climbed to the left of the finite verb. After climbing, it has been pied-piped along with the higher, non-selecting verb. In contrast, in example (39)b, only the verb has been pied-piped, with the climbed particle being left behind. For nearly all speakers, both examples are acceptable.[14] Note that, once the *el akarni* string is formed, it is generally possible to move it across a finite clause boundary.[15]

40) **El akarni**, hallotam hogy **el akart** menni Mari
PV want.INF heard.1SG that PV wanted.3SG go.INF M
"As for wanting, I've heard that Mari wants to go (away)"

An important characteristic of (39) is that pied-piping of the particle is optional, in contrast with examples of pied-piping of a selected particle, where pied-piping

[14] Though there are some exceptions. For example, Balazs Surányi (p.c.) finds (39)a perfect, but stars (39)b.

[15] Though not every speaker allows this. For instance, Anikó Csirmaz (p.c.) accepts (39)a, but finds (40) ungrammatical.

is obligatory. A further difference is the distribution of the preverb in the tail. In the examples in (25) above, the tail admitted both orders [PV-verb] and [verb-PV], the latter appearing in the regular contexts that license this order in Hungarian, i.e., sentences with focus (25)d and/or negation (25)e. In the examples in (39), this is only possible if the preverb has not been pied-piped along with *akart*.

41) a. Akarni, ki akart **el** menni?
want.INF who wanted.3SG PV go.INF
"As for wanting, who wants to go (away)?"
b. Akarni, nem akart **el** menni Mari
want.INF not wanted.3SG PV go.INF M
"As for wanting, Mari doesn't want to go (away)"

However, if the preverb is pied-piped, as in (39)a, only the [PV-verb] order is allowed in the tail.

42) a. * **El** akarni, ki akart **el** menni?
PV want.INF who wanted.3SG PV go.INF
"As for wanting, who wants to go (away)?"
b. * **El** akarni, nem akart **el** menni Mari
PV want.INF not wantei.3SG PV go.INF M
"As for wanting, Mari doesn't want to go (away)"

This pair of examples cannot be improved by preserving the [PV-verb] order in the tail (43). Interestingly, these examples consist of environments that block particle climbing, namely, negation and wh-/focus fronting (cf. section 2 in chapter three). Therefore, the emerging generalisation is that pied-piping of a non-selected particle is possible only if the particle climbs to the immediate left of the clefted verb. In any other context, it is blocked.

43) a. * **El** akarni, ki **el** akart menni?
PV want.INF who PV wanted.3SG go.INF
"As for wanting, who wants to go (away)?"
b. * **El** akarni, nem **el** akart menni Mari
PV want.INF not PV wanted.3SG go.INF M
"As for wanting, Mari doesn't want to go (away)"

To finish off this section, let me point out that those bare nouns that can be pied-piped under clefting of their selecting verb (cf. section 2.5.3) can also be pied-piped if they climb to the left of their selecting verb. To give an example, Anikó Lipták (p.c.) accepts (44)b, which is the climbing counterpart of (44)a.[16] However, pied-piping is prevented in contexts where climbing is also blocked, such as negative sentences (44)c or sentences with a focused constituent (44)d. This is exactly the same behaviour as particles. Therefore, this paradigm supports the hypothesis at the end of section 2.5.3 that pied-piped particles and bare nouns

[16] Note that I am not claiming that all speakers agree with these data. Given that the possibility of pied-piping a bare noun may vary from speaker to speaker, paradigms like (44) have to be discussed on a speaker-specific basis. For those who do not accept (44)a in the first place, such paradigms cannot be created.

can be given the same analysis, even in the absence of a way to determine in advance which bare nouns can be pied-piped.

44) *Pied-piping of bare nouns*

a. Fát vágni, fát vágott János
wood.ACC cut.INF wood.ACC cut.3SG J
"As for cutting wood, János cut wood"

b. Fát akarni, fát akart vágni János
wood.ACC want.INF wood.ACC wanted.3SG cut.INF J
"As for wanting wood, János wanted to cut wood"

c. * Fát akarni, nem akart fát vágni János
wood.ACC want.INF not wanted.3SG wood.INF cut.INF J
"As for wanting wood, János did not want to cut wood"

d. * Fát akarni, TEGNAP akart fát vágni János
wood.ACC want.INF yesterday wanted.3SG wood.INF cut.INF J
"As for wanting wood, it was yesterday that János wanted to cut wood"

2.5.7. Summary

With this much in place, we can formulate the following descriptive generalisation about pied-piping in the predicate cleft construction. Bear in mind that this generalisation is not meant to cover bare nouns, given the difficulties described in section 2.5.3.[17]

45) *Pied-piping restrictions*

In the predicate cleft construction, only bare infinitives may occupy the topic position. No verbal dependent may be pied-piped.

EXCEPTION: particles are obligatorily pied-piped if the clefted verb is their selecting verb.

COROLLARY TO THE EXCEPTION: particles are optionally pied-piped by a non-selecting verb only if they have climbed to the immediate left of the clefted non-selecting verb.

[17] As I was finishing this chapter, I came across Ürögdi (2006), who provides some examples in which a clefted infinitive successfully pied-pipes a fully phrasal preverb, such as *a szobában* 'in the room'. Although the data are intriguing, there are various things to note: first, all the cases of successful pied-piping involve preverbs, non-preverbs being obligatorily stranded (as already noted by Ürögdi 2006:300). Second, these data are rather restricted: not all speakers accept them, and those who do so report the relevant examples to be possible only under explicit contextual prompting, and somewhat marked with respect to the stranding variant. This stands in stark contrast with pied-piping, which is obligatory in all circumstances. Third, and more importantly, the speakers who accept such cases also tend to be more liberal regarding pied-piping of bare nouns. Therefore, given these factors, it seems safe to me to assume that Ürögdi's data ought to be subsumed under the same generalisation as bare nouns –i.e., pied-piping is allowed in a very specific set of circumstances, which may vary from speaker to speaker. The grammatical cases, though, should in principle receive the same analysis I propose in section 4.2 for particle pied-piping. A more thorough examination of these data, though, is relegated to future research.

2.6. Category of the topic

2.6.1. Predicate clefting targets the T(P) level

In chapter two, I argued that the topic in Spanish predicate clefts corresponds to a category relatively high within the expanded VP domain, which I identified with *v*(P). In this subsection and the next one, I will present evidence that the clefted category in Hungarian is somewhat higher than that. More specifically, I propose that it is a full TP, which moves to the topic position to the exclusion of the AgrSP projection that dominates it.

The evidence comes from predicate clefting in causative sentences. Causativisation in Hungarian is done by inserting the morpheme *-tet-* in the verbal form. Whenever predicate clefting targets a causativised verb, the topic must also be a causativised infinitive.[18] If we assume that causative morphemes are instantiations of *v* (cf. Pylkkänen 2002 and references), then it follows that the topic must contain at least a *v*-level head too.

46) *Predicate clefting in causative clauses*
a. Ellenőriz-**tet**-ni, ellenőriz-**tet**-t-em a feladatot
check.CAUS.INF check.CAUS.PST.1SG the exercise.ACC
"As for having (it) checked, I had the exercise checked"
b. * Ellenőriz-ni, ellenőriz-**tet**-t-em a feladatot
check.INF check.CAUS.PST.1SG the exercise.ACC
"As for checking, I had the exercise checked"

The same point can be made with the root modality (possibility) morpheme *–het-*, as shown in (47). Note that, if a verb combines both a causative and a modality morpheme, the order is necessarily [*tet-het*], i.e., causative-modality (48)a. The reverse order [*het-tet*] is ungrammatical (48)b.[19] This suggests that the modality marker sits in a projection even higher than *v*. Following Cinque (1999:154), I take it to be a root modality projection situated right below tense.

47) *Predicate clefting with a potential marker*
a. Meg-ve-**het**-ni, meg-ve-**het**-t-em a könyvet
PV.buy.MOD.INF PV.buy.MOD.PST.1SG the book.ACC
"As for being allowed to buy (it), I was allowed to buy the book"
b. * Meg-ven-ni, meg-ve-**het**-t-em a könyvet
PV.buy.INF PV.buy.MOD.PST.1SG the book.ACC
"As for buying, I was allowed to buy the book"

[18] This is, in essence, the same argument I developed in chapter two for Spanish on the basis of passive morphology. Unfortunately, one cannot replicate the exact same paradigm in Hungarian, given that the Hungarian passive is an unproductive form.

[19] Note that there doesn't seem to be anything wrong with the meaning of (48)b, so one may not attribute its ungrammaticality to semantic factors.

48) a. Ellenőriz-**tet**-**het**-ni, ellenőriz-**tet**-**het**-t-em a feladatot
check.CAUS.MOD.INF check.CAUS.MOD.PST.1SG the exercise.ACC
"As for being allowed to have (it) checked, I was allowed to have the exercise checked"

b. * Ellenőriz-**het**-**tet**-ni, ellenőriz-**het**-**tet**-t-em a feladatot
check.MOD.CAUS.INF check.MOD.CAUS.PST.1SG the exercise.ACC
"As for causing (someone) to be allowed to have (it) checked, I caused (someone) to be allowed to have the exercise checked"

These examples suggest that predicate clefting in Hungarian targets a category higher than *v*(P). However, it cannot be *too* high. In (49)a, we can see that the topic may not be a finite verb. This suggests that the clefted category is not large enough to contain subject agreement features. For completeness, note that it is not possible either to have an inflected infinitive (49)b. However, this last example is independently excluded due to the fact that inflected infinitives may only appear in selected positions.

49) *Finite verbs in predicate clefts*

a. * Ellenőriz-t-em, ellenőriz-t-em a feladatot
check.PAST.1SG check.PAST.1SG the exercise.ACC
"As for checking, I checked the exercise"

b. * Ellenőriz-n-em, ellenőriz-t-em a feladatot
check.INF.1SG check.PAST.1SG the exercise.ACC
"As for checking, I checked the exercise"

Let us recapitulate: the topic must be a category higher than *v*(P), so as to accommodate causative (*-tet-*) and modality *(-het-*) morphology. On the other hand, it must be lower than AgrS(P), so as to account for the impossibility of inflected infinitives. The most obvious candidate is T(P), which implies that the infinitival marker *–ni* is the spell out of a tense head. This is, in fact, the same hypothesis that has been defended by Tóth (2000), Koopman & Szabolcsi (2000), and Kenesei (2001). Therefore, let us make the following generalisation.

50) *Category of the topic*
In Hungarian, predicate clefting targets T(P).

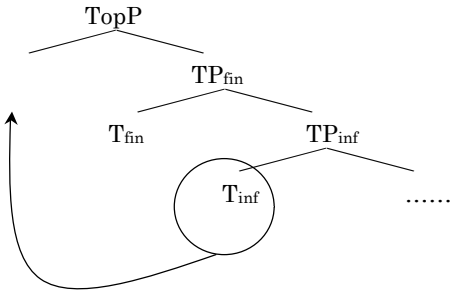
Now, Tóth (2000), Koopman & Szabolcsi (2000), and Kenesei (2001) all claim that *–ni* actually heads a [-finite] version of tense, which, for transparency, I will refer to as $T(P)_{inf}$. While this is possibly correct in regular infinitival clauses,[20] it is not clear to me that this hypothesis extends to the domain of predicate clefts. Consider the reasoning: in order for *–ni* to appear in the topic, it must be the case that the topic contains an instance of TP_{inf}. But, since predicate clefts are derived via movement (cf. section 2.4 above), this projection should also be present in the tail. On top of this, the tail should also contain a [+finite] version of tense (TP_{fin}) in order to account for the finite tense morphology, creating a structure for the tail like (51).[21] Moreover, this structure must be augmented with a special rule to

[20] See especially Tóth (2000) and Landau (2004).

[21] Anticipating the analysis I will propose later, the tree in (51) involves topicalisation of a bare head, as in the cases of bare infinitive fronting in Spanish discussed in chapter two.

the effect that TP_{inf} is never pronounced when dominated by TP_{fin}, so as to prevent *–ni* from showing up in the finite verb in the tail.

51) *Tense in predicate clefts (to be revised)*



While this analysis might be technically workable, one may still wonder to what extent it is plausible to have TP_{inf} in a clause that already contains TP_{fin}. The consensus in the literature (see, for instance, Landau 2004 and references) is that non-finite tense is dependent tense –i.e., the temporal specification of a clause with TP_{inf} is determined by the temporal reference of a higher clause, either by assuming the same tense (anaphoric tense), or by giving rise to sequence of tense effects. Now, predicate clefts stem from clauses that clearly have independent temporal reference. Therefore, once there is a tense head with independent tense, it makes very little sense to introduce a second head with dependent tense – which on top of that, is not expressed overtly at all in the tail. The conclusion I would like to draw is that the infinitival *–ni* marking in the topic position does not correlate with the presence of a TP_{inf} layer. However, this conclusion raises the question of where the infinitival morphology comes from.

In order to solve this problem, I want to propose that *–ni* is not an infinitival marker, as standardly assumed. Rather, I will treat it as the default, unspecified spell out of tense, as illustrated in (52). This means that *–ni* is used to spell out tense in the elsewhere case, whenever insertion of any of the more specific forms fails. The most common environment when this happens is in the presence of a non-finite T head: insertion of *–t(t)-* or *-Ø-* would lead to a feature clash (finite vs. non-finite), and so it is barred. Instead, the unspecified form *–ni* is used, as it is the most specific form that spells out a subset of the features of non-finite tense.

52) *Hungarian spell out paradigm for tense*
/-ni/ → tense
/-t(t)-/ → finite tense, past
/-Ø-/ → finite tense, present

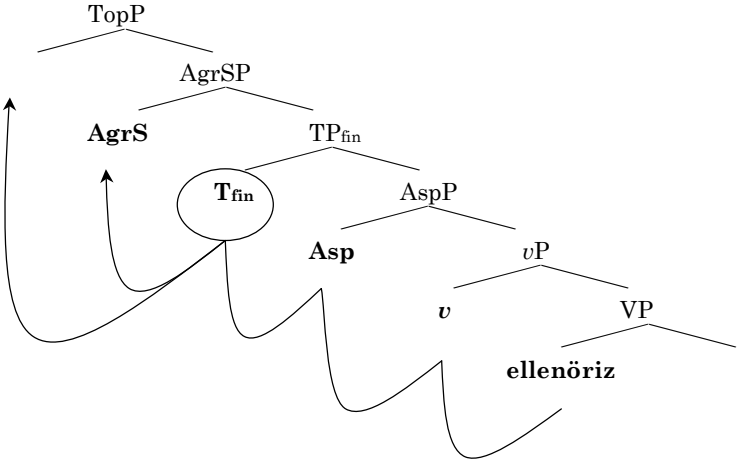
One interesting extension of this hypothesis is that *–ni* will also be used to spell out *finite* tense if, for whatever reason, insertion of *–t(t)-* or *-Ø-* is excluded. This is precisely what I want to claim is the case in the topic position of predicate clefts. I make two initial assumptions: (i) that the category that fronts in Hungarian predicate clefts is not *v*, but T; and (ii) that Hungarian has a separate

AgrS projection dominating TP (cf. section 4.1.5.4 above). Consider now the derivation for a predicate cleft sentence in (53)b. First, the verb undergoes head movement all the way up to AgrS, picking the features of the intermediate heads. After that, the bare finite T head is moved to a topic position.

53) *A derivation for Hungarian predicate clefts*

a. Ellenöriz-ni, ellenöriz-t-em a feladatot
check.INF check.PAST.1SG the exercise.ACC
"As for checking, I checked the exercise"

b.



At this point, the verb in AgrS contains all the inflectional features of tense, aspect, and so on, and it is spelled out as a regular finite verb. This much is straightforward. What is of interest is the feature composition of the fronted constituent. Since the fronted head is T, it bears finite tense and aspect features, but (crucially) not agreement.

54) a. tail: [V + *v* + Asp + T_{fin} + AgrS] → *ellenöriz-t-em*
b. topic : [V + *v* + Asp + T_{fin}] → ??

Given this analysis, the observed form will arise if we can exclude insertion of *–t(t)-* as the spell out for past finite tense. Once this is done, *-ni* will kick in as the elsewhere form, deriving *ellenörizni*. The question is, why should insertion of finite tense morphology fail? What I want to propose is that, in Hungarian, it is not possible to spell out finite tense to the exclusion of agreement (cf. Tóth 2000:74-79 for a similar argument) In more formal terms, I am postulating that Hungarian has combinations of vocabulary items that can spell out various combinations of finite tense and agreement, but none that spells out finite tense without agreement.[22] This could be attributed to the fact that Hungarian finite

[22] Note that "without agreement" means a total lack of the AgrS head, not cases in which AgrS is present but realised as a zero morpheme, as is the case with 3rd person singular in the indefinite conjugation.

verbs necessarily raise all the way up to AgrS, hence the Hungarian vocabulary list has entries for [V + T_{fin} + Agr] combinations. However, no entries exist for [V + T_{fin}] combinations. The lack of such forms is irrelevant in the large majority of cases, as finite tense necessarily raises to AgrS. However, this gap in the paradigm becomes a problem in the case of predicate clefts, where the topic constituent contains finite tense but no agreement. It is not possible to insert a form like *ellenöriz-t-* 'check.PST', as such forms don't exist in the Hungarian vocabulary list. As a last resort option, *-ni* is chosen as the spell out of T_{fin}, deriving the observed *ellenöriz-ni*. Since this form does exist, the derivation converges.

This analysis takes the infinitival morphology of topics to be a very superficial thing. That is, in spite of its surface form, the topic contains an instance of finite tense. This makes the interesting prediction that one should still find finite tense effects in the topic, regardless of its surface realisation. Interestingly, there is an aspect of predicate clefts that supports this conclusion. We turn to it in the next subsection.

2.6.2. Pseudo-infinitives

An intriguing, though fairly restricted aspect of Hungarian predicate clefting is the existence of the so-called *pseudo-infinitives*.[23] When the verb *lenni* 'be/become' is topicalised, the morphology of the topic is not always the expected *lenni*, as (55)b shows. Rather, sometimes one finds *vanni*, which is not attested anywhere else in the language. Example (55)a shows that *vanni* cannot be used as an infinitival form of "to be" in regular complementation contexts that require an infinitive. In this example, the pseudo-infinitival form consists essentially of the suppletive root *van-* (used for the present tense), plus the infinitival suffix *–ni*.[24] Similarly, the past tense form *volt* gives rise to the pseudo-infinitive *volni* (56).

55) a. Orvos akarok lenni / *vanni
doctor want.1SG be.INF be.INF
"I want to become a doctor"

b. **Van**ni / *lenni, **va**n étel az asztalon
be.INF be.INF is food the table.on
"As for being, there is food on the table"

56) Volni / *vanni / *lenni, volt étel az asztalon
be.INF be.INF be.INF was food the table.on
"As for being, there was food on the table"

Nonetheless, the regular form *lenni* is still used in cases in which the tail appears in a tense that is formed with the root *le(n)-*.

---

[23] As I was finishing this chapter, Anikó Lipták (p.c.) pointed out to me that the pseudo-infinitival data were originally described by Gécseg (2001), though no analysis is provided in that article.

[24] It is interesting to note that pseudo-infinitives are not an option for some speakers. For instance, Anikó Csirmaz (p.c.) considers (55)b to be only very marginally acceptable with *lenni*, and totally out with *vanni*. She reports the same judgements for (58)b.

57) a. **Len**ni / *vanni / *volni, **le**sz étel az asztalon
be.inf be.inf be.INF be.FUT.3SG food the table.on
"As for being, there will be food on the table"
b. **Len**ni / *vanni, **le**tt étel az asztalon
be.INF be.INF be.PST.3SG food the table.on
"As for being, there was food on the table"

Cable (2003), discussing the same phenomenon in Yiddish, conjectures that pseudo-infinitives arise due to a morphological requirement that requires copies of the same item contained within one phase be spelled out using the same root, even if this results in the creation of an otherwise unattested word. This analysis cannot be correct for Hungarian since, as shown below, pseudo-infinitives also arise in long distance clefting, where the topic and the tail are clearly in separate phases. Admittedly, some speakers find (58)c slightly more degraded than (55)b, but I believe this difference can be safely attributed to the extra level of embedding, rather than to any problems with the *lenni*/*vanni* alternation. For one, the same speakers report a comparable degradation in the morphologically unproblematic *lenni* cases (57) vs. (58)b. In any case, the contrasts indicate below are clear enough.

58) a. * **Le**nni, hallottam hogy **va**n étel az asztalon
be.INF heard.1SG that is food the table.on
"As for being, I've heard that there is food on the table"
b. ? **Le**nni, hallottam hogy **le**sz étel az asztalon
be.INF heard.1SG that be.FUT.3SG food the table.on
"As for being, I've heard that there will be food on the table"
c. ? **Va**nni, hallottam hogy **va**n étel az asztalon
be.INF heard.1SG that is food the table.on
"As for being, I've heard that there is food on the table"
d. * **Va**nni, hallottam hogy **le**sz étel az asztalon
be.INF heard.1SG that be.FUT.3SG food the table.on
"As for being, I've heard that there will be food on the table"

Now, the existence of pseudo-infinitival forms of *to be* can be explained under the hypothesis I introduced in section 2.6 above. As I claimed there, the *–ni* morphology of topics is not actually a marker of non-finiteness, but a default spell out of tense. In spite of its surface realisation, though, the fronted category is still an instance of finite tense (T_{fin}). Since the root suppletion pattern of *to be* is dependent on the present/past/future specification of finite tense, it is expected that suppletion is also triggered in the topic position. This accounts for the fact that the root shows the same suppletion pattern in the tail and the topic.

The presence of *–ni* on top of the suppletive root is justified, as it also happens in the finite verb. For instance, the final *–t* in *volt* 'was' is the regular past tense marker. That is, in the case of *to be*, past tense is expressed via a suppletive root *and* the regular past tense morpheme. If predicate clefts arise through topicalisation of a finite T head, what we expect is, precisely, forms like *vanni* and *volni*: T_{fin} first triggers suppletion of the root, and then it is itself spelled out as *–ni*.

Pseudo-infinitives are a rather restricted phenomenon, simply because *lenni* is the only Hungarian verb whose root shows an unpredictable suppletive

pattern. There are other verbs with irregular paradigms, such as *to eat*, whose infinitival, past and present forms are given in (59).[25]

59) a. En-ni → eat.INF
b. Eve-tt → eat.PST.3SG
c. Esz-ik → eat.PRS.3SG

This variation, however, is phonologically conditioned, and entirely predictable, unlike the suppletion pattern with *to be*. Consequently, the prediction is that, in the case of *to eat*, no pseudo-infinitives should arise in predicate clefts. As shown below, this is correct: the topic is invariably the regular infinitive *enni*.

60) *Predicate clefting with 'to eat'*
a. **En**-ni / * **ev**-ni, **ev**-ett egy szendvicset
eat.INF eat.INF eat.PST.3SG a sandwich.ACC
"As for eating, he/she ate a sandwich"
b. **En**-ni / * **esz**-ni, **esz**-ik egy szendvicset
eat.INF eat.INF eat.PRS.3SG a sandwich.ACC
"As for eating, he/she eats a sandwich"

Apart from *lenni*, pseudo-infinitives also arise with modals, which have no infinitival form at all, regular or not. For instance, *lehet* 'might/may' gives rise to *lehetni* (literally, *lehet* plus an infinitival marker), which is exclusively used in the topic position of the predicate cleft construction.

61) a. Péternek lehet olvasni
P.DAT may read.INF
"Péter may/might read"
b. Lehetni, lehet olvasni Péternek
may.INF may read.INF P.DAT
"As for being able/allowed, he may/might read"

Similarly for the future auxiliary *fog* and the habitual *szokott*, which form *fogni* and *szokni*, respectively.[26] The case of these two verbs must be taken with a grain of salt, though. For one, they cannot be clefted, since they lack the lexical content necessary to make felicitous topics. However, in spite of this, speakers agree that *fogni* and *szokni* are morphologically well-formed, and that they are the forms one should use if *fog* and *szokott* could be used as topics.

[25] Thanks to Anikó Lipták for pointing this out to me.

[26] Note that the pseudo-infinitival form of *szokott* is *szokni*, and not *szokottni*. This is because *szokott* is a deponent verb, with its present tense being morphologically realised as past –cf. the *–tt* past marker. This marker disappears in the pseudo-infinitival form (*szokni*), reinforcing the idea that *–ni* in pseudo-infinitives is actually spelling out finite tense.

2.6.3. The category of inflected infinitives

In the preceding pages, I have left inflected infinitives deliberately out of the discussion, so as to avoid the complications they pose. As described in section 2.1, they pattern with bare infinitives in leaving a gap in the tail position. The relevant data are repeated below as (62).

62) a. ✓ Maradnom, nem fontos nekem itt [*t*]
stay.INF.1SG not important DAT.1SG here
"As for staying, it is not important for me to stay here"
b. * Maradnom, nem fontos nekem itt maradnom
stay.INF.1SG not important DAT.1SG here stay.INF.1SG
"As for staying, it is not important for me to stay here"
c. * Maradni, nem fontos nekem itt maradnom
stay.INF not important DAT.1SG here stay.INF.1SG
"As for staying, it is not important for me to stay here"

In section 2.1 I proposed to subsume this paradigm under the generalisation in (5), repeated below for convenience. As Anikó Lipták (p.c.) points out, the intuition underlying (5) is that non-finite verb forms cannot be split by movement in the same way as finite verbs. Hence, any movement operation targeting an infinitive (whether inflected or not) will necessarily target the entire verb, not a subpart of it. At present, I have no explanation as to why a split like this should exist, so it will remain an underived generalisation.

5) *Stranding of agreement morphology*
Predicate clefting of finite verbs targets a proper subpart of the verb (i.e., to the exclusion of subject agreement morphology). Predicate clefting of infinitives (whether inflected or not) targets the entire verb.

Putting (5) in more precise words, we obtain the table in (63). The effect is the same as in (5), namely, clefting targets the entire category constituting a non-finite verb form, but only a proper subpart of finite verbs. In this way, we can capture the generalisation (see section 2.1) that non-finite verb forms do not strand any morphemes when targeted by predicate clefting (most notably, agreement morphology in inflected infinitives), and therefore do not give rise to double pronunciation.

63) *Categories in Hungarian predicate clefting*

	Category of the verb	Clefted category
Finite verbs	**AgrS**	**T**
Uninflected infinitives	**T**	**T**
Inflected infinitives	**AgrS**	**AgrS**

I appreciate that this solution might seem stipulative at first sight, in that it introduces an asymmetry between finite and non-finite verbs in terms of the category that is moved. Therefore, let me say a few words in its defence. It is important to bear in mind that *any* analysis must contain comparable

asymmetries, given that the data themselves are asymmetric.[27] Thus, if one wished to define predicate clefting as always targeting T(P), then one would have to encode finite verb agreement in a different way from infinitive agreement, so as to capture the fact that the latter cannot be stranded. The question, then, becomes where such asymmetries ought to be placed. At present, it seems easier to me to keep the structural encoding of agreement uniform across finite and non-finite clauses assume that there is a difference in the category that is clefted. For one, even though that the agreement paradigms for finite verbs and infinitives are indeed different,[28] it is a rather big leap of logic to conclude from this that the structural representation of agreement is also different. On top of that, we have already seen that the category targeted by predicate clefting varies across languages: while in Spanish it is *v*(P), in Hungarian it is T(P), and in Biblical Hebrew it is a RootP (see Harbour 1999). It is not such a big stretch to think that it might also vary within languages.

In short, while I have no explanation as to why something like (5) should hold, I believe it is the best way to explain the data. Note that it is not a stipulation, but rather a generalisation that so far cannot be derived from more fundamental principles. Providing a rationale for it is something I must defer to future work.

2.7. Summary

To recap, the main generalisations uncovered in this section are (a) that the predicate cleft construction is an instance of movement to a topic position, (b) that (at least when considering finite verbs) the targeted category is T(P), and (c) that no verbal dependents/modifiers can be pied-piped to the topic position, except for particles, which are obligatorily pied-piped. Thus, one could initially describe the construction by the generalisation in (64), which would result in the derivation in (65).

---

[27] Interestingly, this asymmetry does not hold for other languages. For instance, inflected infinitives in Brazilian Portuguese behave in the same way as finite verbs, as shown in the paradigm below (data provided by Jairo Nunes, p.c.). Pied-piping infinitival agreement to the topic position results in ungrammaticality, irrespective of whether the tail is pronounced or not. At present, I have nothing interesting to say about this type of cross-linguistic variation.

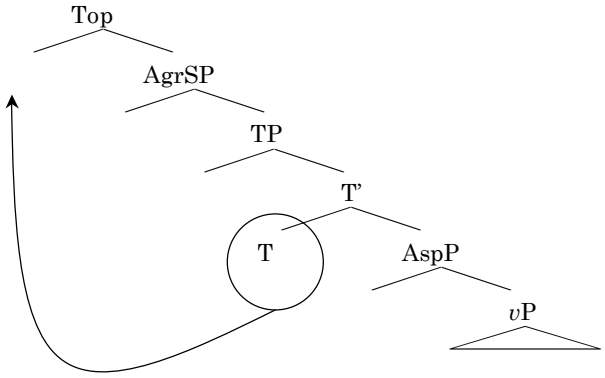
i) Ler, é necessario lermos o livro
read.INF is necessary read.INF.1.PL the book
"As for reading, it is necessary for us to read the book"

i) * Lermos, é necessario (lermos) o livro
read.INF.1PL is necessary read.INF.1.PL the book
"As for reading, it is necessary for us to read the book"

[28] Infinitives show the same agreement paradigm as possessors. Moreover, infinitives lack the definite/indefinite distinction of finite verbs.

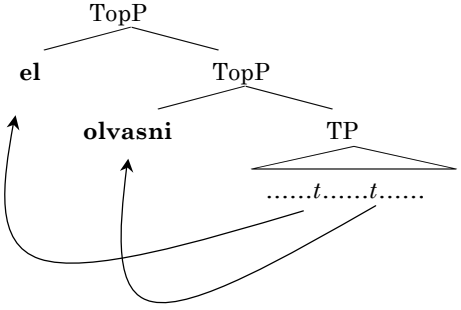
64) *Hungarian predicate clefting*
In Hungarian, predicate clefting of finite verbs targets the TP level. However (unlike in Spanish), there is no option to pied-pipe the entire projection: only movement of a bare head is allowed.

65) *The derivation of predicate clefting*



This derivation captures the no-pied-piping property of Hungarian predicate clefting listed above, and I will adopt it for the cases of predicate clefting in which the verb does not select for a particle. For the cases in which the verb does select for a particle, I will propose a different analysis, to be detailed in section 4. In a nutshell, what I will propose there is that the verb and the particle move separately, to two independent (though adjacent) topic positions, as in (66) below. This is, admittedly, not the most obvious analysis, as it raises a number of questions that would not arise if we assumed that the particle incorporates into the verb and then the two of them move as a constituent. However, an incorporation analysis would fail to account for the cases in which particle and verb are not adjacent in the tail, as (25)d and (25)e, repeated below.

66) *Predicate clefting of a particle verb*



25) d. **El**-olvasni, ki olvasta tegnap **el**?
PV.read.INF who read.3SG yesterday PV
"As for reading, who read (it) yesterday?"

e. **El**-olvasni, nem olvasta János **el**
PV.read.INF not read.3SG J PV
"As for reading, János didn't read (it)"

Under an incorporation analysis, one would have to say that the verb in the tail ends up excorporating away from the particle, so as to account for their separation. However, I already argued in chapter one that excorporation is not possible in general, so it is not possible to invoke it just in this case. Morever, we will see in section 3.2 below that there are good empirical reasons to believe that particles do *not* incorporate into finite verbs –even if they may incorporate into infinitives, as argued throughout section 4.2 in chapter three. Once this much becomes established, a two-movement analysis becomes the only possibility.

3. Hungarian preverbs

We have seen above that particles are special, in being the only elements that are pied-piped along with the verb in the predicate cleft construction. Therefore, in order to develop a theory of predicate clefting in Hungarian, it is first necessary to understand the syntax of preverbs, and especially particles. In this section, I will address the question of what the structural position of preverbs is. In my analysis of roll-up orders in section 4.2 of chapter three, I assumed that preverbs incorporate into their selecting infinitive when they appear in a roll-up cluster. That hypothesis, however, cannot be extended to the data that I will introduce in this section, where we shall see that in some contexts preverbs show indications of not having incorporated into the verb. In order to resolve this contradiction, I will follow Csirmaz (2004) in proposing a dual analysis, in which preverbs sometimes incorporate into their selecting infinitive and sometimes move to a specifier position. Nonetheless, I differ from Csirmaz's analysis in that I will argue that incorporation is a more restricted option than she claims. I will also defend the hypothesis that there are two preverb positions in the Hungarian clause, one related to finite verbs and another one related to infinitives. This hypothesis will be central to the analysis of predicate clefting in section 4.

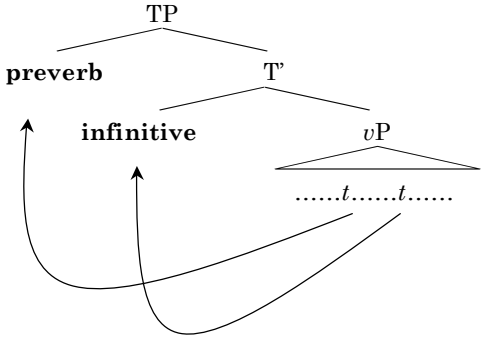
Before starting, a disclaimer is in order. The goal of this section is *not* to provide a comprehensive theory of particles. Its goal is simply to understand the syntax of particles in enough depth to help develop an analysis of the predicate cleft construction, which is the main focus of the second half of this chapter. Therefore, the theory of particles I will propose is admittedly far from perfect, and some stipulations will be necessary along the way. I believe, though, that none of these stipulations is unreasonable, in the sense of being there just to salvage a particular point of the analysis. Thus, I hope they are seen not as failures of the analysis, but as underived generalisations to be resolved in the future.

3.1. The preverbal position

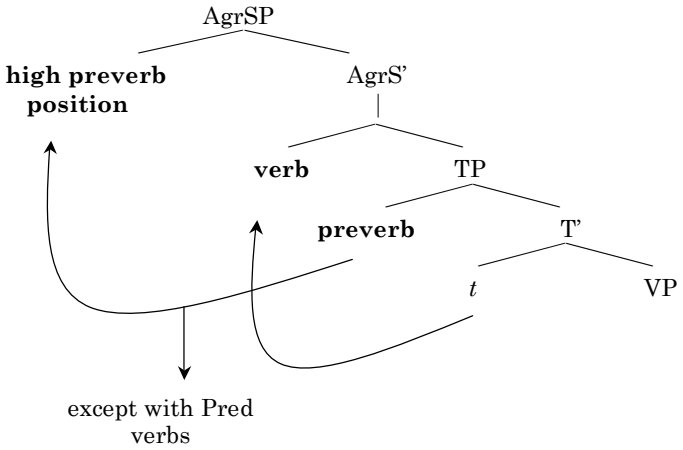
3.1.1. Structure

I have hinted above at the hypothesis that the preverbs in finite clauses sit in a somewhat higher position than preverbs in infinitival clauses. To be more specific, I argued that, in non-finite clauses, the verb moves to the head of TP, and the preverb moves to SpecTP. However, in finite clauses, the verb moves up to $AgrS^0$, which triggers movement of the preverb to SpecAgrSP. The representations in (35) and (36) are repeated below for convenience. I will not attempt to justify these movements. As we shall see below, nobody has yet produced a principled theory of why preverbs move to the left of their selecting verbs. One could in principle resort to feature checking of some kind, but that would simply be a restatement of the question. Thus, lacking a more insightful analysis, I believe the most honest option is to leave these movements as a stipulation.

35) *Preverb movement in (uninflected) infinitival clauses*



36) *The preverb position in finite clauses*



As explained in section 2.5.4, the postulation of these two positions is meant to explain the contrast in the position of preverbs in sentences containing Pred verbs. The relevant contrasts are repeated below. In a nutshell, in a finite clause, the preverbal position is not occupied by the particle (as it should), but by the designated argument. The particle stays in a postverbal position. However, this cannot be the result of the particle failing to move to the left of the verb at any point in the derivation. If the Pred verb appears in a non-finite clause, the particle must precede it. I take this as evidence that the particle always undergoes a short movement. In finite clauses, this movement is masked because the verb itself moves to a higher projection, creating a second preverb position. Usually, it is the preverb itself that raises to occupy this position (as shown in 36), but not with Pred verbs, where it is occupied by the designated argument.

67) *Finite and non-finite Pred verbs*

a. Az erdő a folyón túl (* **el**) terül (✓ **el**)
the forest.NOM the river.on beyond PV lies PV
"The forest lies beyond the river"

b. Az erdő a folyón túl fog (✓ **el**) terülni (***el**)
the forest.NOM the river.on beyond will.3SG PV lie.INF PV
"The forest will lie beyond the river"

3.1.2. The trigger

The first obvious question that we must address is, why do preverbs surface to the immediate left of the verb? In this subsection, I will only consider cases involving the preverb and its selecting verb. Preverb climbing will be tackled in section 3.1.3 below, as I believe the trigger is different. In particular, I will show that preverb climbing happens only if the higher verb is a stress-avoiding verb (such as *fog* 'will'). This is a last resort strategy to remove stress. It can be easily shown that this is not the case for the verb selecting the preverb: the preverb must precede its selecting verb independently of the prosodic properties of the latter. For instance, one cannot argue that *haza* 'home' precedes *menni* 'to go' so as to remove stress from the latter (68)a/(68)b. As shown in (68)c, *menni* is perfectly able to bear stress on its own, so a prosodic explanation for the placement of *haza* in (68)a/(68)b is incorrect. Rather, it seems like something else forces the preverb to move to the left of *menni*, and the observed accentual pattern is simply a side effect of this particular configuration.[29]

68) a. 'Utálok 'haza menni
hate.1SG home go.INF
"I hate to go home"

b. * 'Utálok 'menni 'haza
hate.1SG home go.INF
"I hate to go home"

[29] See the generalisation in section 4.1.3 in chapter three, according to which [preverb-verb] sequences constitute a single unit for the purposes of stress assignment. As in the previous chapter, stress is marked with a stroke (') before the stressed syllable.

c. 'Haza fogok 'menni
home will.1SG go.INF
"I will go home"

There is a line of reasoning that maintains that preverbs must precede their selecting verbs for aspectual reasons. Predicates without preverbs are usually atelic, but become telic as soon as a preverb is added, as in (69). Note the switch from an atelic modifier (*for x time*) to a telic one (*in x time*). The preverbal position is something that follows if preverbs (*qua* telicising elements) must compose with the entire predicate.

69) *Preverbs and (a)telicity*
a. Mari [öt percig] sielt a lejtőn
M five minute.for skied.3SG the slope.on
"Mari skied on the slope for five minutes"
b. Mari [öt perc alatt] **le**-sielt a lejtőn
M five minute under PV.skied.3SG the slope.on
"Mari skied down the slope in five minutes"

However, Wedgewood (2003) and É. Kiss (2003) point out that this is just a general tendency. As they observe, the relation between preverbs and aspectual classes is too complex to be used as an explanation of the distribution of preverbs. For instance, there are predicates that select a preverb and nonetheless receive an atelic reading (70). Conversely, there are predicates that are interpreted as telic even in the absence of a preverb (71). Even more strikingly, some predicates can receive either a telic or an atelic reading, depending on what particular preverb is used (72). This suggests that an aspectual theory of preverb positioning cannot be correct either.

70) *Atelic predicates with a preverb*
a. János **bent** maradt a liftben
J within remained.3SG the elevator.in
"János remained in the elevator"
b. A gyerekek **lent** játszanak az udvaron
the children down play.3PL the courtyard.in
"The children are playing down in the courtyard"

71) *Telic predicates without a preverb*
János hozott egy széket
J brought.3SG a chair
"János brought a chair"

72) *Variable telicity*
a. Mari pulóvert bontott
M pullover.ACC broke-up.3SG
"Mari was unravelling a pullover" [atelic]
b. Mari asztalt bontott
M table.ACC broke-up.3SG
"Mari rose first from the table"[telic]

There is one further class of analyses, in which the preverb checks a feature of some sort in the preverbal position. However, there are diverging opinions as to the nature of that feature. For instance, while Koopman & Szabolcsi (2000) argue it is a [+vp] feature (see section 6.1 in chapter three), Broekhuis & Hegedűs (2006) resort to ϕ features. This type of approach does derive the facts, but in a rather brute force way –i.e., it doesn't really offer any insights into the distribution of preverbs.

Summing up, I think it is fair to say that the reason behind the positioning of preverbs with respect to their selecting verb remains a mystery, in spite of its prominent place in the language. I don't have much to add to this topic, so I will leave it as a question for future research.[30] For the purposes of this chapter, I will simply observe, without commiting to any particular explanation of why, that preverbs move to SpecTP, and then one extra step to SpecAgrSP in finite clauses (cf. section 2.7 for discussion).

3.1.3. The prosodic basis of preverb climbing

At the beginning of the previous section, we established that prosody cannot account for the placement of preverbs with regard to their selecting verbs. In the case of preverb climbing, though, the situation is different, and in recent years the idea has taken hold that preverb climbing is prosodically driven (see Szendrői 2004 and references). Supporting evidence comes from the observation that, in terms of prosodic properties, Hungarian has two classes of finite infinitive-embedding verbs: stress-avoiding ones (*fog* 'will', *szokott* 'habitual') and stress-taking ones (*próbal* 'to try', *utál* 'to hate'). Only the former class allows preverb climbing (73); the latter class blocks it (74).

73) *Stress-avoiding verbs*
a. **'Haza** fogok menni
home will.1SG go.INF
"I will go home"
b. * **'**Fogok **haza** menni
will.1SG home go.INF
"I will go home"

74) *Stress-taking verbs*
a. * **'Haza** utálok menni
home hate.1SG go.INF
"I hate to go home"
b. **'**Utálok **haza** menni
hate.1SG home go.INF
"I hate to go home"

[30] Wedgewood (2003) presents an alternative analysis of preverb distribution, based on an excruciatingly detailed discussion of the semantic composition and parsing of complex eventualities. Unfortunately, I haven't had the chance to study his dissertation carefully, so I am not in a position to comment on it.

Moreover, even with stress-avoiding verbs, preverb climbing is blocked if there is something else that may take stress away from the verb. Such constituents are wh- or focused phrases, and negation.

75) *Wh- / focused phrase blocks preverb climbing*
a. 'HOLNAP fogok **haza** menni
tomorrow will.1SG home go.INF
"It is tomorrow that I will go home"
b. * 'HOLNAP **haza** fogok menni
tomorrow home will.1SG go.INF
"It is tomorrow that I will go home"

76) *Negation blocks preverb climbing*
a. 'Nem fogok **haza** menni
not will.1SG home go.INF
"I will not go home"
b. * 'Nem **haza** fogok menni
not home will.1SG go.INF
"I will not go home"

On the basis of these data, Szendrői (2004) concludes that preverb climbing only happens whenever necessary to remove stress from a stress-avoiding verb.[31] More specifically, her hypothesis is that finite verbs define the left edge of an intonational phrase, and that nuclear stress is assigned on that edge. From this, it follows that this is not a position where a stress-avoiding auxiliary can appear. Szendrői argues that this situation can be salvaged if a stress-taking constituent is placed at the left edge of the intonational phrase, effectively preventing nuclear stress to fall on the verb. Foci, wh- expressions, and negation are the constituents that can fulfil this function. However, if none of these is present in the clause, a preverb can be used as a last resort option.

3.2. The structural relation

3.2.1. Preverb climbing is not incorporation

Preverbs tend to appear to the immediate left of their selecting verb. When this is the case, there is a very strict adjacency requirement. No material whatsoever may intervene between the verb and the preverb. Although examples like (77)a could be accounted for by assuming that the preverb (*újságot* 'newspaper') has incorporated into the infinitive, this explanation cannot be extended to (77)b, where we can see that phrasal preverbs also need to be adjacent to their selecting infinitive.

[31] Note that there are some exceptions, such as *látszik* 'seem' or *tanul* 'to learn', which are stress-avoiding verbs yet disallow preverb climbing (Szendrői 2004:205). These verbs must avoid stress through different means (e.g., focus movement, movement of a lower infinitive…).

77) a. Nem fogok újságot **(*XP)** olvasni
not will.1SG newspaper.ACC read.INF
"I will not read newspapers"
b. Nem fogok ósdi magazinokat **(*XP)** olvasni
not will.1SG old magazines.ACC read.INF
"I will not read old magazines"

One further indication that the preverb doesn't always incorporate into its selecting verb is that the two of them can be separated, as in preverb climbing sentences. This is exemplified below in (78)b: the preverb *be*, which is selected by *menni* 'to go' has moved to the left of the finite verb *fogok* 'will'. If excorporation is not possible (we will come back to this point in section 3.2.2), this example is only derivable if the particle doesn't incorporate into the infinitive to begin with.

78) *Preverb climbing*
a. **Be** mentem
PV went.1SG
"I went in"
b. **Be** fogok akarni *t* menni
PV will.1SG want.INF go.INF
"I will want to go in"

This is possible not only with particles, but with all types of preverbs. This is exemplified below with a PP and an infinitive.

79) *Non-particle preverbs*
a. **A szobába** fogok akarni *t* menni
the room.into will.1SG want.INF go.INF
"I will want to go into the room"
b. **Úszni** fogok akarni *t*
swim.INF will.1SG want.INF
"I will want to swim"

At this point, the question is what the best analysis of preverb climbing is. Given the close structural relationship between preverbs and verbs (77), it is somewhat tempting to treat preverb climbing as an instance of head movement (as was originally proposed to account for the distribution of particles in West Germanic. cf. Evers 1975). Nonetheless, the current consensus in the literature is that an analysis where climbing preverbs move to a specifier position is empirically superior. For one, note that preverb climbing can also happen with phrasal preverbs (79)a, which, by hypothesis, cannot undergo head movement. Also, Brody (1997) observed that preverb climbing can happen across finite clause boundaries, as in the following example. Even taking into account that subjunctive clauses are more transparent for extraction than indicative ones, it is clear that this example cannot be the result of incorporation.

80) Szét kell, [hogy *t* szedjem a rádiót]
apart must that take.SUBJ.1SG the radio.ACC
"I must take apart the radio"

One difficulty with a non-incorporation analysis, though, was pointed out by É. Kiss (1998). She observed that it would incorrectly predict (81) below to be a grammatical instance of across-the-board extraction of *be*. In reality, though, it is impossible to get the first indicated interpretation of this example, where the particle climbs out of both conjuncts. Rather, it must necessarily be interpreted as belonging to the first conjunct exclusively.

81) Be [fogok menni] és [akarom vinni a könyvet]
PV will.1SG go.INF and want.1SG take.INF the book.INF
?? "I will go in and take the book inside"
✓ "I will go in and take the book (somewhere)"

É. Kiss argues that the impossibility of an ATB reading of (81) boils down to improper constituency. Her analysis has the preverb incorporate into the finite verb (a case of long head movement) so that the two form a constituent to the exclusion of the rest of the sentence. A consequence of this analysis is that ATB extraction of preverbs becomes impossible: if the preverb has to incorporate into the finite verb (as opposed to moving to a specifier position), then it is never going to make it out of the first conjunct to begin with. Hence, it must be interpreted as being selected exclusively by the verb in that first conjunct.

It is not clear to me that this is the correct analysis. For one, similar sentences involving phrasal preverbs are also ungrammatical (Anikó Lipták, p.c.). Such cases cannot be reduced to improper constituency, given that phrasal preverbs, by definition, cannot undergo incorporation.

82) Ósdi magazinokat [fogok venni] és [akarok olvasni
old newspapers.ACC will.1SG buy.INF and want.1SG read.INF
otthon]
at.home
* "I will buy old newspapers and I want to read old newspapers at home"
✓ "I will buy old newspapers and I want to read (something) at home"

Similarly, Szendrői (2004:218) points out that ATB extraction is also impossible in cases of preverb topicalisation (83), where the preverb arguably does not incorporate into anything.[32] This suggests that the ungrammaticality of (81) is not a problem of improper constituency.

83) Haza [JÁNOS küldte a csomagot] és [PÉTER hozta
home J sent.3SG the parcel.ACC and P brought.3SG
a levelet]
the letter.ACC
* "Home, it is János who sent the package (there) and Péter who brought the letter (there)"
✓ "Home, it is János who sent the package (there), and Péter who brought the letter (somewhere)"

[32] Unlike other preverbs (e.g., purely aspectual particles), *haza* 'home' can be independently topicalised without trouble, so one cannot attribute the ungrammaticality of (83) to this factor either.

Also, ATB-climbing is impossible in (84) below (Anikó Lipták, p.c.). Here, the particle has climbed to the left of the auxiliary *fogok* 'will', which takes two infinitival complements (cf. the future interpretation of both conjuncts), each of which can potentially select the particle *be*. It is clear that, in this example the particle must be moving out of the coordinate structure, independently of whether this is analysed as head or phrase movement. Therefore, the impossibility of an ATB reading of *be* cannot be the consequence of improper constituency.

84) Be fogok [[menni] és [küldeni egy könyvet]]
PV will.3SG go.INF and send.INF a book.ACC
* "I will go in and I will send a book inside"
✓ "I will go in and I will send a book (somewhere)"

Furthermore, Koopman & Szabolcsi's (2000:94) observe that examples parallel to (84) are judged perfect if the coordinator is *vagy* 'or' instead of *és* 'and'.[33,34] It is unlikely that the choice of disjunction instead of conjunction could have any effect on whether preverbs undergo incorporation or not. Again, this suggests that the ungrammaticality of (81) is not a matter of constituency

85) Be fogok [[menni] vagy [küldeni egy könyvet]]
PV will.3SG go.INF or send.INF a book.ACC
"I will go in or I will send a book inside"

Finally, bare preverbs can be used as short replies to yes/no questions. On the assumption that such short replies involve clausal ellipsis (cf. Merchant 2004) the following example (from É. Kiss 2004:337) indicates that particle climbing can take place to a specifier position. If particle climbing were necessarily incorporation, (86)b would involve ellipsis of a non-constituent, which is generally considered not to be possible. Note that (86)b cannot be reanalysed as involving particle topicalisation rather than climbing, as *meg* is one of the particles that resist A-bar movement (possibly because, being a purely aspectual element, it lacks any lexical meaning that could make a felicitous topic or focus).

86) a. Meg etted az ebédet?
PV ate.2SG the lunch.ACC
"Have you had lunch?"

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[33] Koopman & Szabolcsi provide a different example, reproduced in (i). The one in (85) has been provided by Anikó Lipták (p.c.) to create a minimal pair with (84). The judgements remain the same, in any event. Note also that (i) involves Right Node Raising of *egy szót* 'a word'. This doesn't seem to affect preverb climbing in any way, though.

i) Ha át akarsz [javítani] vagy [festeni] egy szót
if over want.2SG correct.INF or paint.INF a word.ACC
"If you want to correct a word by writing over it or with correction fluid…"
[lit. "if you want to correct over or paint over a word"]

[34] Note, however, that Koopman & Szabolcsi (2000:93-103) actually end up recasting É. Kiss' long head movement analysis in terms of remnant movement. They treat (85) as an unexplained exception, rather than as a significant piece of data.

b. Meg
PV
"I have"

These data point to the conclusion that (81) is ungrammatical for reasons independent of constituent structure. At this point, I can't say anything interesting about what these reasons are (though see Szendrői 2004:215-218 for a proposal). However, for the purposes of this chapter, it is enough to conclude that preverb climbing is *not* head movement, as Brody originally suggested. Consequently, it cannot be treated as the result of incorporation.

3.2.2. Preverb stranding is not excorporation

As already mentioned earlier, sentences containing a focused constituent, a wh-expression, or negation also force separation of the verb and the preverb. In sentences like these, the verb must be strictly right-adjacent to the focus, wh-word, or negation, and the preverb appears in a postverbal position. Note that, unlike in (77), there is no adjacency requirement between the verb and the preverb: they may be separated by all sorts of adverbs and arguments.

87) a. Kit hítvál (✓**XP**) meg?
who.ACC invite.2SG PV
"Who did you invite"
b. PÉTER emelte (✓**XP**) fel a zongorát
P lift.3SG PV the piano.ACC
"It is Péter that lifted the piano"
c. Péter nem emelte (✓**XP**) fel a zongorát
P not lift.3SG PV the piano.ACC
"Péter didn't lift the piano"

How is this pattern to be analysed? If preverbs incorporate into their selecting verbs, as I proposed in chapter three, (87) must be analysed in terms of excorporation of the verb. Various analyses along these lines have been proposed (e.g., Csirmaz 2004 and references), but I will not adopt them. To begin with, I already argued in chapter one that excorporation is not a possible operation. On top of that, Koopman & Szabolcsi (2000:25-29) argue convincingly that an excorporation analysis leads to paradoxes that can only be resolved through case-by-case stipulations on when excorporation may or may not apply. Their reasoning goes as follows: suppose that preverbs incorporate into their selecting verbs. If this is so, an example like (88)a can only be ruled out if *menni* 'to go' can't excorporate from its particle to move to the left of *akarni* 'want'. The only possibility is for the whole *be menni* unit to move to the left of *akarni* (88)b.

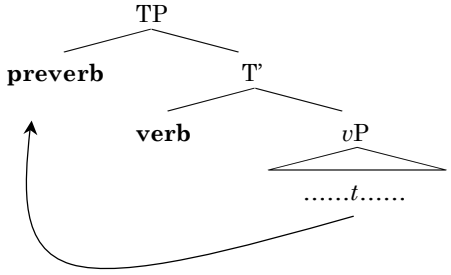
88) a. * Menni akarni [*t* be]
go.INF want.INF PV
"To want to go in"
b. [Be menni] akarni
PV go.INF want.INF
"To want to go in"

Therefore, excorporation must be categorically excluded in this context. However, one cannot formulate a general rule banning excorporation of the verb out of [preverb-verb] complexes, as precisely this operation would be required in order to account for the data in (87) above. We have reached a paradox, in that the same operation must be forced in some contexts and banned in others. The conclusion is that preverb stranding cannot be the result of excorporation, as that would require the adoption of *ad hoc* rules regulating this process. But then, if preverb stranding is not excorporation, it follows that it cannot be incorporation in the first place either.

3.2.3. Summary

We have seen in the preceding pages that some aspects of the syntax of preverbs cannot be explained on the assumption that they incorporate into their selecting verbs. Rather, the phenomena of climbing and stranding require preverb to land in specifier positions to the immediate left of verbs, in contradiction to the analysis developed in the previous chapter. The obvious consequence of this conclusion is that at least some [preverb-verb] combinations do not form constituents, as shown in the following representation (see also section 2.7 above).

89) *Preverb movement to a specifier position*



Nonetheless, even in configurations like this, the verb and the preverb show a certain degree of cohesion. For instance, recall from example (77) above that [preverb-verb] cannot be broken up by intervening material, even when the verb and the preverb do arguably not form a constituent. Also, these combinations always behave like one unit for the purposes of lexical stress assignment –i.e., the preverb takes primary stress, and the verb is unstressed, cf. section 4.1.3 in chapter three. This is, I believe, a crucial property of the syntax of preverbs.

3.3. Towards a mixed theory of Hungarian preverbs

The previous two sections have shown that preverb movement to the left of a verb is not incorporation, at least in a consistent subset of cases. This obviously clashes with the claim in chapter three that roll-up orders are derived by incorporating the preverbs into its selecting infinitive. The goal of this section is to reconcile these two apparently contradictory claims. I will follow Csirmaz

(2004) in proposing a dual theory of preverb movement: preverbs sometimes incorporate into their selecting infinitive, and sometimes move to a specifier position. One important point where Csirwaz and me differ is that she still postulates excorporation in some cases. In contrast, I will try to make all the patterns follow without resorting to this device, which we have seen (chapter one and section 3.2.2) is not very explanatory.

3.3.1. The hypothesis

Csirmaz (2004) lays the foundations for a mixed theory of preverbs and verbal complexes, in which both incorporation and movement to specifier positions are available. Her proposal is based on the distinction between light and heavy preverbs, introduced in chapter three, section 4.1.2 and reproduced below as (90). The crucial fact is that light (atomic) preverbs like *újságot* are necessarily included in rolled-up complexes, whereas heavy (phrasal) preverbs like *ósdi képes magazinokat* are excluded.

90) *Roll-up structures*

a. Nem fogok [**újságot** olvasni akarni]
not will.1SG newspaper.ACC read.INF want.INF
"I will not want to read newspapers"

b. * Nem fogok [**ósdi képes magazinokat** olvasni akarni]
not will.1SG old picture magazines.ACC read.INF want.INF
"I will not want to read old picture magazines"

Importantly, this asymmetry is not a peculiarity of Hungarian. She points to a similar situation in Dutch, described by Zwart (1994) and Koster (1994). In (91), the resultative adjective *schoon* 'clean' may surface within a verb cluster only if it appears on its own. Once it is modified by *erg* 'very', it cannot surface inside the cluster.

91) a. … dat hij het huis zou [willen **schoon** maken]
that he the house should.3SG want.INF clean make.INF
"…that he would like to clean the house"

b. * … dat hij het huis zou [willen **erg schoon** maken]
that he the house should.3SG want.INF very clean make.INF
"…that he would like to clean the house thoroughly"

Koster's and Zwart's analyses are based on the assumption that predicative elements like (*erg*) *schoon* move to a functional projection they dub PredP, and which corresponds to my TP. Atomic predicates like *schoon* have two options: they may either incorporate into the T head (in which case they appear inside the cluster), or they may move to SpecTP (and they appear outside the cluster). In contrast, the incorporation option is not available for phrasal predicates like *erg schoon*, for standard X-bar theoretic reasons. As a consequence, they may only

move to SpecTP, and they always surface outside the cluster. This derives the pattern in (91).[35]

At this point, the parallelism between Dutch and Hungarian is quite obvious,[36] and Csirmaz takes it as an indication that, in Hungarian as well, preverbs may either incorporate into the verb or move to a specifier position. The choice is determined, to some extent, by the head/phrase status of the preverb. It is clear, though, that other factors are at play too –i.e., if head-like preverbs always had a choice to either incorporate or move to a specifier position, it would be possible to derive some patterns that we have shown to be ungrammatical. In some cases, incorporation has to be forced: for instance, in the derivation of roll-up orders, lest the preverb is left outside the fronted chunk. Similarly, there are other cases in which incorporation has to be blocked, such as sentences with focus or negation, where the verb moves away from its preverb. Below I provide a comprehensive list of syntactic environments, indicating for each of them whether preverb incorporation is optional, obligatory, or banned.

3.3.2. Patterns of (non)incorporation

Let me begin by offering a first version of the rules regarding the distribution of verbal elements.

92) *Obligatory preverb incorporation*
The preverb must incorporate into its selecting verb if
a. the verb is part of a rolled-up cluster
b. the verb is an infinitive that undergoes A-bar (focus) movement

93) *Impossible preverb incorporation*
The preverb must move to SpecPredP if
a. the preverb itself undergoes A-bar movement (topic/focus)
b. the preverb must climb to the left of a higher verb
c. focus or negation force head movement of its selecting verb

94) *Optional preverb incorporation*
In any case not covered in (92) and (93), there is a choice between the preverb incorporating into the verb or moving to a specifier position.

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[35] This reasoning is based on the assumption that Dutch verb clusters are the result of incorporation as well. This is a view that has been challenged too –cf. Hinterhölzl (1999) and chapters 7 and 8 of Koopman & Szabolcsi (2000). See Barbiers (2003), though, for a critique of this type of analysis. I believe, in any event, that the issues I raised in connection to Koopman & Szabolcsi's analysis of Hungarian also carry over to these analyses of Dutch. For one, in generalised XP movement approaches like this, head/phrase asymmetries like the one in (91) are quite unexpected and can be accommodated only by stipulation.

[36] Note that, while an atomic predicate can be either inside or outside the cluster in Dutch (91)b, an atomic preverb must be inside the cluster in Hungarian (90)a. This asymmetry can be boiled down to a requirement that Hungarian atomic preverbs necessarily undergo incorporation, whereas their Dutch counterparts do so only optionally –however this is to be formalised.

Now, it is instructive to look at the sentences where the requirements in (92) and (93) may conflict –i.e., requiring simultaneous incorporation and non-incorporation. This is not always the case, though, since some requirements cannot co-occur, to begin with. For instance, both clauses in (92) apply to non-finite verbs only, whereas (93)c applies to finite verbs only. All such cases are correctly predicted to be ungrammatical. The question is how to predict which requirement takes preference over the other. The correct outcomes are summarised in the following table.

	(92)a	**(92)b**
(93)a	Incorporate	Incorporate
(93)b	Incorporate	Incorporate
(93)c	d.n.a.	d.n.a.

Table 3: resolution of contradictory requirements

As can be seen, any time that there is a requirement conflict, incorporation takes preference over movement to a specifier position. This can be seen as an indication that preverb incorporation occurs very early in the derivation –earlier than any of the movements that would result in preverb non-incorporation. Therefore, the results in Table 1 are a standard cyclicity effect: once incorporation happens, it bleeds other options, and since it happens so very early, bleeding of other options is the norm. In the light of this, it is also possible to formulate the following generalisation. Note that it eliminates the notion of "optional incorporation" –if it is not forced, then it doesn't happen.

95) *Preverb incorporation*
In Hungarian, a preverb must incorporate into its selecting verb if
a. the verb enters a roll-up sequence
b. the verb is an infinitive that undergoes A-bar (focus) movement
In all other cases, incorporation is disallowed

This generalisation also assumes (implicitly) the more general rule that only head-like elements may incorporate. But, with this much in place, I believe that the distribution of preverbs can be derived to a large extent. The two environments in (95) are the ones in which a preverb and its selecting verb may not be separated. This formulation entails that all other apparent cases of preverb incorporation are just that: apparent. For instance, regular preverb movement to the left of its selecting infinitive in an English order must be movement to a specifier position. Similarly for preverb movement to the left of its selecting finite verb, and preverb climbing. I am aware that the formulation of (95) requires some look-ahead, but as far as I know, this is not a shortcoming specific to my analysis. For instance, the theory developed in Koopman & Szabolcsi (2000) also resorts to look-ahead in certain cases. Approaches that do not make use of look-ahead have to resort to other mechanisms (e.g., excorporation) that ultimately have the same effect. Therefore, this should be viewed as a general problem in Hungarian syntax, hopefully to be solved in the future.

Now, if there are certain cases where preverbs do not incorporate into their selecting verbs, then it follows that the facts that have been adduced to support an incorporation analysis must be epiphenomenal (cf. section 3.2). As far as I know, the major arguments are (i) stress distribution (one stressed syllable per preverb-verb sequence, as in true lexical units); and (ii) preverb-verb adjacency. One reason to think that these two phenomena are epiphenomenal is that they also hold for phrasal preverbs –as noted in (77) above-, which cannot incorporate. Furthermore, they also hold for climbing preverbs (96), which I argued in section 3.2.1 do not incorporate into the finite verb either.

77) a. Nem fogok újságot **(*XP)** olvasni
not will.1SG newspaper.ACC read.INF
"I will not read newspapers"
b. Nem fogok ósdi magazinokat **(*XP)** olvasni
not will.1SG old magazines.ACC read.INF
"I will not read old magazines"

96) *Adjacency with climbed preverbs*
a. Újságot **(*XP)** fogok *t* olvasni
newspaper.ACC will.1SG read.INF
"I will read newspapers"
b. Ósdi magazinokat **(*XP)** fogok *t* olvasni
old magazines.ACC will.1SG read.INF
"I will read old magazines"

3.3.3. Preverb-verb adjacency

How are these properties to be implemented? In principle, one could resort to a spell out condition like the one proposed in chapter one for Bantu verbal morphology. This, however, would be too strong a hypothesis, as it would effectively prevent separation of the preverb and the verb in any occasion. What is necessary here is a weaker relation, one which ensures preverb-verb adjacency in the contexts where it shows up, but that doesn't prevent separation of the two. Now, recall from section 3.1.3 above that preverb climbing is prosodically driven, i.e., it happens to remove stress from a stress-avoiding auxiliary just in case there isn't any other element that can fulfil this task (a wh- phrase, a focused phrase, or negation). In order to explain this adjacency, I want to capitalise on the "last resort" status of preverb climbing.

Szendrői (2004) argues (a) that nuclear stress in Hungarian is assigned to the left edge of the intonational phrases, and (b) that the finite verb defines the left edge of the intonational phrase. Constituents that can/must bear stress can extend this left edge, but otherwise preverbal constituents are parsed in a separate intonational phrase. Consider, for instance, the following example.

97) *Szendrői (2004:211)*
* [INTP Én [INTP FOGOK kezdeni akarni haza menni]]
I will.1SG begin.INF want.INF home go.INF
"I will begin to want to go home"

This example is ungrammatical because the stress avoiding auxiliary *fogok* is at the position where nuclear stress is assigned. Szendrői argues that the preverbal pronoun *én*, being unstressed, cannot appear in the same intonational phrase as the finite verb. Since it is parsed in a separate intonational phrase, it cannot remove stress from the verb. However, this example can be salvaged if some stress taking element can be inserted at the left edge of the intonational phrase defined by the verb, thus removing stress from the verb. The prime candidates for this function are constituents that require stress, such as foci or wh- words (98)a –see Szendrői 2001 for a more detailed analysis). However, in the absence of such elements, preverbs can fulfil this function (98)b.[37]

98) a. [INTP Én [INTP MOST fogok kezdeni akarni haza menni]]
I now will.1SG begin.INF want.INF home go.INF
"It is now that I will begin to want to go home"
b. [INTP Én [INTP HAZA fogok kezdeni akarni [*t*] menni]]
I home will.1SG begin.INF want.INF go.INF
"I will begin to want to go home"

Given this analysis, preverb-verb adjacency follows from (a) the hypothesis that the finite verb defines the left edge of an intonational phrase, and (b) the requirement that something else be inserted at that left edge to prevent stress assignment to the verb. Under this view, preverb-verb adjacency is epiphenomenal. If the preverb in (98)b climbed to the left of the pronoun *én*, ungrammaticality would result not for lack of adjacency, but because nuclear stress would not have been removed from a stress-avoiding auxiliary.

Now, the attentive reader might have noticed that the analysis above only covers cases of preverb climbing. It does not cover adjacency between a preverb and its selecting verb, which I have argued in section 3.1.2 above is not regulated by prosodic factors. Importantly, as shown in (77)b, adjacency in these cases also holds for preverbs that cannot possibly have incorporated into their selecting verb. Thus, there must be a way independent of incorporation that enforces adjacency between a preverb and a verb. One possibility is to capitalise on the generalisation (chapter three, section 4.1.3) that [preverb-verb] sequences are parsed as a unit for the purposes of stress assignment. The issue is complicated by the fact that it is not clear what forces preverbs to move to the left of their selecting verb, in the first place. However, given examples such as (77)b, it is reasonable to assume that something like this generalisation holds.

The point of this section was to show that there are plausible ways to derive preverb-verb adjacency without resorting to incorporation. In this way, we find support for the hypothesis that preverb climbing involves movement to a specifier position, not incorporation.

3.3.4. Interim summary

In this section, I have tried to develop an analysis of Hungarian preverbs as the basis of the analysis of the predicate cleft construction to be proposed in section 4 below. One of the points I have argued for is that preverbs do not incorporate into

[37] For ease of exposition, I am ignoring cyclicity issues here.

the verb except for a very limited set of cases, detailed in section 3.3.2. This dual approach requires the stipulation of some amount of look-ahead in syntax, which is clearly an undesirable result. Nonetheless, I choose to live with this problem, as (a) it is present in *any* analysis of preverb movement, not just my own, and (b) once it is accepted, it derives the distribution and properties of preverbs to a rather large extent.

I have proposed a theory of Hungarian preverbs that differs from virtually any other in postulating two positions for preverbs (one in SpecPredP and the other one in SpecTP), motivated by the different behaviour of Pred verbs. Although the exact position of preverbs is difficult to detect through directly, I believe this is a reasonable hypothesis. If finite verbs occupy a position somewhat higher than infinitives (as standarly assumed), and there is a preverb position immediately left-adjacent to each of them, then it must be the case that there are two preverb positions in the clause.

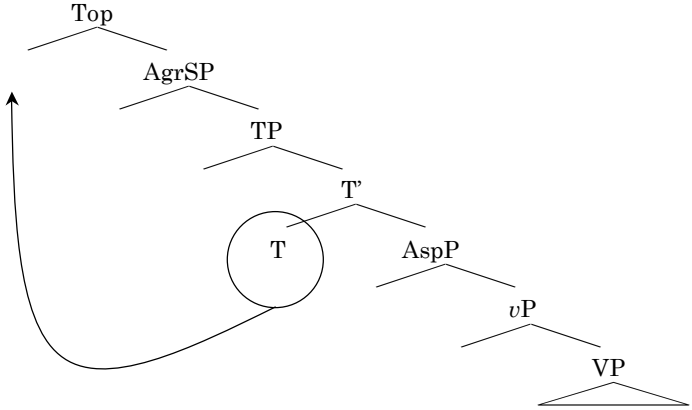
In a nutshell, the theory of preverbs developed throughout this section is far from perfect, but I believe it covers enough ground to be used as the basis of the analysis of the predicate cleft construction, to which we turn now.

4. The analysis of Hungarian predicate clefts

4.1. Recapitulation

In section 2.7 I proposed a derivation for Hungarian predicate clefts with non-particle verbs which was parallel to the one I proposed for Spanish in chapter two –that is, A-bar movement of the bare head *v* to a topic position in the left periphery. This analysis accounts for various properties of the construction, most notably (i) the fact that no verbal complements may be pied-piped; and (ii) the fact that it shows prototypical A-bar movement properties. The analysis was schematised in the tree in (65), which is repeated below for convenience.

65) *A derivation for Hungarian predicate clefting with non-particle verbs*



However, I already noted that this analysis failed to account for the obligatory pied-piping property of particles, discussed in detail throughout section 2.5. This tight relationship might suggest that verbs and their selected particles form a unit, i.e., a syntactic head of sorts. Nonetheless, throughout section 3, I showed that a closer examination of the syntax of particles falsifies this hypothesis. To begin with, it is quite clear that particles and verbs, even though they tend to appear next to each other, are syntactically independent elements. In fact, when considering the exact position of particles with respect to finite verbs, the most likely hypothesis is that [particle-finite verb] sequences are *not* the result of incorporation. This is especially obvious in the following two examples, repeated from section 2.5.2. In both (25)d and (25)e we see that the particle and the verb cannot possibly form a constituent in the tail, as they are separated by other overt material. Clearly, these examples rule out the possibility of an analysis in which the particle incorporates into the verb.[38]

25) d. **El**-olvasni, ki olvasta tegnap **el**?
PV.read.INF who read.3SG yesterday PV
"As for reading, who did some reading yesterday?"

e. **El**-olvasni, nem olvasta János **el**
PV.read.INF not read.3SG J PV
"As for reading, János didn't read"

A similar conclusion can be reached on the basis of examples like (39)a, where the clefted verb pied-pipes a climbed particle that it has not selected. As argued in section 3.2.1, preverb climbing is not incorporation, which in turns entails that the particle and the verb do not form a constituent.

39) a. **El** akarni, **el** akart menni Mari
PV want.INF PV wanted.3SG go.INF M
"As for wanting, Mari wanted to go"

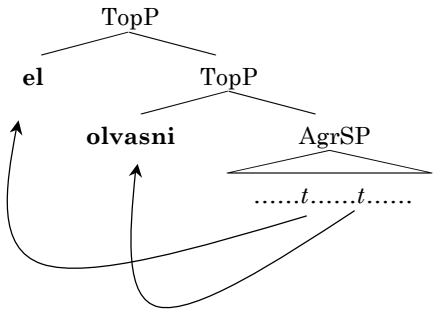
What I want to do is to take this conclusion seriously. That is, I will assume that the verb and the particle do not form a constituent at any point in the derivation. The consequence of this assumption is that this type of examples must be analysed as involving independent movements of the verb and the particle, as in the tree in (99)b. Note that, in the tree below, both the particle and the verb have their own trace each, as a reflection of this independence. The fine details of the analysis are provided in the next section.

99) *A derivation for Hungarian predicate clefting with particle verbs*

a. El olvasni, el olvasta János a könyvet
PV read.INF PV read.3SG J the book
"As for reading, János read the book"

[38] One possible alternative would be to treat this independence in terms of excorporation. See, however, sections 3.1.1, 3.1.2, and 5.3 of this chapter, and section 2.2.2 of chapter one, for arguments against this option.

b



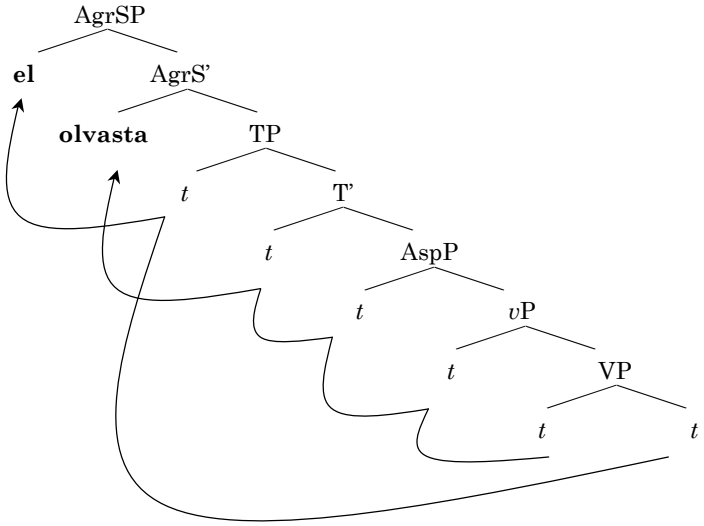
4.2. A two-movement analysis of predicate clefting with particle verbs

The first step of the analysis consists of deriving the full sentence that makes up the tail of a predicate cleft. As discussed in section 3.1.1, I assume that the finite verb undergoes head movement all the way up to AgrS. The particle first moves to SpecTP and then once more to SpecAgrSP. For ease of exposition, I will not represent the subject *János* and the object *a könyvet* 'the book' in the tree in (100)b. As hypothesised in section 3.3.3, a preverb and the verb following it (in this case *olvasta* 'read.3SG') constitute one unit for stress assignment. Consequently, the [preverb-verb] sequence in the tail is pronounced as one phonological word, namely ['*el olvasta*].

100) *Step I: verb and particle movement*

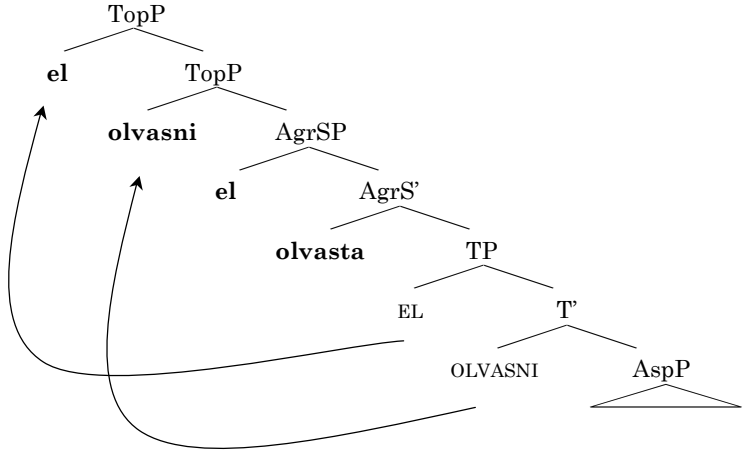
a. El olvasni, el olvasta János a könyvet
PV read.INF PV read.3SG J the book.ACC
"As for reading, János read the book"

b.



The next step is to construct the topic part of the predicate cleft. In section 2.6 I argued that the fronted category is TP. Therefore, I propose that the T head undergoes A-bar movement to the topic position, followed by movement of the preverb to a higher topic position, as in (101) below (lower unpronounced copies appear in small caps). The [particle-verb] sequence in the topic is pronounced as one phonological unit (namely, ['*el olvasni*]) through the generalisation that, in such sequences are parsed as one domain for lexical stress, independently of their actual syntactic structure.

101) *Step II: particle and verb topicalisation*



As I argued in section 2.6, I take the "infinitival" marker (*–ni*) on the topic to actually be the spell out of tense (both finite and non-finite) in the elsewhere case, whenever insertion of a more specific form is not possible. I postulated that one such case is environments where finite tense appears without an AgrS head. This is what happens in the topic position, since what is clefted is the bare T head to the exclusion of AgrS. Consequently, insertion of the regular past tense morpheme *–t(t)-* is blocked, and *–ni* is inserted as the default. This way, we derive the observed form *elolvasni*.

This analysis can offer an insight into the properties of predicate clefting with Pred verbs (cf. section 2.5.4). The puzzle posed by these verbs is that what is pied-piped to the topic position is not the designated argument that occupies the preverb position to the exclusion of the particle. Rather, it is the particle that is pied-piped, in spite of the fact that it necessarily follows the finite verb in the tail. The relevant data are repeated below.

31) *A verb with a designated argument*

a. Az erdő **a folyón túl** terül el
the forest.NOM the river.on beyond lies PV
"The forest lies beyond the river"

b. * Az erdő el terül **a folyón túl**
the forest.NOM PV lies the river.on beyond
"The forest lies beyond the river"

33) *Predicate fronting with a Pred verb*

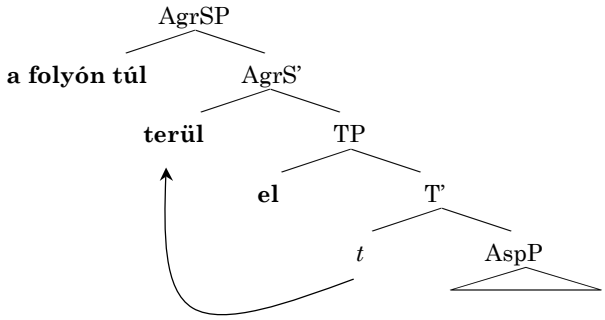
a. * [A folyón túl terülni], az erdő a folyón túl terül **el**
the river.on beyond lie.INF the forest the river.on beyond lies PV
"As for lying beyond the river, the forest lies beyond the river"

b. ?* [A folyón túl terülni **el**], az erdő a folyón túl terül **el**
the river.on beyond lie.INF PV the forest the river.on beyond lies PV
"As for lying beyond the river, the forest lies beyond the river"

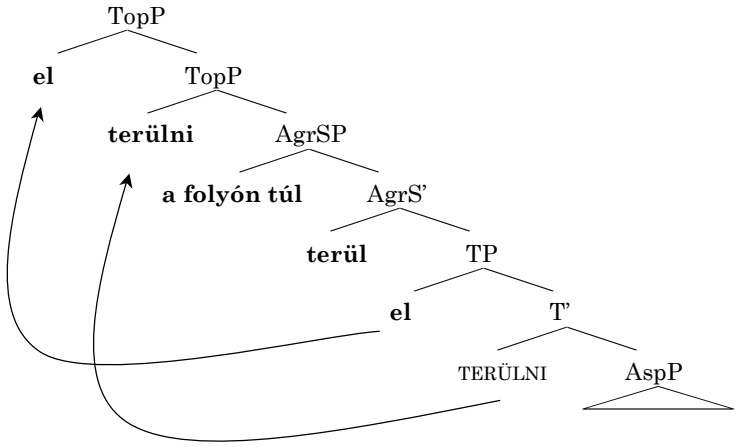
c. [**El** terülni], az erdő a folyón túl terül **el**
PV lie.INF the forest the river.on beyond lies PV
"As for lying, the forest lies beyond the river"

This paradigm follows from the hypothesis that the designated argument only occupies the high preverb position (AgrSP) while the particle moves to the low preverb position (TP). Given that predicate fronting targets TP-level material, the result is that, if anything is going to get pied-piped, it will be the particle. The designated argument cannot be pied-piped under any circumstances because it is sitting in a too high position. A derivation of (33)c is given below (for simplicity, I will not represent the external argument *az erdő* 'the forest', though one could assume it occupies a second SpecAgrSP).

102) *Step I: tail positions of the verb, particle, and designated argument*



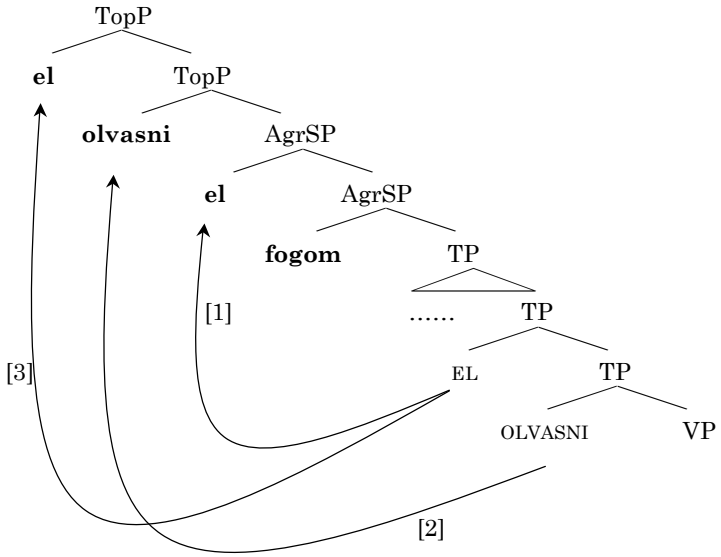
103) *Step II: Predicate clefting at the TP level*



The same logic applies to cases of verb movement to the CP layer stranding the preverb, namely, clauses containing a wh- phrase, a focused constituent, or negation –see the examples in (25) above. In such sentences, predicate clefting targets both the verb and the particle, in spite of the fact that they have been separated in the tail. Since predicate clefting targets the TP layer, it is unaffected by verb movement to C^0, which happens in a higher structural position. Similarly for cases such as (37)b from section 2.5.5, in which the particle of the clefted verb has climbed to the left of a higher finite verb, yet it is nonetheless pied-piped to the topic position together with the lower (selecting) verb. For examples of this type, I want to propose that, first, the particle climbs to the left of the finite verb, and then the lower verb is clefted. As in all the cases above, the clefted verb pied-pipes the particle in its inner specifier position, which in this case implies pied-piping of the particle from its non-climbed position (104).

37) b. **El** olvasni, el fogom [*t*] a könyvet
PV read.INF PV will.1SG the book.ACC
"As for reading, I will read the book"

104) *A derivation for (37)b*



One could also imagine an alternative to (104) in which the particle is clefted from its climbed position, rather than going back to the lower copy. At present, I haven't any data either in favour or against this possibility, so I will leave this point as an open question. Bear in mind, though, that even if the alternative analysis were proven correct, one would still need a two-movement derivation. This, I believe, suggests that the analysis I have developed is on the right track.

4.3. Pending issues

The major advantage of the two-movement analysis I have developed above is that it preserves the syntactic independence of the verb and the preverb in their tail positions. In fact, as far as I can see, a two-movement analysis is the *only* way to account for this independence (cf. section 5 for a consideration of three possible alternatives). Nonetheless, as it stands, my analysis still raises two major questions, namely (a) what forces pied-piping of the particle along with the verb? and (b) what forces the [particle-verb] order in the topic position? I must admit that my answers below will be rather sketchy, in particular regarding the first question. However, I would still like to offer some speculative thoughts on what successful solutions could look like.

Before starting, let me point out that these problems arise only because I am assuming a two-movement analysis of predicate clefting of particle verbs. If one assumed an analysis in which the verb and the particle move to the topic position as one constituent, the problems would immediately disappear. The unwelcome consequence, however, would be that one would have to resort to special mechanisms to explain the independence of the particle and the verb in their tail positions (cf. section 5 for some possibilities). Given this dilemma, it

seems more advantageous to me to take their independence in the tail seriously and explain their apparent unity in the topic position as epiphenomenal. For one, we have already seen a similar situation in section 3.2.1 above: in cases of preverb climbing, the climbed preverb and the higher verb appear to form a unit on the surface. However, a closer study reveals that they still are independent constituents, irrespective of their surface look. Given that this is an independently attested property of Hungarian, there is no reason why it should also apply to the topic position of predicate clefts.

4.3.1. The obligatoriness of particle pied-piping

Let me begin with the issue of what triggers particle pied-piping, for which I cannot offer a solution. However, I want to point out various things. First of all, it is important to note that, as discussed throughout section 2.5, there are two well-differentiated types of particle pied-piping, which depend on the relation between the particle and the clefted verb. If the verb selects the particle, then pied-piping is obligatory (sections 2.5.2 and 2.5.5). However, if the particle has climbed to the left of the clefted verb, then pied-piping is only optional (section 2.5.6). These two cases should be kept separate.[39]

Second, regarding obligatory pied-piping of selected particles, I believe the interesting issue is not that particles are obligatorily pied-piped, as much as the fact that other classes of preverbs (PPs, adjectives, bare nouns, infinitives) can*not* be pied-piped. This is not the case in the focus fronting construction analysed in chapter three. In that construction, every preverb that could incorporate into its selecting infinitive had to be pied-piped (cf. section chapter three, section 3.3). However, in the predicate cleft construction, there is a difference between particles and other preverbs that could potentially undergo incorporation. Since there seem to be no structural differences between particles and the rest of the preverbs, it must be the case that the distinction resides on some inherent property of particles.[40] In other words, the relation between a particle and its selecting verb is "priviledged" in ways that the relation between a verb and other dependents/modifiers is not.

Importantly, there are some indications that this idea might be correct. For instance if a clause contains both a particle and any other constituent that can function as a preverb, it is invariably the particle that appears in the preverb position (105)a. It is not possible to move the other potential preverb to the preverb position instead of the particle (105)b.[41] Example (105)c is given to show that the PP *a szobába* 'into the room' can potentially occupy the preverb position. The fact that particles are the default preverbs suggests that, as hinted at above, they have a priviledged status with respect to their selecting verbs.

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[39] Note also that the data of pied-piping of climbed particles show quite some idiolectal variation, in contrast for the data of pied-piping of selected particles, which are more uniform across speakers. This is an additional reason to treat the two types of pied-piping separately, in spite of their superficial similarity.

[40] Cf. Lüdeling (2001) for a similar hypothesis regarding German particle verbs.

[41] With the obvious exception of Pred verbs. Cf., however, section 4.2.1.1, where I argued that designated arguments of Pred verbs only take preference in the high preverb position.

105) *Multiple potential preverbs*

a. Mari **be**-futott a szobába
M PV.ran.3SG the room.into
"Mari ran into the room"

b. * Mari a szobába futott **be**
M the room.into ran.3SG PV
"Mari ran into the room"

c. Mari a szobába futott
M the room.into ran.3SG
"Mari ran into the room"

Third, note that the label of "particle pied-piping" is not arbitrary. As shown, topicalisation of a bare preverb, to the exclusion of its selecting verb, is perfectly fine (with the exclusion of aspectual particles, which do not have the lexical content to make felicitous topics). This suggests that verb topicalisation is the primary movement, and that the particle is pied-piped so as to avoid an ill-formed structure. In other words, obligatory pied-piping of a selected particle is a repair strategy.

106) *Particle topicalisation*

Be, János fog akarni [*t*] menni
PV J will.3SG want.INF go.INF
"In, it is JÁNOS that will want to go (and out, PÉTER)"

To summarise, any reasonable analysis of obligatory particle pied-piping must take into account the following three factors: first, that a direct selectional relation must hold between the particle and the verb; second, that the particle-verb relation is "priviledged"; and third, that particle pied-piping happens so as to repair an otherwise ill-formed structure. The last point strikes me as particularly important, as it shifts the relevant question from "what forces particle pied-piping" to "what would go wrong if the particle was not pied-piped". Note that, whatever the root of the ungrammaticality is, it is exclusive to predicate clefts, as there are other environments in which the verb can move and strand the particle. For instance, in clauses with focus/wh- movement, the verb moves to C without pied-piping the particle. Thus, it is necessary to identify a property exclusive to predicate clefts.

In short, these are the conditions that a successful analysis must fulfil. In particular, I think it is reasonably plausible to assume that this specific case of pied-piping is a repair strategy, and that it is linked to the selectional relation between verbs and particles. A detailed analysis, however, would rely rather crucially on identifying what the "priviledged relation" that I have aluded to is. At present, I cannot offer a solution, given that it would require an extensive investigation of the relation between verbs and the different classes of preverbs (see Wedgewood 2003 for some insightful discussion). Therefore, I will relegate a proper analysis to future work.[42]

[42] One could suggest that, as opposed to other preverbs, particles constitute an integral part of the meaning of a verb. Under this hypothesis, one could capitalise on the observation (see section 2.2) that predicate clefts are verum focus constructions. More specifically, the clefted verb must have a focus correlate in the tail. Therefore, if particle

Let us move on to the case of pied-piping of a non-selected (climbed) particle. As already shown in section 2.5.6, in this case pied-piping is only optional. This suggests that, as opposed to pied-piping of selected particle, we are not dealing with a repair mechanism. Rather, the structure without pied-piping is grammatical, and pied-piping seems to come as an extra. Moreover, recall that, in this case, pied-piping is dependent on climbing. If something (e.g., negation, focus, wh- words) blocks particle climbing, pied-piping becomes impossible (107)c/(107)d.

107) *Pied-piping of a climbed particle*

a. El akarni, el akarom olvasni
PV want.INF PV want.1SG read.INF
"As for wanting, I want to read (it)"

b. Akarni, el akarom olvasni
want.INF PV want.1SG read.INF
"As for wanting, I want to read (it)"

c. * El akarni, nem akarom el olvasni
PV want.INF not want.1SG PV read.INF
"As for wanting, I don't want to read (it)"

d. Akarni, nem akarom el olvasni
want.INF not want.1SG PV read.INF
"As for wanting, I don't want to read (it)"

On top of this, pied-piping of climbed particles is somewhat sensitive to the phonological weight of the particle. For instance, the trisyllabic particle *keresztül* 'across' is pied-piped without trouble if it is selected by the clefted verb, but gives rise to mild deviance if it is a climbed particle. This contrasts with monosyllabic particles like *el*, which are equally grammatical in both cases.

108) a. **Keresztül** menni, keresztül ment az úton
across go.INF across went.3SG the road.on
"As for going across, he went across the road"

b. ? **Keresztül** akarni, keresztül akart menni az úton
across wanted.INF across want.3SG go.INF the road.on
"As for wanting across, he wanted to go across the road"

109) a. **El** menni, el ment
PV go.INF PV go.3SG
"As for going, he went"

b. **El** akarni, el akart menni
PV want.INF PV want.3SG go.INF
"As for wanting, he wanted to go"

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pied-piping does not take place, then the meaning of the topic and the meaning of the tail would be different. Arguably, that could be enough to throw off the correlation and trigger particle movement to repair a semantically deviant structure. While initially attractive, this analysis suffers from the problem that it would also incorrectly predict pied-piping of other constituents with a similar semantic relation to the verb, such as idiomatic objects. Thanks to Anikó Lipták and Idan Landau for discussion on this issue.

These patterns suggest that pied-piping of a climbed particle is regulated by prosodic factors. This is not such a strange claim: given that preverb climbing is itself prosodically driven, the only relation between a climbed particle and the higher verb is prosodic. When a preverb climbs to the left of a higher verb, the two of them are parsed as one phonological unit. We may suppose that pied-piping of a climbed preverb is a means to preserve that unit. Since this is a purely prosodic requirement, it is correctly predicted that pied-piping will be sensitive to the phonological weight of the particle. Moreover, the preverb and the verb can be parsed as a phonological unit only in case the preverb has climbed, deriving the paradigm in (107). Note that this reasoning still treats particle pied-piping under predicate clefting as parasitic on movement on the verb. However, as opposed to the case of selected particles, it does not take place to salvage an otherwise deviant structure.

4.3.2. The obligatoriness of the [particle-verb] order

In order to complete the analysis, it is necessary to determine why the order in the topic is necessarily [particle-verb]? As shown in (110)a through (110)c, taken from section 2.5.2 above, the reverse order is ungrammatical, irrespective of what the order is in the tail. I also add the pairs in (111) and (112), illustrating the same restriction for the two cases combining predicate clefting and particle climbing (cf. sections 2.5.5 and 2.5.6).

110) *Ordering of predicate cleft topics with particle verbs*
- a. **El**-olvasni, **el**-olvasta
  PV.read.INF PV.read.3SG
  "As for reading, he read"
- b. * Olvasni **el**, **el**-olvasta
  read.INF PV PV.read.3SG
  "As for reading, he read"
- c. * Olvasni **el**, ki olvasta **el**
  read.INF PV who read.3SG PV
  "As for reading, who did some reading?"

111) *Ordering of predicate cleft topics with a climbed particle (I)*
- a. ✓ **El** akarni, el akart menni János
  PV want.INF PV want.3SG go.INF J
  "As for wanting, János wants to go in"
- b. * Akarni **el**, el akart menni János
  want.INF PV PV want.3SG go.INF J
  "As for wanting, János wants to go in"

112) *Ordering of predicate cleft topics with a climbed particle (II)*
- a. ✓ **El** olvasni, el fogom [*t*] a könyvet
  PV read.INF PV will.1SG the book.ACC
  "As for reading, I will read the book"
- b. * Olvasni **el**, el fogom [*t*] a könyvet
  read.INF PV PV will.1SG the book.ACC
  "As for reading, I will read the book"

This is a rather unexpected constraint under a two-movement analysis. Given that the particle and the verb move independently to the topic position, both orders should in principle be possible. In fact, in cases of multiple topicalisation, the topicalised constituents may appear in any order (113). Therefore, it is necessary to find a way to ensure the strict ordering of [particle-verb] combinations that doesn't extend to other instances of multiple topicalisation.

113) *Free ordering of multiple topics*

a. ✓ [Tegnap], [a könyvet], nem olvasta Mari
yesterday the book.ACC not read.3SG M
"As for yesterday, and as for the book, Mari didn't read it then"

b. ✓ [A könyvet], [tegnap], nem olvasta Mari
the book.ACC yesterday not read.3SG M
"As for the book, and as for yesterday, Mari didn't read it then"

In order to explain this restriction, I want to point out an asymmetry between multiple topicalisation structures and predicate clefting of particle verbs. In the case of multiple topicalisation, each of the topics is independent of the others (in more formal terms, we could say that each topic bears a separate [+top] feature). In contrast, as I argued in the previous section, movement of the particle is parasitic on prior movement of the verb. This asymmetry provides a way to derive the obligatory [particle-verb] order. Given that movement of the particle is parasitic on movement of the verb, it will necessarily happen *after* movement of the verb. Therefore, by standard cyclicity, the particle will land in a topic position to the left of the one occupied by the topic, deriving the [particle-verb] order.[43]

This analysis depends on two assumptions. The first is that multiple topicalisation is not subject to minimality (Superiority) effects. In fact, this is not so much an assumption as an interpretation of the data. In order to account for the fact that multiple topics can appear in any order (113), it is necessary to assume that there is no pre-specified order in which they move to the topic field. If multiple topic movement were subject to Superiority, then one would predict (incorrectly) that the order of multiple topics should necessarily be parallel to their order in their base positions. The second assumption is that this way to obtain free ordering does not apply to predicate clefts of particle verbs simply because they are not instances of multiple topicalisation –rather, as argued above, movement of the particle is parasitic on movement of the verb, hence it necessarily happens after the verb is clefted. The paradigms discussed in this section follow from the combination of these two assumptions. The first one is, I believe, quite uncontroversial. The second one, though dependent to a certain extent on the speculative remarks of the previous section, can also be upheld.

[43] Note that one must ensure that movement of the particle will not tuck in below the verb (cf. Richards 1997), as that would derive an ungrammatical [verb-particle] order. I do not think that this is an issue. One prerequisite for tuck-in is that the two movements in question are triggered by the same feature on the same head. This is arguably not the case here. Movement of the verb is triggered by a [+top] feature. However, movement of the particle, being a repair mechanism, can plausibly be considered to have a different trigger.

4.4. Summary

In this section, I have argued that the best analysis for predicate clefting of particle verbs is one in which the particle and the verb move to the topic position independently of each other. The major appeal of this analysis is that it preserves the syntactic independence of the particle and the verb in the tail. The downside is that it forces one to analyse the apparent unity of the [particle-verb] sequence in the topic position as epiphenomenal. However, since a similar analysis is independently required to account for the properties of several [preverb-verb] sequences in regular clauses, there is no reason why it cannot be extended to the topic position in predicate clefts. Moreover, as we shall see in section 5 below, alternatives that treat the [particle-verb] sequence in the topic as a constituent run against major problems.

5. Alternative analyses

I have argued above in favour of a two-movement analysis on the grounds that it preserves the syntactic independence of the particle and the verb in the tail. In fact, it seems to me that this is the *only* plausible way in which this independence can be ensured without resorting to excorporation. However, before finishing this section, I would like to explore the possibility of accounting for predicate clefting in three alternative ways, namely, (i) via remnant movement, (ii) via selective deletion, and (iii) via incorporation at a late stage. We will see that these two analyses are not plausible alternatives, which in turn reinforces the two-movement approach.

5.1. Alternative #1: remnant TP movement

Suppose that the [particle-verb] string in the topic is actually the only phonetically realised part of a remnant TP. Such an analysis would be appealing in that it would provide a rather straightforward account of the apparent unity of [particle-verb] topics, and of the obligatoriness of this order. However, when discussing Koopman & Szabolcsi's (2000) analysis the previous chapter, I already dismissed a remnant movement analysis of Hungarian clausal syntax. If the reasoning there is correct, it is quite unlikely that the derivation of predicate clefts should involve remnant movement –at least in Koopman & Szabolcsi's implementation that every subconstituent below the TP level moves independently of the rest. As already discussed, for such an approach to work, one would have to postulate a large number of features and projections whose sole motivation and effect would be to create a remnant TP. Although technically feasible, this option is rather stipulatory and wouldn't offer any interesting insights. In fact, the simplest way to create a remnant TP is to move the entire complement of TP as a whole, as in (114)b. Let me explore this alternative in some more detail, then. For lack of a better term, I will follow Koopman & Szabolcsi's (2000) practice of labelling the required extra landing site as "LP".

114) *A remnant movement analysis of predicate clefting*

a. Base structure
[TP el [T olvasni [ASPP János]]]

b. Move AspP to an LP position
[LP[ASPP János] [TP el [T olvasni [*t*]]]

c. Move *olvasni* to AgrSP, picking up agreement morphology
[[AGRSolvasta] [LP [ASPP János] [TP el [T olvasni [*t*]]]

d. Move *el* to AgrSP
[[AGRS el [AGRS olvasta] [LP [ASPP János]] [TP el [T olvasni [*t*]]]

e. Move the remnant TP *el olvasni* to a topic position
[TOPP [TP el olvasni] [[AGRS el [AGRS olvasta] [LP [ASPP János [*t*]]]]]]

As can be seen, this analysis accounts for the unity of the particle and the infinitive in the topic position in a rather straightforward way, i.e., by having them move as a unit in the first place. Obviously, it still requires restrictions on the type of preverbs that can be pied-piped. For the sake of the argument, though, I'll assume that one can resort to the same rationale as for the two-movement analysis. This said, there are two crucial aspects of this derivation that require some comment. The first one, obviously, is movement of AspP (114)b so as to create a remnant TP. The second one is that the verb and the particle move to the AgrSP layer separately, rather than raising the whole remnant TP as a unit. Let me start by commenting on the former. This step is necessary to ensure that the clefted verb cannot pied-pipe any complements. Now, for this step to have any plausibility, it must be the case that it happens in every clause, even if no predicate clefting takes place. It AspP moved out of TP only in the context of predicate clefting, we would get a circular analysis. We grant, then, that under a remnant movement analysis, step (114)b *always* takes place, whether predicate clefting happens or not.

It is clear that the remnant movement analysis depends on the availability of this particular step. Therefore, it is fair to ask whether it is justified. I think it is not. For one, note that a single step of AspP movement entails that AspP would become an island for subsequent movement operations. Since AspP contains all clausal material but the verb and the particle,[44] this analysis predicts the impossibility of, for instance, wh- extraction of an object. This is quite a reasonable prediction: Chung (2005:16-21) claims that object extraction is indeed impossible in various languages (e.g., Seediq, Malagasy) for which an analogous step of predicate movement is independently justified.[45] However, object extraction is perfectly grammatical in Hungarian, showing that the predicate is not an island. Therefore, I conclude that a remnant TP cannot be formed through a step of AspP movement as in (114)b.

Let me now turn to the second issue I mentioned above, namely, that the verb and the particle have to move to the AgrS layer independently of each other

[44] This much is necessary in order to prevent anything other than the verb and the particle to show up in the topic position.

[45] Note that Malagasy does allow for object movement, but only on the condition that the object is "externalised", that is, moved to a predicate-external position prior to predicate movement. In fact, externalisation is a prerequisite for extraction of any constituent (cf. Pearson 2000, and Rackowski 2002 for Tagalog), which reinforces the idea that extraction out of the moved predicate is impossible.

–see steps (114)c and (114)d. This dissociation is necessary so as to preserve the independence of the particle and the verb in the tail: if they moved as one constituent, they could not be separated again –cf. the examples in (25) above. However, once we accept this much, it is not clear anymore what the advantage of a remnant movement analysis is. If the verb and the particle have to move independently to the AgrS layer, there is no reason why movement to the topic layer shouldn't happen in the same way. Whatever process makes the verb and the particle look like a unit at the AgrSP level can also be invoked to make them look like a unit in the topic position. This counters the main conceptual appeal of the remnant movement analysis, i.e., the account of the apparent unity of the [particle-verb] sequence in the topic position. The conclusion, then, is that a remnant movement analysis does not seem to be superior in any way to a two-movement analysis.

5.2. Alternative #2: selective deletion

As an alternative to a remnant movement analysis, we may propose a selective deletion analysis, similar to the one I examined for Spanish in section 4.4 of chapter two. This analysis would involve movement of a full TP to the topic position, without any of the prior evacuating movements discussed in the previous subsection. The crucial property of this analysis is that the larger part of the fronted TP simply fails to be pronounced in the topic position: the only elements that receive a phonological exponence are the verb and the particle. Additionally, one needs the opposite outcome in the tail: everything is spelled out except for the verb and the particle in the TP layer (in the derivation below, unpronounced copies are marked with strikethrough).

115) *A selective deletion analysis*

a. Base structure
[TP el [T olvasni [ASPP János]]]

b. Move the verb (picking up inflection) and the particle to AgrSP
[AGRS el [AGRS olvasta] [TP el [T olvasni [ASPP János]]]]]

c. Move the full TP to the topic position
[TOP [TP el olvasni János] [AGRS el olvasta [TP el olvasni János]]]

d. Apply selective deletion
[TOP [TP el olvasni ~~János~~] [AGRS el olvasta [TP ~~el olvasni~~ János]]]

Evidently, the big challenge of this type of analysis is to develop a mechanism of copy pronunciation/deletion that yields the right results. For the sake of the argument, let us suppose that this is possible. How would this alternative fare in comparison to the two-movement analysis? As already mentioned in chapter two, section 4.4, a selective deletion analysis manipulates phonological information, but doesn't affect the semantics of the sentence. Therefore, we could reasonably expect that, in (115)d, *János* could be interpreted in the topic position, as that particular copy has been deleted only at PF. In contrast, in a two-movement analysis, there are no such silent copies in the topic position, hence such an interpretation of *János* should be impossible.

In chapter two, I used three different environments to test this prediction for Spanish, namely, (i) quantifier raising, (ii) idiom interpretation, and (iii) NPI

licensing. All three can be replicated for Hungarian, so let me go through them in turn. In (116)a, we can see that a sentence with an existential subject and a universal object is ambiguous between a direct scope reading [∃ > ∀] and an inverse scope reading [∀ > ∃]. This is not the case if the full VP is topicalised (which requires pronominal doubling, see Lipták & Vicente to app.): in (116)b, the inverse scope reading disappears and only the [∃ > ∀] reading remains available. However, if only a bare infinitive is clefted (116)c, the inverse scope reading reappears.[46]

116) *Quantifier raising*

a. Egy lány szokott megcsókolni minden fiút
a girl HAB.3SG PV.kiss.INF every boy.ACC
"A girl usually kisses every boy"
[∃ > ∀ / ∀ > ∃]

b. Minden fiút megcsókolni, azt egy lány szokott
every boy.ACC PV.kiss.INF that a girl HAB.3SG
"Kiss every boy, a girl usually does"
[∃ > ∀ / ?* ∀ > ∃]

c. Megcsókolni, egy lány csókolt meg minden fiút
PV.kiss.3SG a girl kiss.3SG PV every boy.ACC
"As for kissing, a girl kissed every boy"
[∃ > ∀ / ∀ > ∃]

The absence of the inverse reading in (116)b can be explained under the assumption that moved phrases constitute scope islands (cf. Sauerland 1998, Wurmbrand 2004). As this bans QR out of the fronted VP, the direct scope reading is the only one available. If (116)c were derived by full predicate fronting plus selective deletion, we would expect the inverse reading to be absent as well. This is because the structure of both (116)b and (116)c would be identical, and the only difference would lie on the PF representation. However, the inverse reading is perfectly available in (116)c, which suggests it is not derived via predicate fronting.

The second test is based on idiom interpretation. Example (117)a has both an idiomatic and a literal reading. This sentence is also ambiguous under full VP topicalisation (117)b. In contrast, under predicate clefting (117)c, the idiomatic reading disappears, and only the literal reading is available (an asymmetry originally reported by Gécseg 2001). This can be attributed to the fact that idiomatic readings are generally lost when the parts of an idiom are separated from one another. However, if this last example were derived through full predicate fronting plus selective deletion, the absence of the idiomatic reading would be mysterious. Since (117)b and (117)c would differ only in their PF representation, their LF ought to be the same. Therefore, the conclusion is the

[46] These judgements are relative: while the inverse scope reading is clearly available in (116)a and (116)c, it is somewhat marked with respect to the direct scope reading. However, there is still a contrast with (116)b, where inverse scope is impossible. The markedness of inverse scope in (116)a and (116)c can be attributed to the fact that, in Hungarian, universal quantifiers tend to move to a left peripheral position, from where they take scope. Therefore, the existence of an alternative derivation where inverse scope is expressed overtly might make covert QR a dispreferred way of expressing the inverse reading.

same as above, namely, that (117)c is not derived via full TP fronting. The data are replicated in (118) with a different idiom.

117) *Idiom interpretation (I)*

a. Húzza a lóbőrt
pull.3SG the horse.skin.ACC
✓ "He sleeps"
✓ "He pulls the horse skin"

b. Húzni a lóbőrt, azt szokta Mari
pull.INF the horse.skin.ACC that HAB.3SG M
✓ "He sleeps"
✓ "He pulls the horse skin"

c. Húzni, húzza a lóbőrt
pull.INF pull.3SG the horse.skin.ACC
* "He sleeps"
✓ "He pulls the horse skin"

118) *Idiom interpretation (II)*

a. Bedobta a törölközőt
PV.throw.3SG the towel.ACC
✓ "He gave up"
✓ "He threw the towel –and then he had to pick it up"

b. Bedobni a törölközőt, azt szokta Mari
PV.throw.INF the towel.ACC that HAB.3SG M
✓ "He gave up"
✓ "He threw the towel"

c. Bedobni, bedobta a törölközőt
PV.throw.INF PV.throw.3SG the towel.ACC
* "He gave up"
✓ "He threw the towel"

The final test is based on NPI licensing. In (119)b, we can see that predicate clefting doesn't affect the licensing of the NPI object *semmit* 'anything'. However, if the full VP is fronted, as in (119)c, the NPI is illicit. This is because topicalisation of NPI is independently banned (119)d. Again, if (119)c was derived via predicate fronting in the same way as (119)c, we would expect the former example to be ungrammatical as well. The fact that it is not shows that predicate clefting is does not involve movement of the whole TP plus selective deletion.

119) *NPI licensing*

a. Nem olvasott semmit
not read.3SG nothing.ACC
"He didn't read anything"

b. Olvasni, nem olvasott semmit
read.INF not read.3SG nothing.ACC
"As for reading, he didn't read anything"

c. * Olvasni semmit, azt nem szokott
read.INF nothing.ACC that not HAB.3SG
"To read anything, he doesn't usually do that"

d. * Semmit, nem olvasott
nothing.ACC not read.3SG
"Anything, he didn't read"

In order to salvage a selective deletion approach, one would have to postulate that deletion is not just a PF process. That is, whatever is PF-deleted in the topic is also deleted at LF. This hypothesis would derive the correct interpretation of the examples above. However, it would amount to acknowledging that there is no direct evidence for a full TP movement approach. With this conclusion in place, it seems clear that a selective deletion analysis is not on the right track.

5.3. Alternative #3: incorporation reconsidered

Idan Landau (p.c.) proposes a third alternative based on the idea that the [preverb-verb] sequence is, in fact, a complex head created via incorporation. However, this is an exceptional instance of incorporation, in that it happens rather late in the derivation. His proposal goes as follows: first, the preverb and the verb move independently of each other to their respective positions in the inflectional domain (120)a. Next, the preverb incorporates into the verb, forming a complex head, plausibly through morphological merger as defined in chapter one (120)b. This complex head is the constituent that is moved to the topic position (120)c, capturing the intuition that the topic is a syntactic unit. At PF, the lower copy of the complex head is deleted (120)d.[47] This last step entails that the visible tail is constituted by the syntactically independent copies of the verb and the preverb. Therefore, it is possible to also capture the generalisation that they do not form a constituent in the tail. This analysis is schematically represented below.

120) *Landau's analysis of clefting with particle verbs*
a Base structure
[preverb]……[verb]
b. Incorporation
[TP [preverb-verb]……[preverb]……[verb]]
c. Predicate clefting
[TOPP [preverb-verb] [TP [preverb-verb]……[preverb]……[verb]]]
d. PF deletion
[TOPP[preverb-verb] [TP [~~preverb-verb~~]……[preverb]……[verb]]]

As mentioned above, this analysis is appealing in that it derives simultaneously the constituency of the verb and the preverb in the topic position and their non-constituency in the tail position. However, it also suffers from some problems. For one, consider the level at which incorporation (120)b must take place. Given the arguments in sections 2.6.1 and 2.6.2, this must be the TP level. This much is necessary to ensure that the result of incorporation will be the input to predicate clefting. However, the tail positions of the verb and the preverb, while still

[47] Note that it is crucial that PF deletion targets the complex head, and not the independent lower copies. Otherwise, it would not be possible to derive the independence of the verb and the preverb in the tail.

independent, are clearly higher than TP. For instance, the finite verb has to raise from T to AgrS in order to pick up agreement morphology (and then on to C in wh- questions). This movement is done to the exclusion of the preverb, entailing that the verb must excorporate out of the complex head just created. Thus, the representation in (121) below is a more accurate rendition of Landau's proposal.

121) a. Base structure
[TP [preverb][verb]]
b. Incorporation (through m-merger)
[TP [preverb-verb]]
c. Excorporation of the verb to AgrS
[AGRSP [verb][TP [preverb-verb]]]
d. Excorporation of the preverb to AgrS (without incorporation)
[AGRSP [preverb][verb][TP [preverb-verb]]]
e. Clefting of the TP-level complex head
[TOPP [preverb-verb][AGRSP [preverb][verb][TP [preverb-verb]]]]
f. PF deletion of the TP-level lower head
[TOPP [preverb-verb][AGRSP [preverb][verb][TP [~~preverb-verb~~]]]]

The conclusion is that, for Landau's proposal to work, it is necessary to create a complex head solely for the purpose of subsequent predicate clefting, and then immediately destroy it, so as to account for the independency of the verb and the preverb. This is a somewhat strange conclusion, especially given the hypothesis defended in this thesis that excorporation is not possible. More specific to Hungarian, if steps (121)d and (121)e were possible, one would have to block their application in the case of roll-up orders, as described is chapter three. Otherwise, it would be possible to derive a number of ungrammatical orders.

In conclusion, ingenious though it is, this type of incorporation-plus-immediate-excorporation amounts to an *ad hoc* device to generate the correct structure. I do not believe it offers any inherent advantage over the two-movement analysis I have proposed in section 4.2, and consequently, I will not adopt it.

6. Chapter conclusion

In this chapter, I have examined the properties of the Hungarian predicate cleft construction. The main conclusion is that (in the same way as the infinitive focalisation construction studied in the first part of this chapter), bare infinitive clefting is not a case of remnant phrase movement. This conclusion is the consequence of establishing the following points: (i) that Hungarian predicate clefting is movement; (ii) that the moved category is T; and (iii) that stranded material doesn't show signs of having been moved out of TP. Hence, the best analysis is one in terms of long head-to-spec movement, as suggested for Spanish predicate clefting in chapter two.

The main challenge of this section has been the analysis of sentences in which the clefted verb pied-pipes a particle (either the one it selects or one that has climbed from a lower verb). The most interesting aspect of the construction is

that the verb and the particle behave as syntactically independent constituents in the tail, which argues directly against an analysis in terms of incorporation. In order to account for this property, I have proposed a two-movement analysis, in which the particle and the verb occupy independent topic positions. The apparent unity of the particle and the verb in the topic position is derived through the semantic and prosodic properties of these constituents. Although it might not seem obvious at first sight, this analysis derives the properties of Hungarian predicate clefting in a more straightforward way than the alternatives considered in section 5.

Still, a number of questions remain unanswered. For one, I have nothing interesting to say as to why fronted infinitives may not pied-pipe their complements. Note that one cannot attribute this restriction to a general ban on TP movement in Hungarian, as this type of movement is attested in the *azt*-doubling construction (cf. Lipták & Vicente to app.). Since both *azt* doubling and predicate clefting are instances of topicalisation, it is not clear why they have opposite pied-piping restrictions. In fact, the impossibility of pied-piping verbal complements is even more mysterious given that other focalised categories may pied-pipe larger phrases without trouble (cf. Horvath 2000 and Szendrői 2003 for discussion). I have nothing interesting to say about this question, besides the very sketchy comments of the next chapter, and I must therefore leave it for future research.

Outlook

1. Introduction

The thesis I have defended throughout this book is that, on top of phrase movement and head-to-head movement, there exists an additional type of movement that has not been recognised so far –namely, movement of a bare head to a specifier position, across arbitrarily long distances. I have based this claim on a detailed examination of various cases of bare infinitive fronting in Spanish and Hungarian, which I have shown cannot be reduced to remnant movement. However, this conclusion does not entail that similar derivations should be available in every language. In fact, a quick cross-linguistic look reveals that there are languages in which long head-to-spec movement does not seem to be an option. Possibly the most obvious one is English, where only full VP fronting is available.

1) a. ✓ [VP Read the book], he certainly has t_{VP}.
   b. * [V Read], he certainly has t_{V} the book

I do not think, though, that this is a problem for my analysis. My proposal is that long head-to-spec movement is a possible way in which predicate fronting can be accomplished, but it does *not* follow from this that this option should be attested in every language. Whether predicate fronting is done via VP movement (whether remnant or not), long head-to-spec movement, or both, is subject to parametric variation. Note that, by saying this, we predict that there should be languages in which predicate fronting can only be done through long head-to-spec movement, and VP movement is disallowed. We have seen in chapters three and four that Hungarian is such a language. Between English and Hungarian, we find Spanish, which allows both long head-to-spec movement and VP movement. In a nutshell, the theory of movement I have developed in this dissertation accommodates the following three-way typology.

2) *A typology of predicate movement*
Languages with only (remnant) VP movement – English, Niuean, Malagasy…
Languages with only long head-to-spec movement – Hungarian, Bulgarian, Serbo-Croatian…
Mixed languages – Spanish, German, Hebrew…

Note that I am making two assumptions here. First, I am taking full VP movement and remnant VP movement to be essentially the same phenomenon. I think this is a reasonable assumption, as the process that creates a remnant VP in the first place is independent of the latter movement of VP. This is easily seen in German, where the operation that creates remnant VPs (scrambling) can take place without subsequent VP movement. Conversely, VP movement can happen without scrambling having taken place previously.

Second, I am including verb initial languages (such as Niuean and Malagasy) in the sample, as it has been argued in recent years that their VSO/VOS orders result not from verb movement, but from movement of a (remnant) VP to SpecTP. This is a somewhat different situation from the rest of the languages examined, in that V(P) fronting does not happen for discourse related reasons. Rather, it has been argued that the peculiarity of these languages is that the EPP feature on T is satisfied by the predicate, not by the subject (cf. Massam & Smallwood 1997).[1] The point, however, is not what the trigger of V(P) movement is in this languages, but that they do have V(P) movement to begin with. Given this consideration, their inclusion in the sample is, I believe, justified. In the following section, I take a more detailed look at some of these languages so as to support the divisions in (2). Afterwards, in section 3, I offer a brief discussion of the theoretical and typological consequences of this survey.

2. Expanding the data set

2.1. Languages with only (remnant) VP movement: Niuean

Niuean is an Oceanic language (Tongic subgroup) that has a default VSO/VOS order. Traditionally, verb initial languages have been analysed in terms of verb movement to a head to the left of the surface position of the subject. However, Massam has argued in a series of articles (Massam 2000, 2001, 2005, see also Massam & Smallwood 1997 and Otsuka 2005) that the verb initial pattern of Niuean is best analysed in terms of (remnant) VP movement. Thus, Niuean is quite different from the languages I have examined in the previous chapters, in that the verb initial order is not the result of topicalisation/focalisation. Rather, it arises due to the fact that some other factors make it the default order of the

[1] Note, nonetheless, that the adequacy of a VP movement analysis of Niuean/Malagasy is independent of whether Massam & Smallwood's particular implementation is correct or not.

language. In particular, Massam & Smallwood argue that, in these languages, the EPP feature on T is satisfied by a predicate, not by a subject.

Massam's analysis is quite straightforward: first the object moves out of VP. This movement is motivated for case/agreement reasons, or, if the object is specific, as a means to escape existential closure (cf. Diesing 1992). Then, the remnant VP moves in order to satisfy the EPP feature on T. This derives the VSO order characteristic of Niuean. An example is given in (3), and its simplified derivation in (4). In the interest of exposition, I use English words in the derivation

3) Ne kai he pusi ia e moa
PST eat ERG cat that ABS bird
"That cat ate the chicken"

4) *A derivation for (3)*
a. Base structure
[PST [cat [VPeat bird]]]
b. Object shift out of VP
[PST [cat [bird [VPeat t_{DP}]]]]
c. Remnant VP movement
[PST [VP eat t][cat [bird [t_{VP}]]]]

Massam provides various pieces of evidence in favour of this approach to Niuean VSO orders. The most compelling one, I believe, is the phenomenon of pseudo noun incorporation (PNI), described in detail in Massam (2001). The phenomenon is the following: as mentioned above, it is sometimes possible to have a VOS order as an alternative to VSO. This alternative is exemplified in (5).

5) *Niuean (Massam 2001:157)*
Takafaga ika tumau ni a ia
hunt fish always EMPH ABS he
"He is always fishing"

At first sight, one might be tempted to analyse this example in terms of incorporation of the object into the verb. However, such an analysis faces various theoretical problems. For instance, it would violate the Mirror Principle, which states that incorporated categories must surface to the left of their host, not to the right. However, the most powerful argument against an incorporation analysis is the fact that the PNI object can be of arbitrary size and complexity. The two examples in (6) illustrate PNI of noun phrases containing, respectively, a coordinate structure and a subjunctive relative (equivalent to an infinitival relative).

6) a. Ne [VP kai sipo mo e ika mitaki] a Sione
PST eat chip and ABS fish good ABS S
"Sione ate chips and good fish"
b. Ne [VP kumi motu ke nonofu ai] ni a lautolu
PST seek island SUBJ settle there just ABS they
"They just looked for an island to settle in"

Under a VP movement account, (6)a and (6)b are simply cases in which the object has failed to evacuate VP prior to movement of the latter. Consequently, it gets pied-piped to the initial position, deriving the VOS order. Given the internal complexity of these constituents, it is quite clear that they cannot be derived via incorporation. Furthermore, a look at the class of objects that can be pied-piped provides extra support for a VP movement analysis. Massam (2001:168) points that PNI is blocked if the objects carry case markers (7)a, numeral determiners (7)b, or possessive markers (7)c.

7) a. * Ne [inu **e** kofe kona] a Mele
PST drink ABS coffee bitter ABS M
"Mele drank the bitter coffee"

b. * Kua [holoholo **tau** kapiniu] a Mele
PERF wash PL dishes ABS M
"Mele washed the dishes"

c. * Ne [vali fale **ha** Mele] a Sione
PST paint house GEN M ABS S
"Sione painted Mele's house"

In fact, Massam claims that only non-specific indefinite objects may undergo PNI. This is an interesting conclusion, as these objects are the ones that typically fail to move out of VP (cf. Diesing 1992). Now, in the examples in (7)b and (7)c articles, and possessive markers all trigger a definite reading on the object. If definite objects need to move out of VP, then it will not be possible to pied-pipe them and the ungrammaticality of these two examples follows. The same reasoning holds for (7)a on the assumption that case markers (such as the absolutive *e*) are associated to a VP external projection. In conclusion, pseudo noun incorporation data show quite clearly that Niuean VOS orders are derived via VP movement to the left of the subject. In the absence of evidence to the contrary, it is quite reasonable to assume that VSO orders involve a similar derivation. The only difference would be that, in VSO orders, the object extracts out of VP prior to VP movement, as in the derivation in (4).

The question at this point is whether Niuean can also resort to long head-to-spec movement to derive some of the verb initial orders. The evidence must be constructed carefully, as Massam argues that the constituent that undergoes fronting is quite small, namely, the core VP (i.e., smaller than *v*P). This constituent is presumably small enough that objects can move out of it simply to escape existential closure, as hinted at above. The relevant datum, therefore, would be a grammatical case of fronting of a verb to the exclusion of a complement that can be independently shown not to have moved out of VP. We have already identified one such class of objects above, namely, non-specific indefinites that undergo PNI. Therefore, in Niuean can resort to long head-to-spec movement, it ought to be possible to construct sentences in which a verb strands a complement that can otherwise be pied-piped. However, Diane Massam (p.c.) claims that, to the best of her knowledge, such sentences are ungrammatical: if an object can be pied-piped along with the verb, then it must be. On the basis of this restriction, we can conclude that Niuean verb initial orders are derived exclusively via VP movement, not long head-to-spec movement.

2.2. Languages with only long head-to-spec movement: Slavic

Slavic languages feature a participle fronting construction in their complex tenses. In this construction, the auxiliary is immediately preceded by the participle just in case the clause contains no overt subject. This is exemplified in (8) for Serbo-croatian.[2]

8) *Serbo-croatian*
   a. Ja sam čitao knjigu
      I am read.PART book
      "I have read the book"
   b. [V Čitao] sam knjigu
      read.PART am book
      "(I) have read the book"

Bear also in mind that an analysis based on remnant VP fronting is quite unlikely to be correct. In most Slavic languages, full VP fronting is banned, as shown again for Serbo-croatian in (9). It would be surprising if remnant VPs could undergo fronting but full VPs could not.

9) *No full VP fronting*
   * [VP Čitao knjigu] je (Jovan)
     read.PART book is J
     "Read the book, Jovan has"

Lema & Rivero (1987) and Rivero (1991) proposed that the participle undergoes long head movement from V^0 to C^0, without touching down in T^0. In principle, this should be a violation of the HMC, but Lema & Rivero circumvent it by capitalising on the fact that the HMC is actually a theorem derived from the ECP (see chapter one for discussion). More specifically, they claim that T^0 is not a governing head in the relevant Slavic languages, hence it doesn't count as an intervener between the fronted participle and its trace. Ingenious though it is, there are various reasons against this analysis. For instance, if the auxiliary is in T^0 and the participle is in C^0, it is predicted that subjects, which can independently appear in SpecTP, will also be able to appear between the auxiliary and the fronted participle. The same prediction holds for adverbs. In reality, though, this is not so, as shown in (10) illustrates for Bulgarian.[3]

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[2] Note that in these languages, what is fronted is a participle, not an infinitive as in Spanish or Hungarian. While this is an interesting difference on its own right, it is not relevant for the issue at hand, since I am only concerned with the structural relationships between the fronted category and its complement.

[3] Another potential argument against Lema & Rivero's analysis is that participle fronting can happen in embedded clauses, as in (i). Embick & Izvorski (1995) and Wilder & Ćavar (1999) claim that this should not be possible if both the fronted participle and the complementiser are competing for the same position. However, these data constitute an argument against Lema & Rivero only to the extent that one can show that both complementisers and fronted participles are competing for exactly the same C^0 head, which is not so easy to show. Therefore, although compatible with the hypothesis presented here,

10) a. * Pročel **Petur** e knigata
read P has book
"Petur has read the book"
b. * Pročel **rado** e knigata
read gladly has book
"He has read the book gladly"

In order to circumvent this problem, Bošković (1997) and Wilder & Ćavar (1999) claim that the participle adjoins to T^0. However, Migdalski (2006) points out that this analysis cannot predict the ungrammaticality of examples like the Serbo-Croatian (11), in which an overt subject precedes the [participle-auxiliary] sequence. If the participle is adjoined to T^0, then SpecTP ought to be a licit surface position for subjects.

11) * Jovan poljiubio je Mariju
J kiss is M
"Jovan has kissed Maria"

Against this background, Migdalski (2006, ch. 2) develops an analysis that builds quite crucially on the complementary distribution of overt subjects and fronted participles. He argues that, in Slavic, both subjects and participles are specified for ϕ features,[4] so in principle both are eligible for movement to SpecTP. Since overt subjects are generated in a position higher than participles, they are closer to T^0 and therefore block participle movement (i.e., a standard relativised minimality effect). However, if the subject is not phonetically realised, then it is the participle that moves to SpecTP, giving rise to the [participle-verb] order. As Migdalski points out, this analysis assumes that subjects and fronted participles compete for the same landing site, namely, SpecTP. In order to make this conclusion compatible with the standard theory of movement, he proposes that participle fronting is actually movement of a remnant VP.

Although Migdalski's analysis derives a large number of properties of the construction (see his work for details), it raises the question of how to create a remnant VP. In particular, he shows that Slavic does have some object shift. However, this is not enough. Given that the fronted participle may not pied-pipe *any* VP internal material, it is necessary to show that object shift applies always to *every* VP internal constituent. This is not so easy to accomplish, and in fact Migdalski ends up conceding that in some cases (e.g., PP complements) it is quite difficult to find a plausible trigger for movement. In the case of adverbs, he solves the problem in a rather brute force way, namely, by stipulating that adverbs are never generated inside VP in the first place. I find this a rather unconvincing

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Embick & Izvorski's data cannot be considered a direct argument against Lema & Rivero's analysis.

i) Rasbrah ce pročel beše knigata
understood.1SG that read be.2SG book
"I understood that you had read the book"

[4] He supports this hypothesis by pointing out that at least in some Slavic languages, participles inflect for ϕ features.

aspect of an otherwise quite elegant analysis. However, if one assumes that bare heads may move to specifier positions, it is possible to solve this problem while at the same time preserving the rest of the insights of Migdalski's analysis.

2.3. Mixed languages

2.3.1. German

As is well-known, in German it is possible to topicalise a participle to the exclusion of its complements, which construction is commonly referred to as "partial VP fronting". This construction coexists with a full VP fronting alternative, in which the verbal complements are pied-piped. Examples of both types of fronting are provided below.

12) *German*

a. [V Gelesen] habe ich das Buch t_V
read have I the book
"I have read the book"

b. [VP Das Buch gelesen] habe ich t_{VP}
the book read have I
"I have read the book"

The analysis of (12)a in terms of remnant VP fronting goes back to den Besten & Webelhuth's (1987). Later on, Müller (1998) extended the empirical base, providing what, to date, remains the most detailed analysis of this construction. The main appeal of the analysis is that it builds on two operations that are independently attested in German, namely (i) object scrambling out of VP, and (ii) full VP fronting. In fact, den Besten & Webelhuth emphasise that the independent availability of object scrambling in German constitutes a crucial part of their analysis. Because of this, their analysis is well-motivated, and I believe it is correct in the vast majority of cases. Nonetheless, Fanselow (2001) points out some cases in which it fails. His argument builds on the observation that even constituents that resist scrambling can be stranded under partial VP fronting. For instance, in (13)a and (13)b, we can see that the resultative adjective *roh* 'raw' cannot be scrambled to the left of the direct object, which Fanselow takes as an indication that it cannot move out of VP. As expected, a participle fronting sentence in which *roh* has undergone scrambling is also ungrammatical (13)c. Surprisingly, though, the same sentence is grammatical if *roh* stays in an unscrambled position (13)d. Therefore, this example cannot be derived by remnant movement, at least inasmuch as a remnant movement analysis is dependent on the availability of scrambling.

13) *German*

a. …dass der Karl das Fleisch **roh** gegessen hat
that the K the meat raw eaten has
"…that Karl has eaten the meat raw"

b. * …dass der Karl **roh** das Fleisch gegessen hat
that the K raw the meat eaten has
"…that Karl has eaten the meat raw"
c. * Gegessen hat der Karl **roh** das Fleisch
eaten has the K raw the meat
"Karl has eaten the meat raw"
d. Gegessen hat der Karl das Fleisch **roh**
eaten has the K the meat raw
"Karl has eaten the meat raw"

Müller (1998) acknowledges that data like these are problematic for a remnant movement approach. He proposes that *roh* in (13)d undergoes string-vacuous scrambling out of VP, which in turn feeds remnant VP movement. Although technically feasible, this analysis is somewhat unappealing in that there is no independent evidence for scrambling of *roh*: on the one hand, it is string-vacuous, and on the other hand it doesn't seem to affect the interpretation of the adjective in any discernible way. The only support for this operation is the hypothesis that it feeds remnant movement, which is circular reasoning. In contrast, no such problem arises if we acknowledge that a bare head may undergo A-bar movement. In (13)d, *gegessen* 'eaten' simply moves on its own to the left edge of the clause, without pied-piping VP-internal material.

2.3.2. Hebrew

Landau (2006) shows that Hebrew predicate clefting, in the same way as Spanish, exhibits both full VP clefting and bare infinitive clefting. The two variants are illustrated in (14)a and (14)b, respectively.

14) a. [VP Liknot et ha-praxim], hi kanta
buy.INF ACC the.flowers she bought
"As for buying the flowers, she bought them"
b. [V Liknot], hi kanta et ha-praxim
buy.INF she bought ACC the.flowers
"As for buying, she bought the flowers"

As already discussed in chapter two, Landau goes on to show that Hebrew predicate clefting is an instance of movement, as it obeys the standard locality constraints and is incompatible with genus-species environments.

15) *Locality in Hebrew predicate clefts*
a. Lenakot et ha-xacer, nidme li še-Rina amra še-Gil
clean.INF ACC the.yard seems to.me that.R said that.G
kvar nika
already cleaned
"As for cleaning the yard, it seems to me that Rina said that Gil already cleaned it"

b. * Likro et ha-sefer, Gil daxa et ha-te'ana še-hu
read.INF ACC the.book G rejected ACC the.claim that.he
kvar kara
already read
"As for reading the book, Gil rejected the claim that he had read it"

c. * Likro, nifgašnu axarey še-kulam kar'u et ha-safer
read.INF met.1PL after that.everyone read.3SG ACC the.book
"As for reading, we met after everyone had read the book"

16) *Genus species effect in Hebrew*

a. * Le'exol dagim, Rina xoševet še'ani oxel salmon
eat.INF fish R thinks that.I eat salmon
"As for eating fish, Rina thinks that I eat salmon"

b. * Letayel le-amerika, tasti le-nyu-york
travel.INF to.America flew.1SG to.New.York
"As for travelling to America, I flew to New York"

Therefore, it is quite clear that movement of full VPs is attested in Hebrew. The interesting question is whether bare infinitive clefting involves long head-to-spec movement or movement of a remnant VP. The latter option would require Hebrew to have a productive process of object movement out of VP, but, as Landau points out, this is not the case. Further, he writes:

> "Perhaps one could argue that the movement vacating VP need not be scrambling, for example, it could be movement for licensing purposes. […] The problem is that such movement is never attested without VP fronting (Hebrew lacking overt object shift), and furthermore, there seems to be no restriction whatsoever on the type of elements that can be stranded in VP fronting (PPs, secondary predicates, etc.). Relabelling "scrambling" as "licensing movement" does not advance our understanding of the construction". [Landau 2006:51]

Given the lack of object movement in Hebrew, it is quite difficult to analyse (14)b in terms of remnant VP movement. Landau himself suggests that a long head movement alternative makes more justice to the data. He doesn't develop a formal analysis, as his focus is on the double pronunciation aspect of predicate clefts, but it seems quite reasonable that long head-to-spec movement is the tool he is hinting at.

2.4. Interim summary

In (2), I proposed a typology of predicate movement based on whether this process in a given language involves phrase movement, long head-to-spec movement, or either. The divisions are repeated here for convenience.

2) *A typology of predicate movement*
Languages with only (remnant) VP movement – English, Niuean, Malagasy…
Languages with only long head-to-spec movement – Hungarian, Bulgarian, Serbo-Croatian…
Mixed languages – Spanish, German, Hebrew…

We have seen in this section that all three types of languages are indeed attested. Beyond this, an important conclusion is that predicate movement is not necessarily triggered by topic/focus features: as we have seen, the trigger for movement in Niuean, Bulgarian, and Serbo-Croatian seems to be the same one as for subject movement, namely, an EPP feature on T (possibly related to ϕ features).[5] Interestingly, while Niuean only has full VP movement (sometimes remnant), South Slavic languages only are able to resort to long head-to-spec movement. One way to interpret these differences is to say that there is only one operation of predicate fronting, and that languages may vary along two different parameters, namely (i) the trigger of the movement, and (ii) the amount of material that is pied-piped. I will comment on this issue a bit further in section 3 below.

At this point, though, let me go into a small digression. Given the typology in (2), the main question that arises is whether there is a way to determine which subgroup any particular language will fall on. This is, in essence, a way of asking what regulates the availability (or not) of both VP movement and long head-to-spec movement. Ideally, it should be possibly to infer the status of any given language on the basis of other properties of that language. Unfortunately, at present I cannot offer this level of insight, as it would require a much more extensive cross-linguistic study than I can undertake in this dissertation.[6] Therefore, for the time being I must stipulate for each language whether it allows

[5] See Jouitteau (2005), who argues that verbal predicates might be specified for N features, at least in verb initial languages.

[6] On the basis of this sample, Lisa Cheng (p.c.) has suggested the generalisation that languages that front a bare form of the verb (i.e., just a bare root without any additional morphology) only have the full VP movement option, whereas languages in which the fronted form must have infinitival or participial morphology may (in principle) have access to both options. This generalisation seems to break down for various languages. Aboh (2004:250) provides the Gungbe example in (i), where a bare verb form is fronted. Koopman (1984) also cites comparable examples for Vata.

i) [**gbá**] (wè) Séná **gbá** xwé ló
build FOC S build house DEF
"Sena BUILT the house"

The final answer, though, depends on whether it can be determined whether (i) involves remnant movement (in which case the generalisation would hold) or not. Aboh argues that the surface position of the object *xwé ló* 'the house' is already a derived position, and that it cannot shift further to the left. Thus, proponents of a remnant movement analysis would have to postulate that what is moved is a copy of *gbá* lower than its surface position in the tail, in the same way as in Spanish and Hungarian. However, this is difficult to determine, given the lack of morphological distinctions between the two instances of the verb. At present, I don't know of any evidence pointing in either direction, so I must leave this point for future research.

full VP movement, bare infinitive movement, or both. Note that, by this, I am not simply referring to word orders. In order to provide a formal analysis, it is necessary to look at more complex properties than just surface patterns.

This is somewhat reminiscent of the task faced by Goldberg (2005) in her study of verb-stranding VP ellipsis. This construction is a variant of regular VP ellipsis in which the verb is not elided because it raises out of VP prior to ellipsis. As she points out, the main difficulty, since the verb is not elided, this construction might easily be misanalysed as object drop. Therefore, one cannot determine whether a given language has verb stranding VP ellipsis just by looking at the surface patterns. Rather, one must first figure out what the rules are regulating object drop in the language in question, and then see if there are any cases of missing objects than cannot be subsumed under these rules. Without this background, it is not possible to determine if a missing object is to be analysed in terms of VP ellipsis or pro-drop. To give an example, she claims that this type of ellipsis is attested in (amongst other languages) Irish, Hebrew, and Swahili. However she also argues that similar patterns in Japanese and Korean can be fully accounted for by appealing to object drop only. Hence, she concludes that Japanese and Korean do not have verb stranding VP ellipsis, even in spite of superficial appearances.

Turning to the realm of predicate fronting, suppose we are dealing with a language that has bare infinitive fronting. What features of that language should one be looking for when determining whether to analyse it in terms of long head-to-spec movement or remnant VP movement? First of all, it is necessary to determine whether bare infinitive fronting coexists with full VP fronting. If this is not the case, and full VP movement is absent (as in, e.g., South Slavic languages, section 2.2, or Hungarian predicate clefts and verb focalisation, chapters three and four), then a remnant VP movement analysis becomes very difficult to sustain. One would have to show beyond reasonable doubt that VP internal constituents move out of VP in every sentence. Unless there is strong evidence in favour of this point, a long head-to-spec movement analysis is the most parsimonious one and should be considered the default hypothesis.

The situation is different in languages like German, Spanish, or Hebrew, where VP movement is independently available. In these languages, it is more difficult to determine whether bare infinitive fronting is due to remnant VP movement or long head-to-spec movement, or both. In order to figure this out, it is necessary to devise reliable tests to detect object movement (or lack thereof), as I have done in chapter two for Spanish. If such tests can show that a stranded complement has not undergone movement, then it must be the case that long head-to-spec movement is available in the language in question. Let me emphasise, though, without such tests, it is pointless to try and determine whether a particular case of bare infinitive movement is best analysed as remnant VP movement or long head-to-spec movement. Consider, for instance, the case of Russian, another language with predicate clefts. Abels (2001) shows that both full VP clefting and bare infinitive clefting are available in Russian. Moreover, locality tests show that predicate clefting must be movement. Focusing on the case of bare infinitive clefting, one might wonder to what extent it is reasonable to analyse it as long head-to-spec movement. The difficulty lies on the fact that, unlike Spanish, Hungarian, or Hebrew, Russian does have a productive scrambling rule (cf. van Gelderen 2003, Bailyn 2003). In fact, Abels (2001) capitalises on the productivity of Russian scrambling to claim that bare infinitive

clefting is always remnant VP movement.[7] However, as I have already said, it is not enough to show that Russian has object movement: one also needs to show that objects stranded under bare infinitive clefting consistently show signs of having undergone movement.

3. The typology of predicate movement

So far, we have seen that there are two ways in which a predicate can be moved to the left edge of the clause: either via phrase movement (whether remnant or not) or via long head-to-spec movement, with languages differing in whether they employ one strategy or the other. This is an attractive hypothesis in that it takes all instances of predicate movement to be variants of the same operation, i.e., movement of a constituent to a specifier position to check the appropriate features (i.e., topic/focus or the EPP on T), with the only difference lying simply on the size of the constituent that is moving. As I argued in the previous section, the latter seems to be an arbitrary property of each language, as there seem to be no implicational relations between the different options, and there doesn't seem either to be a way to predict which option(s) will be available for a given language. Thus, the following grid constitutes a more accurate way of representing the typology in (2). Mixed languages like Spanish, German, or Hebrew are represented in more than one cell.[8]

17) *A typology of predicate movement (revised)*

	topic/focus movement	**EPP satisfaction**
full VP movement	English Spanish Hebrew German Hungarian *azt* doubling	Niuean
Head-to-spec mvt	Spanish Hebrew German Hungarian verb focus Hungarian predicate clefts	Serbo-Croatian Bulgarian

[7] Note, though, that this conclusion is virtually forced upon Abels, since he assumes Mirror Theory (Brody 1997). This framework produces a constituent structure in which heads stand in a domination relation (rather than sisterhood) to their complements. Hence, it is impossible to move a head to the exclusion of its complement, simply because there is no constituent including the head to the exclusion of the complement. As a consequence, he would actually be forced to postulate remnant VP movement even if Russian lacked a productive scrambling rule.

[8] Again, bear in mind that this table is only supposed to represent whether a full predicate moves, or only its head. Cases of remnant movement are still classified in the cells for full VP movement.

Obviously, a more refined typology could be constructed by drawing extra columns, in case it were necessary to accommodate types of movement driven by factors other than topic/focus and EPP satisfaction. However, I believe (17) is quite interesting as a starting point.

Bear in mind, though, that the most important aspect of this conclusion is that it sets the foundations of a theory of movement without the head vs. phrase dichotomy. Generalising from the case of predicate movement, one can argue that all movement processes target a bare head (i.e., a terminal node, as defined in 3.1 in chapter one), and move it to a specifier position: all additional material that moves is actually pied-piped (in a way reminiscent of Chomsky's 1995a feature-movement-plus-generalised-pied-piping hypothesis). I have already used this hypothesis in chapter one so as to explain movement of complex heads. Movement of phrases would simply require pied-piping of an even larger constituent. Obviously, this hypothesis must be coupled with a suitable theory of pied-piping that can offer some insights into all these cases. Developing this type of theory is well beyond the scope of this dissertation, but the interested reader is referred to Heck (2004) for an extended discussion of the relevant issues.

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Samenvatting in het Nederlands

In dit proefschrift wordt het bestaan verdedigd van een type verplaatsing waarvan eerder werd gedacht dat het niet voorkwam, namelijk verplaatsing van een kaal hoofd naar een specificeerderpositie over arbitraire lange afstanden. In eerdere theoretische modellen werd verplaatsing van een hoofd naar een specificeerder dan ook expliciet uitgesloten door een combinatie van X-bar structuur en het Principe van de Lege Categorie (*Empty Category Principle*). Echter met de komst van het minimalistische programma (en in het bijzonder Chomsky's 1995b *Bare Phrase Structure* hypothese), zijn deze principes over boord gezet en kan verplaatsing van een hoofd naar een specificeerderpositie alleen nog door een stipulatie worden uitgesloten. In dit proefschrift wordt de stelling verdedigd dat verplaatsing van een hoofd naar een specificeerderpositie niet alleen bestaat, maar daarnaast een aantal zowel theoretische als empirische voordelen met zich mee brengt in plaats van problematisch te zijn. Ten eerste maakt hoofd-naar-specificeerder-verplaatsing het mogelijk een uniforme theorie over verplaatsing op te stellen, waarin alle verplaatste constituenten, ongeacht hun grootte, naar een specificeerderpositie verplaatst worden. Daarnaast biedt het een eenvoudige alternatieve verklaring voor bepaalde gevallen van partiele verplaatsing van predicaten naar het begin van de zin, waarvoor overblijfsel-verplaatsing (*remnant movement*) geen uitkomst biedt.

In hoofdstuk 1 wordt de theoretische basis voor het proefschrift gelegd. Het hoofdstuk begint met een kritische evaluatie van het onderscheid tussen hoofd- en woordgroepverplaatsing (X^0 en XP-verplaatsing). Dit onderscheid kan uiteindelijk herleid worden tot de basisaanname in de X-bar theorie dat knopen gemarkeerd worden met diakritische tekens die de status van de knopen in de syntactische structuur aangeven. Deze aanname is echter in strijd met het systeem voorgesteld in Chomsky (1995b). In dit systeem wordt het gebruik van diakritische tekens in syntactische structuren namelijk expliciet verboden. De oplossing van dit dilemma wordt aangedragen door de aanname dat het onderscheid tussen hoofden en XPs kunstmatig is en daarom overboord gezet kan worden. De syntaxis maakt weliswaar structuur aan, maar het plakt geen etiketten, zoals 'hoofd' of 'woordgroep', op onderdelen van die structuur. Niettemin hebben bepaalde morfeemgroepen een hogere graad van morfofonologische samenhang dan gebruikelijk. Ik beschouw deze groepen, net als Julien (2002), als datgene wat traditioneel bekend staat als 'complexe hoofden'. Het is belangrijk om er op te wijzen dat dit een puur morfofonologische classificatie is zonder enige syntactische consequentie. Aangezien er geen structurele basis is om verplaatsingsprocessen onderscheid te laten maken

tussen hoofden en woordgroepen, zouden beide soorten constituenten op dezelfde manier verplaatst dienen te worden: met een specificeerderpositie als landingsplaats en met inachtneming van gerelativiseerde minimaliteit (*relativised minimality*) en fasetheorie als de enige lokaliteitsprincipes.

In hoofdstuk 2 wordt een empirisch argument voor verplaatsing van een hoofd naar een specificeerderpositie naar voren gebracht: Spaanse gekloofde zinnen waarin het predicaat voorop geplaatst wordt (1):

1) Leer, ningún estudiante ha leído este libro [*Spaans*]
lezen.INF geen student heeft gelezen dit boek
'Wat lezen betreft, geen student heeft dit boek gelezen'

Net als in verscheidene andere talen waarin deze constructies voorkomt (zie voor een volledig overzicht Kandybowicz 2006:145-146), is de relatie tussen de voorop geplaatste infinitief (*leer*) en het vervoegde werkwoord (*leído*) onderhevig aan de gebruikelijke condities op lokaliteit. Dit wijst erop dat de twee verschijningsvormen van het werkwoord onderdeel uitmaken van een en dezelfde ketting gevormd door A-bar verplaatsing. Op het eerste gezicht lijkt de beste manier om (1) te analyseren te zijn als overblijfselverplaatsing van de VP, net zoals de Duitse gevallen die voor het eerst onder de aandacht gebracht werden door Den Besten & Webelhuth (1987). Een soortgelijke analyse zou technisch simpel en aantrekkelijk zijn. Echter nader onderzoek van de constructie wijst uit dat deze analyse niet stand kan houden. Zou er sprake zijn van VP-overblijfselverplaatsing in (1) dan zou het gestrande lijdend voorwerp uit de VP verplaatst dienen te zijn voor de vooropplaatsing van de infinitief. Echter, een serie testen (variabele binding, interpretatie van indefinieten, mogelijkheden tot subextractie en clitische verdubbeling) wijst uit dat het gestrande lijdend voorwerp niet verplaatst is. Aangezien deze conclusie een overblijfselverplaatsing-analyse direct uitsluit, is het noodzakelijk om een kaal verbaal hoofd gewone A-bar verplaatsing te laten kunnen ondergaan, zoals is toegestaan onder de theorie ontwikkeld in het eerste hoofdstuk.

Hoofdstuk 3 behandelt focalisatie van infinitieven in het Hongaars. Een voorbeeld van deze constructie vindt u in (2), waarin kleine hoofdletters de focalisatie klemtoon weergeven:

2) ÚSZNI akart János [*Hongaars*]
zwemmen.INF wil.3SG J
'János wil ZWEMMEN (en niet WANDELEN)

Ik stel voor om (2) op dezelfde wijze te analyseren als de Spaanse gekloofde zinnen waarin het predicaat vooropgeplaatst wordt, dat wil zeggen door toe te staan dat een kaal verbaal hoofd A-bar verplaatsing ondergaat. Er is echter een complicatie. Het Hongaars kent namelijk ook focalisatie van complexe verbale groepen. Deze complicatie is echter niet echt een probleem voor de voorgestelde analyse. Een diepgaande studie naar de klasse van de complexe verbale groepen die focusverplaatsing toestaan, laat namelijk zien dat deze klasse alleen die complexe verbale groepen omvat die tevens geanalyseerd kunnen worden als een complex hoofd, in de betekenis geïntroduceerd in hoofdstuk 1. Daarom is het noodzakelijk om deze constituent te verplaatsen door een operatie die geen gebruik maakt van overblijfselverplaatsing. In de laatste sectie van dit

hoofdstuk, vergelijk ik deze analyse met de alternatieve analyse van Koopman & Szabolcsi (2000). Deze analyse maakt gebruik van herhaalde overblijfselverplaatsing. Hoewel deze alternatieve analyse ook de geobserveerde patronen in de data kan afleiden, kent het verscheidene problemen waarvan de analyse die hier voorgesteld wordt geen last heeft. Op basis van simpliciteit is daarom mijn analyse te verkiezen boven die van Koopman & Szabolcsi.

In hoofdstuk 4 wordt de studie van het Hongaars voortgezet. Deze concentreert zich op de gekloofde zin met vooropgeplaatst predicaat. Hoewel ogenschijnlijk gelijk aan hun Spaanse tegenhangers, brengen Hongaarse gekloofde zinnen met vooropgeplaatst predicaat een probleem met zich mee wat betreft partikelwerkwoorden, zoals het voorbeeld hieronder laat zien.

(3) Be menni, be ment János [*Hongaars*]
PART gaan.INF PART ging J
"Wat naar binnen gaan betreft, János ging naar binnen"

Er is nogal wat bewijs dat het vooropgeplaatste werkwoord en het partikel samen geen constituent vormen, en daarom niet samen verplaatst kunnen worden. Een overblijfselverplaatsing-analyse zou daarentegen een aantal ongemotiveerde stipulaties vereisen. Dit dilemma wordt opgelost door (3) te analyseren als een geval van parallelle verplaatsing: eerst wordt de infinitief *menni* verplaatst naar een topic-positie gevolgd door verplaatsing van het partikel *be* naar een aparte topic-positie. Het mechanisme van deze verplaatsingen is echter hetzelfde als in de voorgaande hoofdstukken, wat de verplaatsingstheorie in hoofdstuk 1 verder ondersteunt.

Tenslotte worden er in het laatste hoofdstuk gelijksoortige gevallen in andere talen onderzocht. Dit beperkte overzicht laat zien dat verplaatsing van een hoofd naar een specificeerderpositie geen rariteit van het Spaans of Hongaars is, maar dat het voorkomt in een grotere groep talen (Duits, Hebreeuws, Serbo-Kroatisch). Echter er zijn ook talen die geen gebruik maken van deze mogelijkheid (Engels, Niuean) Het opzetten van een typologie van deze constructies vormt een groter onderzoeksproject dat in de toekomst zal worden uitgevoerd.

Resumen en español

Esta tesis defiende la existencia de un tipo de movimiento que, hasta la fecha, se había considerado imposible –a saber, movimiento de un núcleo a una posición de especificador a través de distancias arbitrariamente largas. Este tipo de movimiento estaba explícitamente excluido en modelos teóricos anteriores a consecuencia de la combinación de la teoría de X-barra y del Principio de Categorías Vacías. No obstante, con el advenimiento del programa minimalista, esta restricción pierde fuerza: asumiendo el modelo de estructura sintáctica de Chomsky 1995b (*Bare Phrase Structure*, o BPS), el movimiento de un núcleo a un especificador sólo puede excluirse por estipulación. En esta tesis, se argumenta que, lejos de constituir un problema, la aceptación de este tipo de movimiento conlleva una serie de ventajas, tanto teóricas como empíricas. En primer lugar, hace posible desarrollar una teoría unificada de movimiento, en la que todos los constituyentes se mueven a posiciones de especificador independientemente de que sean núcleos o sintagmas. Además, ofrece una alternativa para ciertos casos de movimiento de sintagmas incompletos para los que no se puede manterner un análisis de movimiento remanente.

El primer capítulo desarrolla la base teórica de la tesis. El punto de partida es una evaluación crítica de la distinción entre el movimiento de núcleos y el movimiento de sintagmas, que se basaba en la asignación de diacríticos (X^0, X', X") a los nodos de la estructura. Esta teoría, sin embargo, es incompatible con la propuesta de Chomsky 1995a de que las estructuras sintácticas no deben incluir tales diacríticos. Este dilema se resuelve asumiendo que la distinción entre núcleos y sintagmas es artificial y, por lo tanto, prescindible. La sintaxis simplemente produce estructuras, pero no las marca como "núcleos" o "sintagmas". Sin embargo, ciertas agrupaciones de morfemas exhiben una fuerte cohesión a nivel morfo-fonológico (ver Julien 2002): estas agrupaciones se corresponden con los "núcleos" de la terminología tradicional. No obstante, estos núcleos son estructuralmente sintagmas, por lo que no es de extrañar que puedan moverse en la manera normalmente reservada a los sintagmas. Siguiendo esta lógica, todos los movimientos, tanto de "núcleos" como de sintagmas acaban en una posición de especificador. El resultado es una teoría de movimiento más simple, dado que elimina la distinción entre movimiento de núcleos y movimiento de sintagmas.

El segundo capítulo desarrolla un argumento empírico a favor de la hipótesis de que los núcleos se pueden mover a posiciones de especificador. Los

datos provienen de la construcción de infinitivo temático en español. A continuación se reproduce un ejemplo de la misma.

1) Mucha gente ha comprado este libro, pero [**leer**, nadie lo ha **leído**]

Al igual que en otras lenguas en las que se encuentra esta construcción (ver la lista de Kandybowicz 2006, p. 146) a relación entre el infinitivo temático (*leer*) y el verbo que lo dobla (*leído*) respeta las restricciones de localidad habituales. Por lo tanto, es razonable asumir que constituyen dos eslabones de la misma cadena de movimiento. A primera vista, esta construcción parece ser un caso de movimiento remanente del sintagma verbal, por analogía con los casos del alemán estudiados por den Besten & Webelhuth 1987. Aunque este es un análisis técnicamente simple y atractivo, un estudio más detallado revela que no es correcto. El prerrequisito indispensable para mantener un análisis de movimiento remanente es que los objetos puedan moverse a una posición externa al sintagma verbal. No obstante, una batería de pruebas (ligado de variables, interpretación de indefinidos, posibilidades de subextracción, y doblado de clíticos) demuestran que los objetos asociados al infinitivo temático no se han movido. En consecuencia, ejemplos como (1) requieren movimiento de un núcleo verbal a una posición de especificador.

El tercer capítulo se centra en la focalización de infinitivos en húngaro. He aquí un ejemplo, donde las mayúsculas indican acento focal.

2) ÚSZNI akart János [*húngaro*]
nadar quiere J
"János quiere NADAR (y no CORRER)"

Una complicación aparente es que el húngaro también permite la focalización de complejos verbales. Sin embargo, este capítulo demuestra que los complejos verbales que pueden focalizarse son sólamente aquellos que muestran características de ser núcleos complejos. Por lo tanto, llegamos a la misma conclusión que en el primer capítulo, es decir, que (2) requiere movimiento de un núcleo a una posición de especificador. La parte final de este capítulo evalúa la alternativa propuesta por Koopman & Szabolcsi 2000, basada en múltiples movimientos remanentes. Debido a su alto grado de complejidad, esta alternativa presenta varios problemas que no aparecen en el análisis propuesto aquí. Por lo tanto, ha de ser desestimada.

El cuarto capítulo continúa la investigación del húngaro, centrándose en la construcción de infinitivo temático. Aunque aparentemente muy similar al español, el húngaro presenta la complicación de los verbos con partícula, como se puede apreciar a continuación.

3) Be menni, be ment János
PRT ir PRT fue J
"Ir adentro, János fue adentro"

La evidencia indica que el verbo topicalizado y su particular no forman un constituyente, por lo que no pueden moverse juntos. Por otro lado, un análisis de movimiento remanente requeriría varias estipulaciones sin motivación alguna. Este dilema se resuelve analizando (3) como un caso de movimiento paralelo de

constituyentes: primero, el infinitivo *menni* se mueve a una posición de tópico, seguido de un movimiento independiente de la partícula *be* a su izquierda. La mecánica de estos movimientos, sin embargo, es exactamente la misma que se discutió en el primer capítulo, y que se ha empleado en los capítulos segundo y tercero.

Finalmente, el último capítulo examina superficialmente otros casos similares en otras lenguas. Aunque un análisis más profundo hubiera sido deseable, estos datos preliminares indican que el movimiento de núcleos a una posición de especificador no es una particularidad del español y el húngaro, sino que se encuentra en otras lenguas (hebreo, alemán, croata…). Sin embargo, también hay otras lenguas que, aparentemente, no hacen uso de esta opción (inglés, niue…). Establecer la tipología de este tipo de construcciones forma parte de un proyecto de investigación que se desarrollará en el futuro.

Vita

Luis Vicente was born in Bilbao (Spain) on the cold rainy Sunday morning of 25th February 1979. After an uneventful childhood and teenage, in 1998 he entered the English Philology program at the University of Deusto. He spent his third year in Manchester, where he started studying linguistics seriously. Back to Spain for his final year, he finally graduated in July 2002 with a bachelor's thesis on Basque relative clauses. Only a few weeks after graduation, he moved to the Netherlands to start working as an AiO at the institute formerly known as ULCL. As part of his graduate education, he spent the spring term 2005 as a visiting student at UMass Amherst. The book you are now holding is the result of part of the research he carried out during his four (and some) years as an inmate of building 1166. He currently lives in Amsterdam, where he leads a double life as an amateur comedian.