

# Non-Verbal Predicates and Predicate Movement in Hungarian

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# Non-Verbal Predicates and Predicate Movement in Hungarian

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*Szüleimnek.*

# Introduction

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## 1.1 Goals

This dissertation aims at contributing to the understanding of the various ways predicative relationships are encoded in natural language. The theoretical goal is to provide evidence for the claim that complex predicates are created in syntax, and that complex predicate formation is a way to license more complex argument structures than simple verbal predicates would. The empirical data come from Hungarian, and the aim is to give an analysis of non-verbal predicates and the way they create complex predicates with verbs.

## 1.2 Theoretical background in a nutshell

This thesis is written in the generative framework of linguistics initiated in Chomsky's work since the 1950s and the Minimalist Program in particular (cf. Chomsky 1995, 2000, 2001a, etc.). The basic assumption of this framework is that some part of grammar is hard-wired in humans, and is common to all of us (this is Universal Grammar, UG). Assuming a universal basis for language makes it easier to explain language acquisition, which is an extremely fast process given the complexity of the system acquired. Work in the area of syntax has been aiming at uncovering the properties of single languages as well as the commonalities to all languages in order to arrive at properties of UG, and thus explain language acquisition.

In the framework of the Minimalist Program, the model of grammar is based on the assumption that syntactic units are sound-meaning pairs that are the result of derivationally created structures. The derivation (computation) takes lexical elements and proceeds with the use of two basic operations: Merge and Move, which are binary operations on lexical units and partial structures. New elements are merged together to form (partial) structures, often

represented as binary tree structures; and sometimes already merged elements are copied and re-merged at the root of the existing tree structure (Move). Then, at a certain point, the built structure is spelled out, which means that it is transferred to the Logical Form (LF), where the syntax-based semantics is computed, and to the Phonological Form (PF), where it gets phonological shape. A further often-made assumption in the theory is that this spell-out happens cyclically, when a “phase” is built (Chomsky 2001b).

More specifically relevant to the discussion here is the analysis of verbs and their arguments in a layered VP-structure in the sense of Hale and Keyser (2002), for example. The lexical projection of V is assumed to involve the internal argument(s) of the verb, that is, the object(s) of transitive verbs and the “subject” (the nominative argument in nominative–accusative languages) of unaccusative verbs. The first projection above VP is vP, which introduces the external argument, that is the subject of unergatives and of transitive verbs. Thus, subject–predicate relations with the verb introducing the arguments are supposed to be uniform.

- (1)  $[_{vP} \text{ EXT } [_{VP} \text{ V INT } ]]$

While the main assertion of clauses is expressed by verbal predicates, we also find various contexts where the predicate is not verbal. What is the structure of these predications, and how are they embedded in the clause? The studies on non-verbal predication and on so-called small clauses have been addressing this issue, along with the problem of identifying a common representation of all predication relations (cf. Williams 1980, Stowell 1981, and subsequent literature). My thesis is based on these assumptions as I develop an analysis of the structure of nominal, adjectival and adpositional predicates in Hungarian and propose a syntactic derivation of their word order properties.

### 1.3 Outline of the thesis

Chapter 2 will provide some information on the syntactic structure of Hungarian sentences and will introduce the data to be considered in detail in the later chapters. I will briefly discuss the left periphery of Hungarian sentences, which includes positions for topics as well as operator positions for *wh*-elements, focus, and negation. Then I will turn to the main topic of this thesis, the so-called Verbal Modifiers, which appear in the preverbal position in neutral sentences. I will discuss some previous approaches to the syntax of these elements and will propose that all Verbal Modifiers are predicative elements and that this accounts for their syntactic behavior. I will present my main hypothesis with respect to the syntax of verbal modifiers in terms of predicate movement and syntactic complex predicate formation. The chapters that follow will focus on various instantiations of this predicative structure and the movement of predicative elements.

Chapter 3 offers an analysis of Hungarian sentences containing the copula as the verbal element in the sentence. The main argument is that in copular constructions, the non-verbal predicate moves to the preverbal position as an overt syntactic way of complex predicate formation (cf. (2)). In copular sentences, the main predicate of the clause is the non-verbal one, the copula being a functional element that can stay silent in the most unmarked case. It will be argued that this movement of the predicate is lacking in existential sentences (e.g. (3)). This correlates with a difference between categorical andthetic judgments:thetic sentences are those where the predicate does not move to the pre-verbal position.

- (2) a. A torta finom volt.  
 the cake delicious was  
 ‘The cake was delicious.’  
 b. A torta nagy meglepetés volt.  
 the cake big surprise was  
 ‘The cake was a big surprise.’  
 c. A torta a hűtő-ben volt.  
 The cake the fridge-INE was  
 ‘The cake was in the fridge.’
- (3) Van egy torta a hűtő-ben.  
 is a cake the fridge-INE  
 ‘There is a cake in the fridge.’

Chapter 4 argues for complex predicate formation in the case of predicative PPs. Predicative PPs do not only move next to the copula, but are also preverbal when they are predicative complements (cf. (4)).

- (4) Az egér az ágy alá szaladt.  
 the mouse the bed under.to ran.3SG  
 ‘The mouse ran under the bed.’

A further claim of this chapter is that particles are part of the maximally extended projection of PPs, which is a small clause. A functional hierarchy with Place and Path projections for postpositions and a functional *p* projection for particles is proposed to accommodate the adpositional elements. Particles are heads of the functional projection *p*P which is the instantiation of den Dikken’s (2006) Relator (i.e., a functional element that connects a subject and a predicate), thus their movement into the preverbal position (cf. (5)) is another case of complex predicate formation, as well as a syntactic way of licensing directional complements.

- (5) A macska fel-mászott a fá-ra.  
 the cat up-climbed.3SG the tree-SUB  
 ‘The cat climbed up the tree.’

Chapter 4 also discusses the syntax of other secondary predicates in Hungarian that often do not involve (obviously) locative PPs or particles, but can still be argued to be realizations of an adpositional predicative structure. Depictive, resultative, and dative-marked predicates with *consider*-verbs are such cases (cf. (6), (7), and (8), respectively).

- (6) Mindig feketén iszom a kávé-t.  
 always black.ADV drink.1SG the coffee.ACC  
 ‘I always drink coffee black.’
- (7) A szakács apró-ra vágta a zöldségek-et.  
 the cook small-SUB cut.3SG the vegetables-ACC  
 ‘The cook cut the vegetables small.’
- (8) A vásárló túl édes-nek tartja a tortá-t.  
 the customer too sweet-DAT consider.3SG the cake-ACC  
 ‘The customer considers the cake too sweet.’

These case-marked predicates are also preverbal, but it will be shown that depictives are focused and are therefore not relevant for the discussion of predicate movement. Resultatives and dative-marked predicative complements of *consider*-type verbs will, however, be shown to form complex predicates with the verb in neutral sentences, and therefore fall under the unified treatment of predicate movement.

Chapter 5 will discuss the details of predicate movement. Two approaches in the literature that explicitly take the movement under consideration to be predicate movement will be discussed. The two analyses have different premises and predictions, and it seems that both of them need some additional assumptions to account for the data under consideration. Chapter 6 will conclude.

# Predicate Movement: Theoretical Background

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## 2.1 Introduction

Hungarian has become known as a language of relatively free word order, the word order of which is affected by the information structural properties of sentences. The important notions concerning restrictions on the surface word order are not the usual structural differences between subject and object constituents that we find, for example, in English. However, information structural notions, such as the distinction between topic and comment, and focus and background, play a crucial role (see e.g. Kálmán 1985a,b; Horvath 1986; É. Kiss 1987, 2002, 2005; Brody 1990, 1995; etc.). Furthermore, there are various seemingly diverse elements that have to immediately precede the verb in neutral sentences; these are the so-called Verbal Modifiers (VM) (cf. Kálmán 1985a; Horvath 1986; Komlósy 1992, 1994; a.o.). This thesis is about the syntax of such preverbal elements, focusing in more detail on a subset of them. The preverbal position has received a lot of attention both because of the syntactic and semantic properties of the preverbal elements and because of its interaction with the verb and the left periphery of the clause. I will attempt to contribute to the understanding of the syntactic make-up of the preverbal position and its relation to the verbal predicate.

This chapter introduces the basic assumptions of the thesis and puts forward the main proposal that will be elaborated on in the following chapters. In order to do that, I will have to pull together a few strings related to different issues. First, section 2.2 will introduce some general syntactic properties of Hungarian. I will not give a full description of Hungarian sentence structure, but will concentrate on those aspects that will be relevant for the discussions to follow (cf. É. Kiss 2002 for a detailed overview of the properties of Hun-

garian sentence structure). The most important of these are the restrictions on Hungarian word order, the interactions between the left periphery of the clause and the preverbal position, and the class of Verbal Modifiers. Section 2.3 summarizes earlier accounts for the syntactic behavior of Verbal Modifiers, and discusses their merits and shortcomings. The outcome of the examination of VMs will be that they are predicates. Therefore, in the second part of the chapter, I will turn to the discussion of subject–predicate relations in the literature on generative grammar. In section 2.4, I will introduce the basic properties of predication that are relevant for the whole of this thesis by going through the development of some ideas in the past decades (some of the more specific details are in the chapters to follow). Section 2.5 will consider complex predicate analyses of similar phenomena in other languages, and arrive at the conclusion that a mixed analysis is preferable. Finally, section 2.6 presents the gist of the analysis.

## 2.2 Hungarian word order

The fact that the “freedom” of word order in Hungarian does not equal free permutation of clausal constituents in all contexts is a central issue in the research on Hungarian syntax. That these permutations are restricted is evident from the fact that, although a sentence may have several grammatical word order variants, these variants generally do not mean the same. Variation in surface word order corresponds to variation in meaning, especially including information about the way the discourse is structured. A detailed illustration of this is given by É. Kiss (1987, 38ff), who lists all the possible permutations and stress patterns of the simple sentence in (1), showing that changes in the word order and/or the stress pattern go together with changes in the meaning of the sentence.

- (1) János szereti Mari-t.  
 John loves Mary-ACC  
 ‘John loves Mary.’

Before we turn to the variation, it has to be noted that we need to distinguish between neutral and non-neutral sentences. This term refers first and foremost to a prosodic property of sentences: neutral sentences have level prosody, while non-neutral sentences exhibit emphatic or corrective stress (Kálmán 1985a,b, Kálmán et al. 1986). In sentences with level prosody the main stress of the clause is on the verb or on the preverbal constituent. The corrective stress pattern comes about when the clause has a constituent that requires extra stress, and this erases the stress on the constituents following it. Typical elements that require extra stress are focused constituents and *wh*-phrases. Emphatic stress, on the other hand, involves focusing the verb or the VP, which also means extra stress on the verb. Since the verb would receive the main stress of

the clause anyway (unless there is a VM preceding the verb), emphatic stress just means that the corrective stress is placed on the verb.

To illustrate the differences, consider now some of the intonational and word order variants of the simple sentence in (1). The intended stress patterns are indicated on the phrases: constituents bearing extra stress are in small caps, the notation thus indicating their focus status (see Section 2.2.1.3 on stress requirement on focus). In (2a), the sentence from (1) exhibits a neutral stress pattern: the constituents all receive stress, the sentence shows level prosody with the main sentential stress on the verb; this is a neutral sentence. The other sentences contain an extra stress on one of the constituents, and this takes away the stress from the verb or the postverbal constituents. In (2b), the subject *János* is focused and receives extra, corrective stress, and in (2c), it is the verb that is focused. These changes in the stress pattern do not involve word order changes. In (2d), the word order changes, and it is the object argument that is interpreted as focus; in fact this word order has no neutral interpretation.

- (2) a. János szereti Mari-t.  
 John loves Mary-ACC  
 ‘John loves Mary.’
- b. JÁNOS szereti Mari-t.  
 John loves Mary-ACC  
 ‘It is John that loves Mary.’
- c. János SZERETI Mari-t.  
 John loves Mary-ACC  
 ‘John does love Mary.’
- d. MARI-T szereti János  
 Mary-ACC loves John  
 ‘It is Mary that John loves.’

As we can see from the English renderings of these sentences, the change in the intonational pattern results in different meanings assigned to the same string of words. Similarly, changing the word order has an effect on the semantics of the clause. That the permutation of word order results in meaning differences indicates that the word order is in fact restricted by some sort of hierarchical organization in the sentence, albeit along different lines than the more familiar subject–object asymmetries found in languages like English.

The situation is more complex in most cases, since there are different types of elements that prefer to be in the left periphery of the clause. In the literature on Hungarian, the term *left periphery* is used to refer to the preverbal field of the clause excluding the immediately preverbal position of neutral clauses, which hosts Verbal Modifiers. VMs can be particles, PPs, bare noun arguments, infinitival complements or secondary predicates. Verbal Modifiers are not scope taking operator-like elements as opposed to the constituents in the left periphery (apart from topics), this has also been connected to analyses that assume that VMs are either base-generated preverbally or moved there

by means of A-movement, while the left peripheral elements take their surface positions as a result of A'-movement. Verbal Modifiers will be the subject of this study and since they interact with the preverbal field, some properties of the left periphery are also of interest.

A Hungarian clause can thus be divided into the following parts: the left periphery includes Topic, Quantifier and Focus Phrases; the preverbal position is the place of VMs; and the postverbal part of the clause is everything that follows the verb.

(3) [ [left periphery] [ VM V [postverbal field] ] ]

As for the postverbal part of the clause, it does not seem to show the restrictions describable in terms of syntactic function, operator status or any other notion that is relevant in the ordering of the preverbal field. Kálmán (1985a,b) has noted that the free word order property of the postverbal field of Hungarian manifests itself best in non-neutral sentences. The examples in (4) show that various orderings of postverbal arguments and adjuncts are possible without affecting the grammaticality or the meaning of the clause.

- (4) a. JÁNOS vitte vissza a könyv-et a könyvtár-ba tegnap.  
 John took.3SG back the book-ACC the library-ILL yesterday  
 'It was John that took the book back to the library yesterday.'
- b. JÁNOS vitte a könyv-et vissza a könyvtár-ba tegnap.
- c. JÁNOS vitte tegnap vissza a könyvtár-ba a könyv-et.
- d. JÁNOS vitte tegnap a könyv-et vissza a könyvtár-ba. etc.

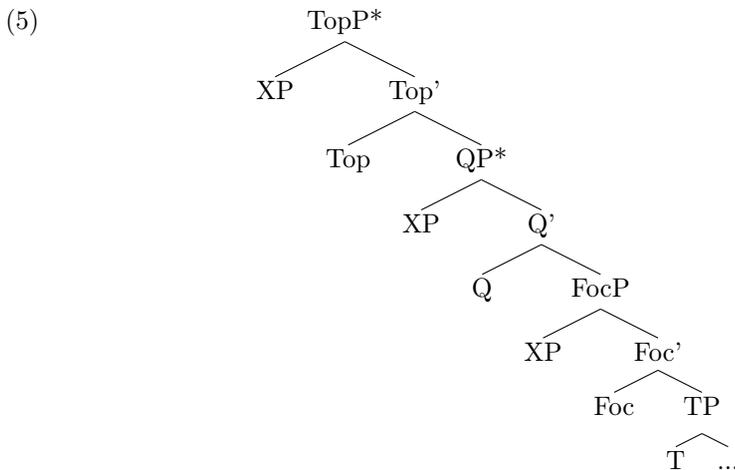
The base-generated word order of the Hungarian VP as well as its free surface word order have been the subject of much discussion in the generative literature, starting from the 1980s. Horvath (1986) defended the view that Hungarian is a (more or less) regular SVO language, with one essential difference from English and other SVO languages. In Hungarian, there is a position to the left of the verb, which is the place of base-generated complements; basically, one designated argument per verb is generated to the left of the verb. This designated position is also the host of focused elements. When there is a focused phrase in the clause, the designated argument is postverbal, it is adjoined to V during the derivation. Horvath (1986) analyzes focus movement as substitution into this preverbal position, as the two types of elements show complementary distribution preverbally.

While Horvath (1986) proposed an SVO word order, É. Kiss (1987) argued for a non-configurational VP, where the arguments are generated in a flat structure, thus accounting for the lack of word-order restrictions typical of (subject-)configurational languages. The VP is preceded by operator positions that are hierarchically organized. Another proposal regarding the base word order of the language came from Marácz (1989), who argued that Hungarian is a head-final language with an SOV base-order.

Recently, Surányi (2006) has argued for a configurational vP and a base-generated SVO order in Hungarian, and he analyzed the surface word-order variation as the result of scrambling. Under this approach, the variation in word order is due to the (Japanese-style) scrambling of constituents. Surányi's (2006) analysis of configurability is in line with the cross-linguistic proposals to account for subject-object asymmetries. He also follows previous assumptions about obligatory verb movement out of the vP as argued for by Puskás (2000). I will follow this line of analysis.

### 2.2.1 The word order of the left periphery

At the left periphery of Hungarian clauses, we find topics, (distributive) quantifiers and focus elements, following each other in this order (cf. Kenesei 1986; É. Kiss 1987; Brody 1990; etc.). The basic order is illustrated in (5) (where the asterisk next to Topic and Quantifier Phrases means that they are iterable), with an example given in (6).



- (6) [<sub>TopP</sub> Anna [<sub>QP</sub> mindenhol [<sub>FocP</sub> EZT A KÖNYVET olvassa]]].  
 Anna everywhere this.ACC the book.ACC reads  
 'It is this book that Anna reads everywhere.'

Other orderings of these elements in the left periphery are not allowed: focus and quantifiers cannot precede the topic(s), and focus cannot precede the quantifier(s), either. The result of this is that the sentence displays a topic-comment structure with the topic(s) preceding all elements in the comment part of the clause. The hierarchical organization of the left periphery of Hungarian clauses fits in with the recent developments in the cartographic work on the left periphery of clausal structure that posits the same sort of projections for other languages as well (cf. Rizzi 1997).

### 2.2.1.1 Topic

The topic of Hungarian sentences is identified as a constituent in the left periphery of the clause that determines what the sentence is about (É. Kiss 1987, 2005), it is the logical subject of the clause.<sup>1</sup> There is another type of topic – the contrastive topic – that has a different semantic role, I will return to that after the discussion of “aboutness” topics.

Most of the time when we speak about the topic of a sentence in Hungarian, we mean both a syntactic position in the clause and a semantic function. Because of the “aboutness” in the definition of topic, there can be all sorts of constituents in the topic position, but the topic of the clause has to be [+referential], as only about referential XPs can we state properties. In fact, it is not enough for topics to be referential, they also have to be [+specific] in the sense of Enç (1991), referring to those elements that have an established referent in the discourse (É. Kiss 2002). É. Kiss (2005) examines what the conditions on topicalization are, and she relates it to event structure in the sense that constituents introducing new information in the clause cannot be topics (even if they qualify otherwise, i.e., if they are definite). All other specific constituents can appear in topic position if the sentence makes a predication about them.

There can be more than one topic constituent in the clause. For example, the sentence in (7) has three topics. In clauses with multiple topics, the logical predication is about the n-tuple of elements in topic positions (É. Kiss 2002), the predication in (7), for example, is about a certain time, place and set of entities.

- (7) [<sub>TopP</sub> Ma [<sub>TopP</sub> a buszon [<sub>TopP</sub> Peti [csak a fociról  
           today           the bus.SUP           Peti only the football.DEL  
           beszélte.]]]]  
           talked.3SG  
           ‘Today Pete was only talking about football on the bus.’

Topics are assumed to move into topic position (TopP) by A'-movement in order to establish a relation with the rest of the clause. The semantic relation is that of a topic and a comment (cf. É. Kiss 2002).

Contrastive topics have different properties than aboutness topics. The specificity restriction does not hold for contrastive topics: non-specific nominals and predicates can be contrastively topicalized as well (É. Kiss 2002, 2005). Contrastive topics show a stress and intonational pattern that is different from regular topics in that they receive extra stress with rising intonation. The examples in (8) contain contrastive topics (CT), and the contrastive topic in (8b) is a bare singular noun, which is never specific (or even referential) in

<sup>1</sup>Gécseg and Kiefer (2009) argue for a distinction between logical subject and topic, claiming that the two are independent notions and “topic” is a discourse-related notion. Under their analysis, the structural topic position can be filled with by the logical subject of the clause.

Hungarian, while (8c) contains a predicative NP as contrastive topic, showing that predicates can appear there as well.

- (8) a. [<sub>CT</sub> /János [<sub>FocP</sub> EZT A KÖNYVET olvassa.]]  
           John                   this.ACC the book.ACC reads  
           ‘As for John, he is reading this book.’  
   b. [<sub>CT</sub> /Könyvet [<sub>FocP</sub> CSAK JÁNOS olvas.]]  
           book.ACC                   only John reads  
           ‘As for books, only John reads them.’  
   c. [<sub>CT</sub> /Orvos [<sub>FocP</sub> MARI akart lenni.]]  
           doctor                   Mari wanted.3SG be.INF  
           ‘As for a doctor, it was Mary who wanted to be one.’

É. Kiss (2002) claims that the fact that non-referential elements can be contrastive topics has to do with the contrastive interpretation, and Gyuris (2002) provides a semantic analysis of contrastive topics. For the discussion in this thesis, the important property of contrastive topics is their distinctive intonational pattern and the fact that non-referential elements can be contrastive topics but not regular topics.

### 2.2.1.2 Quantifiers

The position of quantifiers is below topics but higher than focus in the clause. As in the case of topics, the number of quantifiers in the preverbal field is unrestricted. The sentences in (9) and (10) contain quantifier phrases raised to their scope positions.

- (9) Mindenki kevés filmet látott.  
       everyone few film.ACC saw.3SG  
       ‘Everyone saw few films.’  
 (10) Az egyik versenyző minden nap két érmet nyert.  
       the one contestant every day two medal.ACC won.3SG  
       ‘One of the contestants won two medals every day.’

É. Kiss (2002) and Brody and Szabolcsi (2003) dub the functional projection hosting the quantifier phrase DistP, since we find distributive quantifiers there, while other types of quantifiers (e.g. ‘six / few people’ etc.) would occupy a different projection in the quantifier field of the sentence. Brody and Szabolcsi (2003) distinguish between distributive quantifiers in DistP and counting quantifiers in a Counting Phrase (CountP), and they also include some topic phrases in a projection called Referential Phrase (RefP). The strict order of these projections when they co-occur in the sentence is: RefP > DistP > CountP, the order (10) also exhibits.

The scopal relation between quantifiers is determined by their surface order with respect to each other; cf. É. Kiss (1987) and Brody (1990) among others. So, quantified elements move to the left periphery of the clause. The

example in (9), for example, requires that the universal quantifier take wide scope. It is possible to leave quantifiers *in situ* as well, but then the scopal relations get slightly more complicated. When one of the quantifiers is preverbal and the other is postverbal, inverse scope readings are also possible, with restrictions that do not concern us here; see Brody and Szabolcsi (2003) for a detailed analysis. It suffices for us to note that the postverbal quantifier may take scope over the preverbal one only if it is stressed, as shown in (11), where the apostrophe shows accent on the postverbal universal quantifier.

- (11) Kevés filmet látott 'mindenki.  
 few film.ACC saw.3SG everyone  
 'Everyone saw few films.'  
 every > few; \*few > every

When the postverbal universally quantified phrase is stressed, the reading given in (11) arises, and the linear scope reading with narrow scope for the postverbal quantifier is not available. If the postverbal quantifier does not receive extra stress, linear scope is preserved, just like in those sentences where both quantifiers are preverbal.

### 2.2.1.3 Focus and *wh*-phrases

Focus is understood as a constituent that denotes an exhaustive list of elements of which the predication holds (cf. Szabolcsi 1981a, É. Kiss 1998a; a.o.). É. Kiss (2006a) claims that the semantic contribution of focus is identificational predication. The sentence in (12) states that John is the only person in the discourse domain who watched the given film yesterday.<sup>2</sup>

- (12) JÁNOS nézte meg ezt a filmet tegnap.  
 John watched.3SG PRT this.ACC the film.ACC yesterday  
 'It was John who watched this film yesterday.'

A Hungarian clause has at most one preverbal focus, but this does not mean that there cannot be more foci in a sentence. When there are two foci, only one of them is in the preverbal focus position, the other is postverbal. The uniqueness of the focus position in the left periphery contrasts with the possibility of multiple topics that we have seen. The sentence in (13) is ungrammatical, because only one preverbal focus is possible in a clause, but the intended meaning can be expressed by leaving one of the foci postverbally and adding extra stress to it.

- (13) \* $[_{TopP}$  János  $[_{FocP}$  MA  $[_{FocP}$  EZT A FILMET látta]].  
 John today this.ACC the film.ACC saw.3SG
- (14)  $[_{TopP}$  János  $[_{FocP}$  MA látta EZT A FILMET]].  
 John today saw.3SG this.ACC the film.ACC

<sup>2</sup>I use small caps to mark focus in the clause throughout this thesis.

‘It was today that John saw THIS FILM.’

The syntax of focused elements is standardly analyzed as involving a Focus Phrase (FocP) in the left periphery of the clause, and focused elements move to this projection (cf. Brody 1990, 1995, É. Kiss 2002). The trigger for this movement has often been claimed to be a [+Focus] feature in the FocP and on the focused element (e.g. Brody 1990, 1995, É. Kiss 2002).

A different analysis has been proposed by Szendrői (2003), who claims that the trigger for movement is an interface condition on the stress requirement of focused constituents. The focused constituent needs to be stressed, hence it moves to the main stress position of the clause in order to satisfy this PF-requirement. The position that is assigned main stress is at the left edge on the Hungarian verbal projection.<sup>3</sup>

This stress based analysis accounts for the fact that there can be only one preverbal focus, since there is only one main stress in the clause. However, it is not obvious how the word order satisfying the stress requirement at the PF-interface can be derived without positing some sort of feature that would make the movement to the left edge of VP possible in the first place. Unless focus interpretation is a by-product of movement for some other reason (cf. É. Kiss 2006a for this line of thinking), the movement has to be triggered by a relevant semantic feature on the Foc-head and on the moving constituent. Thus, it seems that we do need some feature that is able to trigger the movement at all.

*Wh*-phrases also move to the focus position in Hungarian. This can be shown by the fact that both foci and *wh*-elements trigger inversion of the particle (or some other VM) and the verb; that is, particles cannot precede the verb, the focus or the *wh*-element does (cf. (15) vs (16) for the contrast).

- (15) a. JÁNOST látogattuk meg a kórházban.  
 John.ACC visited.1PL PRT the hospital.INE  
 ‘It was John that we visited in the hospital.’  
 b. KIT látogattál meg a kórházban?  
 who.ACC visited.2sg PRT the hospital.INE  
 ‘Who did you visit in the hospital?’
- (16) a. \*JÁNOST meg-látogattuk a kórházban.  
 John.ACC PRT-visited.1PL the hospital.INE  
 ‘It was John that we visited in the hospital.’  
 b. \*KIT meg-látogattál a kórházban?  
 who.ACC PRT-visited.2SG the hospital.INE  
 ‘Who did you visit in the hospital?’

Topic constituents can precede the *wh*-element, as in (17), just like they precede foci. Furthermore, in embedded sentences, the *wh*-phrase can be preceded by

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<sup>3</sup>For cross-linguistic variation on the stress assignment and stress-taking strategies in languages, cf. Szendrői (2001, 2003).

the complementizer element *hogy* ‘that’, cf. (18). This shows that, unlike in languages like English, *wh*-phrases do not move up to CP.<sup>4</sup>

- (17) Mari tegnap KIT látogatott meg a kórházban?  
 Mary yesterday who.ACC visited.3SG PRT the hospital.INE  
 ‘Who did Mary visit in the hospital yesterday?’
- (18) Nem tudom, hogy tegnap KIT látogattál meg a  
 not know.1SG that yesterday who.ACC visited.2SG PRT the  
 kórházban.  
 hospital.INE  
 ‘I don’t know who you visited in the hospital yesterday.’

These examples show us that focus follows the topic(s) in the clause, and that VMs and focus are in complementary distribution in the preverbal position in so far as the two types of constituents cannot occur together preverbally.

#### 2.2.1.4 Negation

Negative elements are also preverbal. There are two positions for the negative particle *nem* ‘not’. One position is immediately preceding the verb, this is the usual clausal (proposition) negation. The other possibility is for negation to appear before a focused element. The two types of negation can also co-occur.<sup>5</sup>

- (19) a. János nem olvasta el ezt a könyvet.  
 John not read.3SG away this.ACC the book.ACC  
 ‘John didn’t read this book.’
- b. János nem EZT A KÖNYVET olvasta el.  
 John not this.ACC the book.ACC read.3SG away  
 ‘It was not this book that John read.’
- c. János EZT A KÖNYVET nem olvasta el.  
 John this.ACC the book.ACC not read.3SG away  
 ‘It was this book that John didn’t read.’
- d. János nem EZT A KÖNYVET nem olvasta el.  
 John not this.ACC the book.ACC not read.3SG away  
 ‘It was not this book that John didn’t read.’

The fact that the clausal negation is strictly preverbal means that in these sentences, the otherwise preverbal particles (like the *el* ‘lit. away’ in the previous examples) and other Verbal Modifiers are postverbal. This has been analyzed as involving obligatory verb movement to NegP, thus deriving the postverbal order of particles (cf. É. Kiss 2002 among others).

<sup>4</sup>In multiple *wh*-questions, both *wh*-phrases are on the left periphery, but only one of them is in focus, the other is in the quantifier position.

<sup>5</sup>Focus negation is not constituent negation since it licenses NPI elements in the clause in the same way as proposition negation does (cf. É. Kiss 2002).

### 2.2.1.5 Summary

As we can see in this brief overview of the left periphery of the Hungarian clause, the elements that we find in this field are scope-taking constituents and topics. The word order is strictly hierarchical, with topics preceding quantifiers, focus and negation in the clause. There is another position in the preverbal field that has to be accounted for, and that is the position of the so-called Verbal Modifiers. We will turn to these now.

### 2.2.2 Verbal Modifiers

From early on in the tradition of Hungarian linguistics, it has been noticed that certain elements tend to occur preverbally in neutral sentences. They are not topics or scope-taking operators, and their position is lower than that of any of the left-peripheral elements discussed so far. Furthermore, they are not preverbal in non-neutral clauses. These preverbal elements in neutral clauses received the name Verbal Modifiers in acknowledgment of their property of modifying the verbal predicate in some sense (Komlósy 1994). Examples illustrating the different types of phrases that can be used as VMs are given in (23) to (29). This is the complete list given by Komlósy (1994, pp. 99–100, ex. (9)) with his category labels (but with modified glosses in some places).<sup>6</sup>

- (20) Péter tegnap **beteg** volt.  
Peter yesterday ill was  
'Peter was ill yesterday.' [adjective: predicate adjective]
- (21) Péter tavaly **katona** volt.  
Peter last.year soldier was  
'Peter was a soldier last year.' [common noun: predicate nominal]
- (22) Péter tegnap **rosszul** volt.  
Peter yesterday badly was  
'Peter was sick yesterday.' [adverbial: predicate adverbial]
- (23) Péter **meg**-verte Jánost.  
Peter PRT-beat.3SG John.ACC  
'Peter beat John up.' [preverb]
- (24) Péter **szám-ba** vette az esélyeket.  
Peter account-ILL took.3SG the chances.ACC  
'Peter considered the chances.'  
[case-suffixed common noun: idiom part]
- (25) Péter **szén-né** égette a húst.  
Peter coal-TRA burned.3SG the meat.ACC  
'Peter burned the meat to cinders.'  
[case-suffixed common noun: predicative complement]

<sup>6</sup>Komlósy (1994) calls particles preverbs and distinguishes between oblique case-marked nominals and PPs. I will show in Chapter 4 that these belong to the same category.

- (26) Péter **piros-ra** festette a kerítést.  
 Peter red-SUB painted.3SG the fence.ACC  
 ‘Peter painted the fence red.’  
 [case-suffixed adjective: predicative complement]
- (27) Péter **okos-nak** tartja Marit.  
 Peter clever-DAT considers Mary.ACC  
 ‘Peter considers Mary clever.’  
 [case-suffixed adjective: predicative complement]
- (28) Péter **az asztal-ra** / **az ágy alá** tette a könyvet.  
 Peter the table-SUB / the bed under put.3SG the book.ACC  
 ‘Peter put the book on the table / under the bed.’  
 [case-suffixed DP or PP: complement]
- (29) Péter **a kamrá-ban** / **az ágy alatt** tartja a  
 Peter the pantry-INE / the bed under keeps the  
 könyveit.  
 book.POSS.3PL.ACC  
 ‘Peter keeps his books in the pantry / under the bed.’  
 [case-suffixed DP or PP: complement]
- (30) Péter-nek **víz** ment a szemébe.  
 Peter-DAT water went.3SG the eye.POSS.3SG.ILL  
 ‘Water got into Peter’s eyes.’ [common noun: subject]
- (31) Péter **újság-ot** olvas a kertben.  
 Peter newspaper-ACC reads the garden.INE  
 ‘Peter is reading a newspaper / newspapers in the garden.’  
 [case-suffixed noun: direct object]
- (32) Péter-nek **láz-a** van.  
 Peter-DAT fever-POSS is  
 ‘Peter has fever.’  
 [possessed noun marked for possessor: predicate complement]
- (33) Péter **úsz-ni** akar.  
 Peter swim-INF wants  
 ‘Peter wants to swim.’ [infinitive: predicative complement]
- (34) Péter **jól** bánik Marival.  
 Peter well treats Mary.INS  
 ‘Peter treats Mary well.’ [adverbial: complement]
- (35) Péter **ügyesen** vezeti a labdát.  
 Peter skillfully leads the ball.ACC  
 ‘Peter dribbles the ball skillfully.’ [adverbial: adjunct]

All these examples can basically be sorted into five groups: (i) predicative elements next to the copula (adjectives, nouns, adverbs or PPs); (ii) predicative PPs (including resultatives, complements of *consider*-type verbs, complements

of positional verbs); (iii) bare nominal internal arguments (including bare nominal subjects, objects and possessums); (iv) infinitival complements; (v) VP-adverbs. I will return to these groups when I narrow down the focus of this thesis in Section 2.6.

We saw in the previous discussion of the left periphery of the Hungarian clause that VMs exhibit a complementary distribution with focus (including *wh*-phrases) and negation in the preverbal position. Whether this surface complementarity is real or only apparent has been the topic of some discussion. One line of analysis proposes that the VM is base-generated in (Brody 1990) or moved into (e.g. É. Kiss 1999b) the preverbal position (ignoring for the moment, what this position actually is, but see the discussion below), but then the verb moves higher in the functional sequence either into the Foc-head or into Neg (cf. Puskás 2000, É. Kiss 2002). A possible derivation is illustrated in (36).

$$(36) \quad [_{FocP} XP_k \text{Foc}^0 + V_i [_{XP} VM_j X^0 + t_i [_{VP} t_i [_{YP} \dots t_{j..} t_k \dots]]]]$$

Thus, the VM moves to the preverbal slot during the derivation, but then the verb moves across it when it moves into the Foc-head. Subsequent scrambling in the postverbal field can derive the fact that VMs are not always immediately postverbal in these sentences. Surányi (2006) proposed that scrambling takes place within the propositional part of the clause (TP or AspP).

A different line of analysis handles the data by fewer movements: É. Kiss (2002, 2006a) and Broekhuis and Hegedűs (2009) assume that in those cases when the verb is preceded by focus or negation, the VM has not moved out of its base-position at all. Both of these analyses assume that the VM is base-generated postverbally and moves into its surface position only in neutral clauses. É. Kiss (2002, 2006a) proposes that this is so, because the VM and focus occupy the same surface position, so only one of them can move there, and when there is a focus in the clause, that is the one that has to move. The proposal by Broekhuis and Hegedűs (2009) also claims that the two movements are complementary, and it is because either one of them satisfies the need of the verb to be unstressed (see Section 2.3.6 and Chapter 5 for details), hence, only one of the movements takes place.

The common property of all of the elements in (23) to (29) is that they are one way or another predicative, as was already noted by Komlósy (1986, 1994). What “one way or another” could mean has not received a detailed analysis for all groups of elements yet, but it was suggested by Komlósy that we are dealing with syntactic predicates.

It has been proposed that non-referential elements have to be in the preverbal position, because they are licensed there somehow. Only referential arguments are licensed postverbally (Alberti 1997). This restriction could, in principle, capture the fact that bare singular and plural internal arguments obligatorily appear preverbally similarly to all sorts of syntactically predicative elements, but the restriction seems slightly arbitrary and it furthermore has to

be confined to neutral clauses, since in non-neutral clauses, these non-referential elements are often postverbal.

As we will see, the proposed analyses have often been developed for the most common case, that of particles, and thus emphasize properties not shared by the other preverbal elements. One such feature is the phonological dependence of the particle on the verb. Another observation is that VMs determine the aspectual properties of the clause, which has sometimes been taken as their defining feature, but is in fact more restricted to particles and resultative phrases (cf. É. Kiss 2006b for discussion). Whether all the preverbal constituents above are to be analyzed uniformly is an open question, but their distributional similarities suggest that a uniform analysis may be possible.

## 2.3 Previous syntactic analyses of VMs

This section will give an overview of the analyses that have been proposed to account for the distribution and syntactic properties of VMs and VM–V units. I will discuss the different proposals with respect to the syntactic position of VMs and the derivation of the surface order.

### 2.3.1 Lexical unit

Lexicalist approaches mostly deal with particle–verb units as there are more non-compositional cases among those than among the other VM–V combinations. The reason for assuming that we are dealing with lexical items was first and foremost the non-compositional meanings of some of the complexes, that is, the fact that the particle and verb together can have a meaning that is not predictable from the meanings of the two constituents. However, there are also phonological and morphological considerations that seem to favor having the VM–V unit lexical.

In some cases, there is no obvious way how the meaning of a particle–V unit could be derived compositionally. The two together form a separate lexical entry, an idiomatic expression. An often-quoted example of this is given in (37), where the particle and the verb form a non-compositional semantic unit.<sup>7</sup>

- (37) János be-rúgott.  
 John into-kicked.3SG  
 ‘John got drunk.’

Particle–V units also form a single phonological word, which is reflected in the orthography since they are spelled as one word when the particle immediately

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<sup>7</sup>I give the lexical meanings of particles in the glosses even when the particle–V unit has a non-compositional meaning. The particle *meg* ‘orig. back’ has almost completely lost its lexical meaning, I gloss it as PRT.

precedes the verb<sup>8</sup>: the word stress is on the particle, just like in the case of compounds where the stress is on the first member of the compound.

Similarly, the fact that the V and the particle can undergo derivational morphological processes together, constitutes an argument for their treatment as a (complex) lexical entry and a (complex) head in syntax. (38), for example, shows that nominalizations can be derived by means of the suffixes *-ás* and *-ó*.

- (38) a. fel-vág-ás  
           up-cut-ing  
           ‘cutting up; showing off’  
       b. fel-talál-ó  
           up-find-er  
           ‘inventor’

Recently, this lexicalist view on particle-V (and more generally, VM-V) units has been taken up by Ackerman (1987) and Ackerman and Webelhuth (1998). They use the framework of Lexical Functional Grammar to give an analysis of complex predicates in terms of lexical entities and complex syntactic items that come from the lexicon.

According to the lexicalist view, the particle-V unit is really a lexical entry that enters the syntactic derivation as a (lexically complex) V head. This analysis, however, has difficulties in accounting for the fact that the particle is often separated from the verb, for example, when the sentence contains a focus, a *wh*-element, or negation, which are all in complementary distribution with VMs in the preverbal slot. Particles show more syntactic independence than lexically incorporated elements should.<sup>9</sup>

A further argument against treating particle verbs as lexical units is the immense productivity with which they are created. It is not only the case that they are productive, they are generally semantically transparent, too. It is indeed hard to imagine that all these elements form separate lexical entries, and even if the idiomatic ones do, it does not necessarily imply that the structures are not formed in syntax, since even the idiomatic ones have transparent syntactic structures. An example of a productive particle that can occur with spatial and non-spatial meaning in semantically compositional and idiomatic structures is *fel* ‘up’. Some examples are given in (39), where the examples range from completely compositional to idiomatic.

- (39) a. fel-megy  
           up-go  
           ‘go up’

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<sup>8</sup>For the sake of transparency, I depart from this orthographical tradition and separate the particle from the verb with a hyphen when the particle is preverbal.

<sup>9</sup>This is not desirable if we want to draw a line between lexical processes and syntactic ones. Neeleman and Weerman (1993), however, choose to argue for this view about Dutch particle verbs and say that morphologically complex words can sometimes be transparent for syntax.

- b. fel-tesz  
up-put  
'put up'
- c. fel-néz  
up-look  
'look up'
- d. fel-ad  
up-give  
'give up'
- e. fel-talál  
up-find  
'invent'

Additionally, particle–V units show similarity to other types of VM–V combinations, which are less likely to be lexical, because the VMs involved are obviously complex. The syntactic behavior of particles and other (obviously phrasal) VMs is uniform, so that it does not seem to be well-established that they have a different lexical or derivational relation to verbs.

That VMs can be phrasal is obvious from the fact that they can be modified, as illustrated in (40). The pre-modifiers are obviously related to the secondary predicates and not to the whole VP, which also suggests that the elements in the preverbal position are (possibly complex) phrases, which is not reconcilable with the proposal that the predicate and the verb come out of the lexicon as a syntactically simplex unit.

- (40) a. Mari teljesen őrült-nek tartja János-t.  
Mari completely crazy-DAT considers János-ACC  
'Mary considers John completely crazy.'
- b. Anna millió darab-ra törte a váz-át.  
Anna million piece-SUB broke.3SG the vase-ACC  
'Anna broke the vase to a million pieces.'

A further complication that a lexicalist complex predicate analysis has to account for is the case-marking on the non-verbal predicate. The fact that Hungarian secondary predicates bear inherent case makes a lexical analysis even less feasible, because case-marking is not possible within compounds. Which case marking we find on the predicate depends on the semantic relationship between the verb and the predicate: *consider*-type verbs take dative marked predicates, while resultative predicates are either in sublative or in translative case, both of which express change of state (cf. the examples in (41)).

- (41) a. okos-nak tart  
clever-DAT hold  
'consider clever'
- b. lapos-ra kalapál  
flat-SUB hammer

- ‘hammer flat’  
 c. por-rá válik  
 powder-TRA turn  
 ‘turn into powder’

Thus, although the lexicalist analysis of VM–V complexes handles idiomatic meanings and derivational properties easily, it has difficulties in accounting for the syntactic independence and complexity of VMs. Base-generated syntactic structures can be an alternative to the lexical approach, and such analyses have indeed been proposed in the literature.

### 2.3.2 Base-generation in syntax

Early generative analyses of Hungarian generally assumed that particles as well as other VMs form a syntactic unit with the verb inside the VP (cf. Horvath 1986; Brody 1990). The structural representation of this unit is a syntactically transparent complex  $V^0$ . There are two alternatives: either we are dealing with adjoined heads or with a phrasal unit adjoined to the verbal head.

Horvath (1986) argues that VMs are arguments of the verb, base-generated to its left. In her analysis all verbs can have one of their arguments generated to their left under  $V'$ , although the VP is head-initial otherwise, that is, all other arguments follow the  $V$  head. The structure that she assumes is similar to the one later proposed by Neeleman and Weerman (1993) for Dutch resultative constructions: a phrasal constituent is left-adjoined to the  $V$ -head. However, Horvath (1986) does not assume that these are complex predicates; for her, the preverbal elements are regular arguments of the verb. Brody (1990) has a similar analysis, with the VM and the verb forming a  $V+$ , which is not an intermediate projection of  $V$ , but more like a complex head.

These analyses avoid the problem of the above mentioned lexical analyses with respect to having necessarily complex elements in the lexicon. As long as the preverbal element is assumed to be phrasal, they can also handle the case marking on secondary predicates, since they assume that the elements adjoined to  $V^0$  are arguments of the verb, and therefore can bear oblique case assigned by the verb in syntax.

However, the base-generation approach faces a challenge when the preverbally generated phrases themselves have complements. The empirical fact is that the complement of such VMs cannot be preverbal, despite the fact that the ‘designated’ arguments (i.e., the VMs) are claimed to be phrasal. This makes the proposal less attractive.

- (42) a. Anna teljesen elégedett-nek tűnt az eredménnyel.  
 Anna completely satisfied-DAT seemed.3SG the result.INS  
 ‘Anna seemed completely satisfied with the result.’  
 b. János nagyon dühös volt az ellenőrré.  
 John very angry was the controller.SUB

‘John was very angry with the controller.’

If the predicative complement is phrasal — which it has to be, since it can be modified, as the examples in (42) show — and is base-generated in its surface position, why must its complement follow the verb? Complements can often appear before the head when the phrase is a pre-modifier itself. For example, when APs function as attributive modifiers of a noun, their complement precedes the A-head (as in (43)).

- (43) a. az eredménnyel elégedett diák  
           the result.INS satisfied student  
           ‘the student satisfied with the result’  
       b. \*az elégedett az eredménnyel diák  
           the satisfied the result.INS student  
           ‘the student satisfied with the result’

The complement of secondary predicates cannot, however, appear before the VM. It cannot appear between the VM and the verb either, since those two have to be adjacent. Thus, examples like (44) are out.<sup>10</sup>

- (44) a. \*Anna [az eredménnyel elégedett-nek] tűnt.  
           Anna the result-INS satisfied-DAT seemed.3SG  
           ‘Anna seemed satisfied with the result.’  
       b. \*Anna [elégedett-nek az eredménnyel] tűnt.  
           Anna satisfied-DAT the result.INS seemed.3SG  
           ‘Anna seemed satisfied with the result.’

To sum up, the assumption that we are dealing with complex heads with one of the arguments base-generated preverbally under the V-head also faces challenges, especially when the preverbal element has a more complex structure.

### 2.3.3 Head-movement into V

É. Kiss (1999b) developed a head movement analysis, basically as an instance of incorporation into V, whereby particles (and other modifiers) assume head status. This approach can account for the phonological unity of the VM and the verb and the fact that VMs are often small constituents, but it runs into problems when we consider VMs that are larger than particles.

Even though complements of secondary predicates are stranded when the predicate is moved into the preverbal position, modifiers must be pied-piped.

<sup>10</sup>The complement could be separately moved to the topic position of the clause, with the predicate still being preverbal.

- (i) [<sub>TOPP</sub> Anna [<sub>TOPP</sub> az eredménnyel [mindig elégedett-nek tűnt            ]]].  
       Anna           the result.INS   always satisfied-DAT seemed.3SG  
       ‘Anna always seemed satisfied with the result.’

The predicate, however, cannot appear anywhere else in the neutral sentence.

As we have already seen, VMs can be phrasal: full-fledged APs, DPs and PPs can be VMs as well.

- (45) Az üveg teljesen üres-nek tűnt.  
the bottle completely empty-DAT seemed.3SG  
'The bottle seemed completely empty.'
- (46) A ráadás a kedvenc dalom volt.  
the encore the favorite song.1SG was  
'The encore was my favorite song.'
- (47) A zongora az ablak előtt állt.  
the piano the window before stood.3SG  
'The piano stood in front of the window.'

Furthermore, VMs are left behind when the verb moves on to NegP or FocP under the standard analysis of such constructions. This means that a head-incorporation analysis also has to postulate excorporation of the V out of the complex head when the verb moves to the left periphery.

One way to avoid the problems that a head-movement analysis creates and to account for the fact that VMs can be phrasal is to hypothesize that the VM moves into the Specifier of a functional projection above the verbal projection.

It is also possible to claim that in those cases where the VM is not preverbal it has not moved at all. This would solve the problem of excorporation and postverbal ordering too. However, this option is not without problems either. If movement of the particle is motivated by the need to check some formal feature, standard derivational accounts predict that it cannot be sensitive to what will happen later in the derivation. An analysis that can handle this problem was developed by Broekhuis and Hegedűs (2009), where the interaction of Optimality Theoretic (OT) constraints determine VM-movement and word order. I will return to that proposal in 2.3.6, after discussing those analyses claiming that VMs target a functional projection of the verbal domain.

### 2.3.4 Spec,AspP

Another influential proposal, which has its roots in the semantic properties of particles, emphasizes the role particles play in determining the aspectual properties of the clause (Kiefer 1992, 1994, É. Kiss 2002). Since particles (as well as other secondary predicates) influence the semantic interpretation of the clause, they can be treated as perfectivizers, creating perfective predicates out of originally imperfective ones (cf. É. Kiss 2002). The syntactic analysis differs from the previous ones in that it takes VM-movement to be a case of phrasal movement to a functional projection.

- (48) a. János evett egy almát.  
John ate.3SG an apple.ACC

- ‘John ate/was eating an apple.’  
 b. János meg-evett egy almát.  
 John PRT-ate.3SG an apple.ACC  
 ‘John ate an apple.’

The reasoning behind this proposal is related to the perfectivizing function of particles. Since particles often contribute to the aspectual properties of the clause and behave similarly to the other VMs, the conclusion has been drawn that all VMs end up in an Aspectual Phrase (AspP) in the verbal domain.

However, as was recognized among others by É. Kiss (2004), the perfectivizing, telicizing role of particles is only one part of their story. They are secondary predicates that move to the preverbal position in order to form complex predicates with the verb, and their aspectual contribution follows from the fact that they often express goal or termination, which contributes to the telic reading of the sentence. If we wish to maintain the reasonable parallel with the other (secondary) predicates that appear preverbally, then we should rather regard the predicative nature of these elements as the common factor and not the aspectual properties of particles that the other preverbal phrases may not necessarily have.

Csirmaz (2006) and É. Kiss (2006b) still posit that there is an AspP in the clause where telicizing elements end up in the surface structure, but they also assume a preverbal Predicative Phrase (PredP) as the landing site for all predicative elements.

### 2.3.5 Spec,PredP

É. Kiss (2004, 2006b) and Csirmaz (2004) argue that particles — as well as other VMs — are moved into a predicative position in the left periphery of the clause, the reason for this movement being their predicative nature (which was already alluded to in the earlier assumption that non-referential elements move). Surányi (2009c) argues for a similar analysis, claiming that particles reach their surface position in two steps and the first step is a vP-internal predicative position (from where the VM moves on into Spec,TP). These analyses all adopt Zwart’s (1993) and Koster’s (1994) analysis of similar phenomena from Dutch by calling the projection Predicative Phrase (PredP).

Zwart (1993) and Koster (1994) argued that Dutch predicative phrases move to the immediate neighborhood of the verb, and suggested that the position where they moved is the specifier of a Predicative Phrase. PredP is a functional projection in the clause that hosts all sorts of predicative elements and also attracts the verb to Pred<sup>0</sup>. É. Kiss (2006a) argues that focus and VMs compete for the preverbal position in Hungarian because focus is in fact an instantiation of predication, namely identificational predication (Higgins 1979), so focus movement can be seen as a case of predicate movement.

These analyses of Hungarian VM–V constructions are based on the assumption that all VMs are predicative in the relevant sense. Predicates, how-

ever, are necessarily predicated of something. In most cases, the accusative-marked argument of the verb is the subject of the non-verbal predicate. Thus, an analysis of VMs in terms of a predicate movement has to specify the subject–predicate relationship with respect to non-verbal predicates as well.

In section 2.4, I will look at the syntactic relation between subjects and predicates, and then focus on analyses proposing Small Clauses (SCs) to be the structural instantiation of such a relation. VMs will be argued to be predicates that move to the vicinity of the matrix predicate in order to establish a relationship with the verb and license their argument(s). But first I will look at another proposal about the landing site of the predicate movement and the motivation behind the movement as well.

### 2.3.6 Spec,VP

An alternative analysis of predicative movement has been developed by Broekhuis and Hegedűs (2009), based on Broekhuis' (2008) analysis of locative inversion in terms of movement of Small Clause predicates (in fact remnant SCs) following Moro (1997).

Broekhuis (2008) assumes that the subject and the predicate within a SC are in an agreement relationship, and that a probe that attracts  $\phi$ -features can therefore trigger movement of either one of them, both being possible goals. He uses this to account for locative inversion in English, such as *Down the hill rolled the baby carriage*. When a verb takes a SC complement, either the subject or the predicate of the SC can undergo movement to check  $\phi$ -features; and locative inversion is an example when the predicate of the SC (more precisely, the remnant SC, which does not contain the subject) moves into the subject position. Broekhuis argues that this is because the subject is the focus of the clause in such sentences and therefore has to remain *in situ* since there is a requirement for English foci to be aligned to the right edge of the clause in order to be stressed (cf. also Szendrői 2001). Checking  $\phi$ -features locally interacts with information structural constraints to derive the word order of the clause (and to account for variation) under this account. Broekhuis (2008) also analyzes Dutch and Hungarian predicate movement along similar lines but with different constraints that interact with the necessity to locally check  $\phi$ -features.

The basic idea of Broekhuis and Hegedűs (2009) with respect to predicate movement in Hungarian is that it is triggered by the  $\phi$ -features on the verb, so that the landing site of movement is Spec,VP in order to establish object-agreement. The other important aspect of the analysis is that agreement could in principle be established at a distance as in regular Minimalist analyses, but there is an additional factor (built in the syntactic analysis as an OT-constraint) that forces the movement. This factor is the requirement that finite verbs be unstressed, that is, for finite verbs to avoid carrying the main stress of the clause. In an OT-style analysis, this factor overrules the possibility of long-

distance agree and the internal argument or SC-predicate therefore moves into Spec,VP.

This analysis has the advantage that it does not need to introduce additional formal or semantic features or extra functional projections in order to derive the observed orders. In a wider context, it is also successful in predicting the observed variation in the English locative inversion cases for example: assuming that the choice between moving the subject or the predicate of the SC depends on information structural differences, and that competing constraints decide the optimal output, Broekhuis (2008) can predict under what circumstances locative inversion is expected to occur in English.

In this thesis, I will take over several components of the proposal by Broekhuis and Hegedűs (2009): (i) the moved elements are SC-predicates (or, possibly, remnant SCs); (ii) the movement is into Spec,VP; (iii) the movement may be made possible by the agreement relation within the SC but it is another property that makes the movement obligatory. In Chapter 5 I will return to the proposal by Broekhuis and Hegedűs (2009) and discuss some properties of predicate movement suggesting that although stress-avoidance is an important factor (especially when considering the word order in verb clusters), the predicate also has a property that favors it to surface in the proximity of the verb.

The analysis proposing that VMs land in Spec,VP as a result of predicate movement is compatible with what Surányi (2009c) calls a two-stage derivation of the surface position of VMs. He argues that there is evidence for the surface position of particles to be outside of vP, which he assumes to be Spec,TP, but there is also evidence for them to have an intermediate landing position inside the vP. As was mentioned in the previous section, he claims the vP-internal position to be PredP, a landing site of predicate movement. Broekhuis and Hegedűs (2009) claim that the place where predicates first land is Spec,VP. This is thus also the site of complex predicate formation proposed in this thesis, while it may very well be that the VM and the verb surface higher in the clausal structure.<sup>11</sup>

### 2.3.7 Summary

One of the most important parts of this discussion is that recent proposals concerning the syntax of VMs converge on the idea that we are dealing with predicates. More specifically, according to Broekhuis and Hegedűs (2009) we have Small Clause predicates (or, in some instances, their subjects) in the cases of predicate movement. The following chapters of this thesis will investigate the relevant SCs and their predicates in more detail, but first I will turn to the

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<sup>11</sup>Whether the verb and the VM move together or independently to higher positions is an issue that has been raised by Vicente (2007) with respect to predicate topicalization, and Vicente arrived at the conclusion that the VM and the V move separately. I will not be concerned with further movement of the VM+V unit in this thesis.

structural representation of subject–predicate relations and complex predicate formation in general.

## 2.4 Subject–Predicate Relationships

The relationship between subjects and predicates is interesting from both a semantic and a syntactic point of view. Semantically, a predicate states a property about a subject, while the subject is the thing stated a property about.<sup>12</sup> For an overview of some traditional logical and linguistic theories, see, for example, Svenonius (1994), Moro (1997), and den Dikken (2006). Focusing on my aims in this book, I will select some central issues from the discussions in the generative linguistic tradition. This section will cover a number of theoretical topics that are important for the explication of the problems Hungarian complex predicates raise.

In section 2.4.1, I will discuss the syntactic configuration that corresponds to subject–predicate relationships and the rise of the analysis of certain predicative relationships in terms of Small Clauses. In section 2.4.2, the distinctions between small clauses and main clauses will be briefly considered. The conclusion will be that Small Clauses are projections of functional heads that connect subjects to predicates.

### 2.4.1 The syntactic configuration

One important matter with respect to the structure of predication is the syntactic relationship between a subject and a predicate, and its manifestation in syntactic configurations. Chomsky (1965) defined the functional notion of the “Subject-of” a sentence structurally as the NP immediately dominated by the S node, [NP, S], and the “Predicate-of” the sentence as the VP or other Predicative Phrase under S, thus S rewrites as [NP, Predicate-Phrase]. Of course, the picture has turned out to be more complicated than this, as there are cases where the subject of the main predicate is also related to another predicate in the clause, thus an argument-raising analysis of certain constructions was proposed. This makes the notion “Subject-of” slightly more complicated.

Subject raising appeared in Bresnan’s (1972) analysis of Subject Shift from the complement of subjectless verbs (like *seem*) to the matrix subject position. Stowell (1978) developed a raising analysis for English sentences containing the verb *be*, arguing in essence for an analysis, where the subject NP originates inside a postverbal predicative phrase (VP, NP, AP or PP). The NPs and the predicative phrases following *be* are understood to form a constituent, as in (49), with the NP being the subject of that constituent.

<sup>12</sup>This notion of subject resembles the definition of topics very much, and indeed we find that there is often a correspondence between subjects and sentence topics. One exception is the class of so-calledthetic sentences, those sentences that describe or present situations and do not state a property of a subject (e.g. Kuroda 1972 about this difference in Japanese).

- (49) a. [e] was [[<sub>NP</sub> an American flag] [planted on the moon]]  
 b. [e] has been [[<sub>NP</sub> an angry lion] [running wild]]  
 c. [e] may be [[<sub>NP</sub> a cow] [in the barn]]  
 (Stowell 1978, ex. (38))

Stowell (1981, 1983) argued that all lexical categories can involve subjects within their maximal projection, that is, every maximal projection of a lexical element is potentially a “Small Clause” (SC).<sup>13</sup> Stowell argues in his work that the subject is the specifier of the phrase. He discusses, among others, the following examples:

- (50) a. I consider [John very stupid].  
 b. I expect [that sailor off my ship] (by midnight).  
 c. We feared [John killed by the enemy].  
 (Stowell 1981, 257, ex. (13))

The theme arguments in sentences like (50) are the subjects of the adjectival, prepositional and participial elements in the clause. In other words, the bracketed sequences form a phrase, and since this phrase involves a subject and predicate predicated of the subject, they are, in a sense, clauses.

In this analysis, the notion of subject has semantic content (it is semantically related to the Small Clause predicate), but it is also a structural notion in that a certain syntactic position is designated where subjects occur (Spec,XP). Stowell (1983) argues that the presence of a(n overt) subject is restricted by the Case Filter: the SC subject needs to be assigned Case by the matrix verb (in an Exceptional Case Marking fashion), because SC-predicates cannot do so.

This small clause analysis was essentially adopted by Chomsky (1981, 165ff), but with the remark and modification that small clauses like the one in (50a) cannot be maximal projections of AP because of the notion of government he argued for. For the subject of the small clause to be phonetically realized, either the A head should be able to assign case to it (which it cannot), or the verb should be able to govern into the small clause, but then the SC cannot be a maximal projection. This modification, however, was no longer valid in the Barriers framework. Since the small clause is L-marked by the matrix verb, it is not a barrier and thus the matrix verb can govern the small clause subject even if the phrase is a maximal projection of the adjective (Chomsky 1986a).

At the same time, Williams (1980) proposed a different theory of predication, which did not involve Small Clauses in the Stowellian sense. Williams claims that the essential condition on predication is that subjects must c-command their predicates (or the traces of their predicates) at Predicate Structure. The condition is thus structural, but not configurational in that the subject does not have to be in a certain position. What Williams calls *Predicate*

<sup>13</sup>The term *small clause* goes back at least to Williams (1975), who uses it in the discussion of relative clause participles, adverbial participles, and gerunds.

*Structure* refers to a level of representation (after Surface Structure), where the relation between a predicate and its subject is indicated by co-indexation (cf. Williams 1980, 205f). All lexical categories (V, A, N, P) are potential predicates. In the following examples, the theme argument in the clause is the subject of the adjectival predicate.

- (51) a. John became sick.  
 b. John made Bill sick.  
 (Williams 1980, 207, ex.(19))

In (51), the adjectival predicate *sick* is predicated of the theme NP (*John* and *Bill*, respectively), and this is done by co-indexation at Predicate Structure. There is, however, no implication that this relationship has to be manifest in a constituent, a (small) “clause”, formed by the subject and the predicate. This is where Stowell and Williams crucially diverge.

Williams (1983a) argues that their notions of subject is the most important difference between his theory of predication (from 1980), on the one hand, and the Small Clause theory of Stowell (1981) and Chomsky (1981), on the other hand. While the Small Clause analysis assumes that all phrases have subjects phrase-internally, Williams’ theory is based on the argument that subjects are external arguments. Williams also has empirical arguments against the assumption that subjects are specifiers of the predicative phrase. In the case of NPs, possessors are also assumed to be specifiers, but subjects and possessors can co-occur, as shown in (52), so they cannot originate in the same position. In (52), *John* is supposed to have raised out of Spec,NP, but the possessor is also supposed to occupy that position. This problem became less obvious in analyses involving more functional projections within the extended nominal phrase.

- (52) John seems to be Mary’s husband.

The view that c-command is the structural relation between a subject and a predicate, so that the subject is external to the predicate XP is shared by Rothstein (1983), who argues that every predicate must be linked to a syntactic argument (her *predicate-linking rule*) even if the predicate does not have a semantic requirement for a subject (e.g. weather verbs, raising verbs). She distinguishes between a formal (syntactic) subject-predicate relationship and a notional (semantic) one, and claims that the syntactic requirement for predicates being linked to subjects is independent of thematic structure (thereby rejecting Williams’ notion of subject, which is thematic). However, Rothstein does share Williams’ view that predicates and their subjects do not necessarily form constituents, that is, SCs are not the sole instantiation of subject–predicate relations.

Thus, in the Small Clause theory of the early 1980s, subjects are internal to the predicative phrase, while in the predication theory, they are crucially external to the predicative XP. Importantly, though, there is a subject–predicate

relation between the two in the predication theory analysis as well. Rothstein's analysis, furthermore, makes it explicit that predicates need to be linked to a subject (as a syntactic requirement), that is, subjects are structurally obligatory.

Another difference between a Small Clause analysis and a predication structure analysis is that the latter takes the DP in examples like (50) to be an argument selected by the verb, while under a Small Clause analysis, the SC as a whole is selected by the verb. Although, these DPs do behave in some respect like object arguments (they get accusative case, they can be passivized and cannot be PRO), they are not semantically selected by the matrix verb (Hoekstra 1984, Chomsky 1986b).

Hoekstra (1984) argues for the SC-analysis on both theoretical and empirical grounds. Theoretically, the assumption that the internal argument is the thematic argument of the non-verbal predicate makes it possible to give a uniform analysis to raising and ECM constructions with infinitival clauses and Small Clauses as in (53) and (54).

- (53) a. John seems to be ill.  
b. John seems ill.
- (54) a. I believe John to be capable of anything.  
b. I believe John capable of anything.

A further important empirical observation is that Dutch predicative PPs cannot be postverbal, while other PPs can. Starting out from a V-final base structure, Hoekstra (1984, 236) explains this fact with the help of the SC-analysis.

- (55) a. dat Jan in the tuin is  
that John in the garden is  
'that John is in the garden'
- b. \*dat Jan is in de tuin  
that John is in the garden  
'that John is in the garden'

Assuming that Dutch verbs govern to the left, Hoekstra claims that the sentences with postverbal predicative PPs are ungrammatical because the trace of the subject is not governed in the postverbal Small Clause, and, as a result, the ECP rules these sentences out. This analysis relies on the presence of a trace in the postverbal PP, and the assumption that the subject has moved out of the SC.

Safir (1983), Contreras (1987) and Chung and McCloskey (1987) provide some constituency tests from English, Spanish, and Modern Irish, respectively, that show that SCs do form a constituent. Safir (1983), for example, shows by means of the English example (56) that SCs can appear as subjects of *be*, which proves that the SC is a constituent.

- (56) [<sub>SC</sub> Workers angry about the pay] is just the sort of situation that the ad campaign was designed to avoid.

There are not many tests, however, that can be used here to show the constituency of the SC. Svenonius (1994) argues that those categories that are dependent, expressing secondary predication (i.e., SCs, which are dependent on the matrix predicate in the clause) cannot be displaced, thus failing constituency tests based on movement possibilities, and so the fact that SCs succeed in relatively few constituency tests is due to their dependent nature. He, therefore, claims that the lack of evidence for the constituency of these categories is not evidence for their non-constituency but is a result of their dependency on a matrix predicate. This goes well together with the assumption by Stowell (1991b) that SCs get restructured into the matrix clause at some level of the derivation.

With respect to the selection of the DP, another possible line of analysis entertained by Chomsky (1975, 1986b) is to analyze the verbal and the non-verbal predicate as a complex (or “compound”) predicate, where the two together select for the DP argument. This complex predicate analysis has the advantage of accounting for the object-like properties of the DP. Under the complex predicate analysis, however, there is no subject–predicate relation between the DP and the (SC) predicate, since the internal argument is the argument of the predicate complex. I will come back to complex predicates in section 2.5.

A decade after the beginning of the Small Clause and Predication Theory debate, Bowers (1993) proposed a uniform structural manifestation and representation for all predication relations (see the next subsection for more discussion on the nature of the category SC). He argues that by positing a functional layer Predicative Phrase (PrP), we can unify all predicative relations, including those found in Small Clauses and main clauses.<sup>14</sup> The uniform representation of predication is as depicted in (57).



The Specifier position of Pr is the subject (external argument) position. The complement is the predicate, thus preserving the c-command relation between subject and predicate proposed by Williams (1980), as well as the constituency of the subject and the predicate assumed by SC-theory. The predicative XP can be of any lexical category, VP, AP, NP, or PP. Predication is then defined

<sup>14</sup>It is important to distinguish Koster’s PredP from the Predicative Phrase (PrP) Bowers (1993) proposed for Small Clauses. The latter one is a functional projection that establishes subject–predicate relations, while the PredP Zwart (1993), Koster (1994) and É. Kiss (2004, 2006b) argue for hosts predicative elements (see Section 2.3.5).

by the structural relation between the specifier and the complement of the functional head Pr, uniformly. PrP is a complete functional complex in the sense of Chomsky (1986b), that is, it is fully saturated. The semantic role of the Pr head is to turn a property into a propositional function that needs to combine with an element to form a proposition (Bowers 1993, 649).

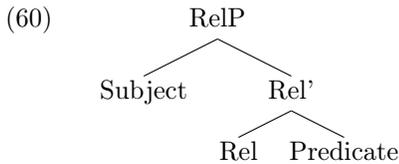
The analysis with a Pr head has both empirical and theoretical advantages according to Bowers. One of the arguments in favor of the constituency of SCs is that SCs can be co-ordinated, as shown in (58).

- (58) a. Mary considers John a fool and Bill a wimp.  
 b. John regards professors as strange and politicians as creepy.  
 c. Sue will put the books on the table and the records on the chair.  
 (Bowers 1993, 602, ex. (16))

Since SCs of different categories can be co-ordinated with Across-the-Board (ATB) extraction of their subjects, the following examples support Bowers' uniform treatment of all predication relations, where the categorial status of the predicate is no longer important at the PrP level. In the case of (59), two PrPs, involving two different types of predicative complements are conjoined. In (59a) an AP and an NP predicate are conjoined, and in (59b) we find an AP and a PP predicate. The theme argument is extracted and moved to Spec,VP as an instance of an independently assumed short object shift (cf. Johnson 1991), which in this case is an ATB-movement from the co-ordinated PrPs.

- (59) a. I consider<sub>i</sub> [<sub>VP</sub> John<sub>j</sub> t<sub>i</sub> [<sub>PrP</sub> [<sub>PrP</sub> t<sub>j</sub> crazy] and [<sub>PrP</sub> t<sub>j</sub> a fool]]].  
 b. Bill<sub>i</sub> is [<sub>PrP</sub> [<sub>PrP</sub> t<sub>i</sub> unhappy] and [<sub>PrP</sub> t<sub>i</sub> in trouble]].  
 (Bowers 1993, 605 ex. (23))

The idea that there is a designated predicative head and phrase has been influential since Bowers' analysis. Svenonius (1994) developed an analysis of secondary predication and particle movement by assuming a Predicative Phrase. I will return to that in the next subsection (Section 2.4.2). One of the most recent theories of predication is the one proposed by den Dikken (2006), whose assumptions about the structural relationship between a subject and a predicate are very similar to those of Bowers' in that he assumes that predication is asymmetrical, mediated by a functional head, which he calls Relator. However, den Dikken (2006) emphasizes the point that, whereas in Bowers' (1993) analysis the predicative head Pr is claimed to be a new functional head in the structure, the name *Relator* is used in a more abstract sense, as the function of a 'relator' can be instantiated by various sorts of heads connecting predicates and their subjects. The base-generated configuration in the following:

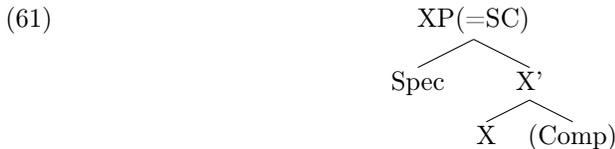


To sum up, those analyses that assume a mediating head between the subject and the predicate, thus analyzing the subject as external to the predicate (but not adjoined to it) can capture the empirical facts better than those that have category internal subjects.

### 2.4.2 ‘Big’ Clauses and ‘Small’ Clauses

Even though the idea that predication structures are represented as Small Clauses has been influential, the categorial nature of SCs has been a matter of debate. In this section, I will review some influential proposals regarding the size and categorial nature of Small Clauses. The question of the size of SCs is a recurrent one, and opinions vary, from the most minimal assumptions (e.g. Stowell 1981, Moro 1997) to the most elaborate ones (e.g. Kitagawa 1985, Starke 1995).

Chomsky (1975, 479-484) characterizes SCs as minimal predication structures that cannot be main clauses themselves, but can be arguments of main clauses. A crucial difference from main clauses is that SCs do not contain an inflectional element. Stowell (1981, 1983, 1995) takes SCs to be the maximal projections of their predicative element. That is, SCs are XPs, where X can be any lexical category, and the subject of the SC is the Specifier of the XP.



This structure accounts for the fact that matrix verbs sometimes seem to be sensitive to the category of the predicate inside the SC. If we compare the examples in (62) (repeated here from (50)) and the ones in (63), it seems that the verbal predicates select for SCs of different categories while disallowing others. Once we assume that the SC is the maximal projection of the category of the predicate, this selectional restriction is easily accounted for.<sup>15</sup>

- (62) a. I consider [John very stupid].  
 b. I expect [that sailor off my ship] (by midnight).
- (63) a. \*I consider [that sailor off my ship].

<sup>15</sup>Hans Broekhuis (p.c.) points out that the restriction may rather be related to the fact that *consider* but not *expect* takes evaluative predicates.

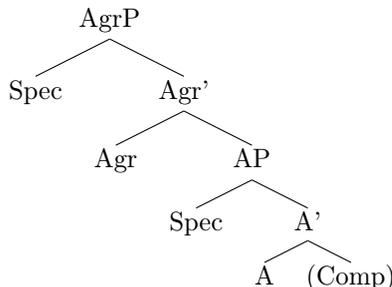
- b. \*I expect [John very stupid].

But the structure in (61) has its shortcomings as well. A serious problem noted by Williams (1983a) and others is that the predicate must be a maximal projection, because it can undergo movement operations, such as *wh*-movement. The example in (64) is from Williams. Since the predicate of the SC-complement can be moved, it must be an XP (unless we allow for movement of intermediate categories), but then the subject cannot be the specifier of the same category XP.<sup>16</sup> The argument does not hold for these examples if we assume that the object may have moved out of the SC prior to the *wh*-movement, for example, by short object shift (cf. Johnson 1991, Lasnik 1999, Broekhuis 2008), so that we are dealing with remnant movement of the whole SC.

- (64) What does John consider [Bill [t]<sub>NP</sub>]<sub>N\*</sub>  
(Williams 1983a, ex. (37b))

It seems that some more structure needs to be assumed to overcome the difficulties Stowell's minimal assumption is facing. There have been various proposals analyzing SCs as projections of INFL, thus relating them to main clauses. However, SCs never involve inflectional (i.e., tensed) elements, so the INFL was considered to be zero or defective (cf. Hornstein and Lightfoot 1987, Aarts 1992, respectively). With the rise of the split-INFL hypothesis and the appearance of Agreement projections, another promising candidate offered itself. Indeed, the subject and the predicate of a SC can agree with each other in gender and number in some languages. Chomsky (1995) considers adjectival small clauses (e.g. embedded under *consider*-type verbs or under *be*) to be of the category AgrP.

- (65)



Moro (1997) argues, however, that even if small clauses sometimes involve agreement between the subject and the predicate, this cannot be a necessary and defining feature of the structure, because we find cases where the subject and the predicate obviously do not agree in any of their  $\phi$ -features. In (66) the two DPs within the complement SC differ in all their  $\phi$ -features: one is

<sup>16</sup>The N\* in example (64) shows that the category of that projection is dubious (cf. Chomsky 1981).

masculine plural, the other is feminine singular, there has to be no agreement between them for the predicative relation to obtain.

- (66) Gianni ritiene [<sub>SC</sub> [<sub>DP</sub> questi libri] [<sub>DP</sub> la  
Gianni believes this.M.PL book.M.PL the.F.SG  
causa della rivolta]]  
cause.F.SG of.the riot  
'Gianni believes these books to be the cause of the riot.'  
(Moro (1997, 53, ex. (80), my glosses - VH))

Note, however, that in these studies, IP or AgrP are meant to be 'maximal' projections of the SC, that is, the discussions are in fact often about "how big" a Small Clause can get. Depending on our views about the obligatoriness of functional projections, matrix clauses can also be regarded to be of various sizes, so maybe SCs are not exceptional in this respect. The issue we are interested in here is different, however. The question is in a way "how small" a Small Clause can be. What is the minimal domain where subject–predicate relationships can be expressed? We can disregard functional structure other than the one instantiating subject–predicate relations.

In fact, Moro (1997) has his answer to the latter question, too. In his analysis, the SC is the projection of the predicate with the subject adjoined to it. This structure has the advantage that it explains that either the subject or the predicate can move, as well as the selectional relation between the verb and the predicate, which was Stowell's concern.

- (67)
- 
- ```

graph TD
  XP1[XP] --- Subject[Subject]
  XP1 --- XP2[XP]
  XP2 --- Spec[Spec]
  XP2 --- Xp[X']
  Xp --- X[X]
  Xp --- Comp["(Comp)"]
  
```

However, this structure is not really suitable for the analysis of those constructions that Bowers' (1993) structure with the Predicative Phrase handles so well, namely those cases where there is an element, like *as*, between the subject and the predicate, as in (68).

- (68) They regard John as an idiot.

In a structure where the subject and the predicative phrase are connected by a functional head, the example in (68) is easily accommodated. Indeed, Bowers (1993) — and everyone who follows the idea of SCs as functional projections (including den Dikken 2006) — considers elements like *as* to be instantiations

of the Predicative head or Relator.<sup>17</sup>

According to Bowers (1993), the category of the SC is uniform: he argues that on the PrP level, there is no need and no way to distinguish between different categories. How does this fare with respect to the data in (62) and (63), which show that matrix predicates can select the category of the SC they take? These data do not seem to support the line of analysis unifying all SCs because it would imply that the matrix predicate can see inside the SC, and select for a subconstituent. However, Kitagawa (1985) argued that the matrix predicate does not select for categories but for ‘state of affairs’ or ‘change of state’ SCs, and this means that categorial information is neither necessary nor sufficient (cf. footnote 15). Svenonius (1994) has developed an analysis that overcomes the problem of Bowers’ proposal by arguing for the percolation of certain features of the predicate up to the level of Predicative Phrase. Svenonius argues that the relevant features are the stage-level/individual-level distinctions of predicates. Raposo and Uriagereka (1995) also argue that the matrix predicate is sensitive to the stage-level or individual-level nature of the SC, thus this has to be encoded.

The analysis by den Dikken (2006) does not face the problem of category-neutrality, since he argues that his Relator (essentially the equivalent of a SC-head) is an abstraction over various possible categories. Different kinds of functional elements can be Relators, so depending on what functional projection we are dealing with in a given context, we will have SCs of different categories. If the Relator happens to be *v*, then we are dealing with verbal predication, if it is a particle, then we will have a predicate that is adpositional in nature. The problem that arises under this assumption is how to limit the number of possible Relators. Is there a universal inventory of elements that can act as SC-heads, is it language dependent, or is it just the case that anything goes and that in principle any head can be a Relator? Den Dikken (2006) does not discuss this, but it seems to me that the number of possible mediating heads should be limited if we want to maintain a coherent concept of predication. This thesis, however, will not give an answer to this question since its focus is only non-verbal Small Clauses and does not handle other possible instantiations of den Dikken’s Relator. It will, however, matter that the SC or RelP is not category-neutral, since as we will see, there is a difference in copular clauses in the spell-out of the verbal copula that depends on whether the SC is nominal or adpositional in nature.<sup>18</sup>

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<sup>17</sup>Note that Starke (1995) argues for their  $C^0$  status. Emonds (1985) argued, however, that complementizers are all Ps, and Ps can certainly be Relators.

<sup>18</sup>This difference cannot be attributed to a difference between stage-level or individual-level SCs but it may be explained under a Bowers-style uniform predication analysis if we allow for some relevant categorial features to percolate up to the Predicate Phrase level in the way proposed by Svenonius (1994).

## 2.5 Small Clauses and Complex predicates

In early analyses of clauses involving secondary predicates in English (cf. Chomsky 1975), like the one in (69), it was assumed that the primary and the secondary predicate form a constituent in the underlying structure, with the NP argument being a common argument of theirs. Then the secondary predicate is dislocated during the derivation, so the NP ends up between the two parts of the complex predicate.

(69) They consider John intelligent.

This analysis aimed to account for the strange property of examples like (69) that the NP seems to be the object of the verb (for example, it gets accusative case from the verb), although semantically it belongs to the predicative adjective, and has no semantic relation to the verb (cf. Hoekstra 1984). That the following sentence in (70) is not a contradiction supports the view that the DP *the problem* is not a thematic argument of the verb in the first conjunct.

(70) They considered the problem difficult, but they didn't consider the problem.

The thematic relation between the non-verbal predicate and the direct object, and the lack of it between the verb and the direct object prompted toward a different line of analysis. The SC-analysis of these and similar sentences gave up the idea of the original constituency of the two predicates, and focused on the relation between the non-verbal predicate and the direct object. SC-analyses emphasize representing subject–predicate relations in terms of certain structural configurations. The structural configuration can be a Specifier–Head configuration (e.g. Stowell 1981) or a Specifier–Complement relation (as in Bowers 1993, den Dikken 2006, etc.). The SC is assumed to be a complement of or an adjunct to the matrix predicate, and the DP is believed to be an argument within the SC.

However, the old assumption that we are dealing with complex predicates formed by the verb and the secondary predicate has never been abandoned completely. The main reason for this is that the two predicates can appear in some syntactic configurations that are not available for the SC. In some languages, the relationship between the verb and the secondary predicate is more obvious, for example, because they are adjacent. This is the case in Dutch, and also in Hungarian.

Neeleman and Weerman (1993) and Neeleman (1994) argue for the existence of complex predicates, which are either created in the lexicon or base generated in syntax. The main arguments for lexical complex predicates come from their derivational properties: in Dutch, particle-verb units can be nominalized, and Neeleman and Weerman (1993) take this as evidence for their lexical status. They analyze resultative predicates as base-generated adjuncts to the verbal predicate, and argue that the verb and the non-verbal predicate

add up their theta-grids and have common arguments (cf. also Neeleman and van de Koot 2002 for resultatives).

Positing base generated complex predicates has the disadvantage, however, that the process of theta-role assignment has to be complicated: since the direct object is the argument of the non-verbal predicate, while theta-roles are assigned by the complex predicate, the theta-role cannot be assigned directly by the non-verbal predicate, it has to percolate up to the verbal level.

The case of Hungarian is even more complicated: the non-verbal predicate is often case-marked, which is not something that a base-generation approach can easily account for. Similarly, there is a problem with structurally more complex predicates. When the non-verbal predicate has a complement (see (71)), that complement cannot be preverbal, which means that the non-constituency of the predicate and its complement has to be stipulated. More specifically, it cannot be a complement of the complex predicate, because the nominal argument *Marit* is. How is it related to the AP, then? I do not see an immediate answer if we assume base-generated complex predicates.

- (71) Mari-t büszké-nek tartom az eredményeire.  
 Mari-ACC proud-DAT consider.1SG the results.POSS.PL.SUB  
 ‘I consider Mari proud of her results.’

An interesting proposal with respect to the relation between small clauses and complex predicates came from Stowell (1991b). He proposed an analysis which was turning the old idea of complex predicates upside down, claiming that the SC-structure is the underlying one, and complex predicates come about during the derivation, as a result of restructuring. He argues that restructuring of SCs only happens at LF in English, whereas it already takes place at surface structure in some other languages, for example, in Italian (Stowell 1991b, based on Rizzi 1986). The idea of reanalysis was already suggested by Hoekstra (1984, 264) in order to account for case assignment to the SC-subject, which is not adjacent to the verb but is adjacent to the complex predicate. Rizzi (1986) claims that this reanalysis can take place if the predicates are string adjacent. Restructuring or reanalysis in its less radical form means predicate-incorporation, and it combines the advantages of both the SC-structure and the old complex predicate analysis. It helps maintain a structural view on predication, but accommodates the evidence pointing towards a monoclausal analysis of certain constructions as well.

Stowell (1991b) argues that the controversial empirical data are best accounted for by assuming that complement SCs are restructured, their predicate forms a complex predicate with the verb during the derivation. He assumes that there is some LF-requirement in the background that makes restructuring necessary. Languages differ as to what level this restructuring has to happen. Stowell claims that predicate movement has to happen at Surface Structure in Italian (cf. also Rizzi 1986). I propose that Hungarian also belongs to the Italian-type languages in this respect, and predicate movement to the prever-

bal position is the instantiation of Small Clause restructuring and complex predicate formation.

## 2.6 Hungarian: complex predicates derived

As we have seen in Section 2.2.2, bare nouns, non-finite verbs, certain adjuncts and predicative complements appear adjacent to the verb in neutral Hungarian sentences. As was discussed in Section 2.3, there have been various proposals regarding the structure of these constructions. In this section and in more detail in the following chapters, I will argue that we are dealing with base-generated SCs and syntactic complex predicate formation.<sup>19</sup>

Let us take a look at the examples from Section 2.2.2 cited from Komlósy (1994) again but with a slightly different characterization that suits my purposes of sorting them into various subgroups.

This study is confined to preverbal predicative phrases, this means that I will exclude bare nominal arguments from my discussion in the following chapters, so examples like (72) and (73) will not be discussed since these are instances that have been analyzed in terms of nominal (semi-)incorporation by É. Kiss (1994), Maleczki (2001), and Farkas and de Swart (2003) among others.

(72) Péter-nek láz-a van.  
Peter-DAT fever-POSS.3SG is  
'Peter has fever.'

(73) Péter újságot olvas a kertben.  
Peter newspaper.ACC reads the garden.INE  
'Peter is reading a newspaper/newspapers in the garden.'

There is a consensus in the literature that bare nominals are not referential in Hungarian and that they need to form a semantic unit with the verb, that is why they appear in the preverbal position in the neutral sentence. This ties in perfectly well with the proposal of this thesis that all predicative elements are preverbal to form a complex predicate with the verb, but since there is no Small Clause subject–predicate relation when it comes to these elements, I will exclude them from the discussion.

Sentences that have a bare nominal SC-subject preverbally, similar to the one in (74), will be discussed in Chapter 3 when I introduce locative sentences. I will show that a sentence like (75) originates with a SC-complement to the copula, but contrary to regular copular clauses, there is no complex predicate formation.

(74) Péter-nek víz ment a szemé-be.  
Peter-DAT water went.3SG the eye.POSS.3SG-ILL

<sup>19</sup>The idea that there is some sort of complex predicate formation is not new, all analyses that consider VMs to undergo predicate movement into PredP (cf. Section 2.3.5) consider it to be a way to create a complex predicate with the verb.

- ‘Water got into Peter’s eyes.’  
 (75) Víz van a szemem-ben.  
 water is the eye.POSS.1SG-INE  
 ‘There is water in my eye(s).’

Since I will focus on non-verbal predicates, I will also exclude verbal VMs from my discussion, that is, examples such as (76), although it is evident that they are good candidates for a complex predicate analysis. I refer the reader to Koopman and Szabolcsi (2000) and É. Kiss and van Riemsdijk (2004) for recent views on verb cluster formation.

- (76) Péter úsz-ni akar.  
 Peter swim-INF wants  
 ‘Peter wants to swim.’

Finally, I will not consider VP-adverbs either, which means that I will exclude examples like the ones in (77) and (78).

- (77) Péter jól bánik Marival.  
 Peter well treats Mary.INS  
 ‘Peter treats Mary well.’  
 (78) Péter ügyesen vezeti a labdát.  
 Peter skillfully leads the ball.ACC  
 ‘Peter dribbles the ball skillfully.’

As said, I will limit my scope to predicative complements of the non-verbal type and I will distinguish three subtypes. The first type will be the main topic of Chapter 3 and consists of copular clauses with nominal, adjectival or adpositional/adverbial predicates; these are the ones in (79).

- (79) a. Péter tavaly katona volt.  
 Peter last.year soldier was  
 ‘Peter was a soldier last year.’  
 b. Péter tegnap beteg volt.  
 Peter yesterday ill was  
 ‘Peter was ill yesterday.’  
 c. Péter tegnap rosszul volt.  
 Peter yesterday badly was  
 ‘Peter was sick yesterday.’

The second type of non-verbal predicates will be the topic of Chapter 4 and consists of predicative PPs in non-copular clauses. The sentence in (80) has a particle preverbally, which I will argue to be part of the extended projection of the PP.

- (80) Péter meg-verte Jánost.  
 Peter PRT-beat.3SG John.ACC

‘Peter beat John up.’

Building on recent literature, I will also show in Chapter 4 that oblique case suffixes and postpositions are syntactically alike, both belonging to the category of adpositions. Thus, the sentences in (81) all contain PPs as predicative complements (with the additional fact that (81a) has an idiomatic meaning).

- (81) a. Péter szám-ba vette az esélyeket.  
Peter account-ILL took.3SG the chances.ACC  
‘Peter considered the chances.’
- b. Péter az asztal-ra / az ágy alá tette a könyvet.  
Peter the table-SUB / the bed under put.3SG the book.ACC  
‘Peter put the book on the table / under the bed.’
- c. Péter a kamrá-ban / az ágy alatt tartja a könyveit.  
Peter the pantry-INE / the bed under keeps the book.POSS.3PL.ACC  
‘Peter keeps his books in the pantry / under the bed.’

Finally, example (82) contains resultative constructions (with different case-markings on the result), which have often been analyzed as involving a SC complement to the verb, while (83) contains the verb *consider*, which is another case of a SC-taking verb.

- (82) a. Péter szén-né égette a húst.  
Peter coal-TRA burned.3SG the meat.ACC  
‘Peter burned the meat to cinders.’
- b. Péter piros-ra festette a kerítést.  
Peter red-SUB painted.3SG the fence.ACC  
‘Peter painted the fence red.’
- (83) Péter okos-nak tartja Marit.  
Peter clever-DAT considers Mary.ACC  
‘Peter considers Mary clever.’

The hypothesis to be tested is that these predicative elements form Small Clauses with a subject in the base-generated structure, and move to their surface position left-adjacent to the verb in order to establish a local relation with the matrix predicate. In this way, the subjects of the original Small Clauses are also licensed as arguments of the complex predicate.

The lexicalist complex predicate analysis has especially been advocated for particle verbs in Hungarian, as in (84), and for *consider*-type predicates and their predicative complement, illustrated in (83).

- (84) a. Anna be-hozta az újságot.  
Anna into-brought.3SG the newspaper.ACC  
‘Anna brought in the newspaper.’

- b. Anna meg-ette a szendvicset.  
 Anna PRT-ate.3SG the sandwich.ACC  
 ‘Anna ate (up) the sandwich.’

As was pointed out in Section 2.3, the lexicalist and base-generated complex predicate analyses face serious challenges, and a movement-based analysis seems to be more feasible. I will argue that this movement is predicate movement, which applies in order to establish a relation between the predicate and the verb.

We can identify SCs in Hungarian, which makes it plausible to regard the moving elements as SC-predicates, and the movement as predicate movement. The following chapters will show that in all these cases we are dealing with some sort of restructuring in the sense of Stowell (1991b), that is, Hungarian is another language that creates complex predicates from underlying Small Clauses overtly (before Spell-Out). This implies that I subscribe to the theory that claims that predication involves a configurational relation between a subject and a predicate. More precisely, I will adopt den Dikken’s (2006) theory of predicative relations in terms of a Relator head mediating between the subject and the predicative XP. The notion of Relator is abstract in the sense that there is no actual functional projection called RelP (as opposed to Bowers’ 1993 Predicative Phrase (PrP)), but the projection can be nominal, adjectival or adpositional in nature in the cases under discussion.

The conceptual argument for assuming SCs is that it provides a means to represent subject–predicate relations in a uniform manner, and can be translated into LF straightforwardly. Empirically, their constituency is not easy to test in many cases (cf. the discussion in Section 2.4.1). Conceptually, complex predicate formation makes a “reanalysis” possible in the sense that the argument structures of the matrix predicate and the SC predicate are united. The empirical argument for complex predicates is that the participating predicates behave as constituents under some tests (especially movement tests).

In some cases, however, we can show the constituency of the small clause in Hungarian as well. At least some predicative constructions can be shown to be constituents. For example, SC-complements of *want* are constituents in examples like (85).

- (85) a. Nem akarok mást, csak Mari-t el az  
 not want.1SG else.ACC only Mari-ACC away the  
 utam-ból.  
 way.POSS.1SG-ELA  
 ‘I don’t want anything else, but Mari out of my way!’
- b. Nem akarok mást, csak Mari-t elnök-nek.  
 not want.1SG else.ACC only Mari-ACC president-DAT  
 ‘I don’t want anything else, but Mari for president.’

Another piece of evidence suggesting the correctness of a SC-analysis comes

from binding data. Although the following sentences are not completely acceptable to all speakers I consulted, for those who accept them, the only available interpretation is that the reflexive is coreferential with the object (the SC-subject) and not with the subject of the clause.

- (86) A miniszterelnök elégedett-nek tartja a kormány-t  
 the prime.minister satisfied-DAT considers the government-ACC  
 magá-val.  
 self-INS  
 ‘The P.M. considers the government satisfied with itself / \*himself.’

Thus, at least in some cases, we have evidence that SCs exist in Hungarian. On the other hand, VM–V units move together, they can be contrastive topics on the left periphery of the clause.<sup>20</sup> This is illustrated in (87).

- (87) El-olvas-ni, el-olvastam a könyvet.  
 away-read-INF away-read.1SG the book.ACC  
 ‘As for reading (it), I did read the book.’

Furthermore, the VM can license additional arguments in the clause. Traditionally, these cases have been used as an argument for the lexicalist complex predicate analysis, pointing out that the particle can change the lexical subcategorization of the predicate, thus they must form a lexical unit with the verb.

- (88) János ki-sírta magát.  
 John out-cried.3SG self.ACC  
 ‘John cried enough.’
- (89) János bele-olvasott a könyv-be.  
 John into-read.3SG the book-ILL  
 ‘John read part of the book.’

I will argue in Chapter 4 that, in fact, the particle is part of the extended structure of the postverbal PP, and its presence as a predicate licenses the (object) DP or the PP as an argument in the clause. Similarly, secondary predicates move to the preverbal position because of their predicative nature. In this sense, we are dealing with complex predicates, because the complement of the non-verbal predicate is a complement of the VM-V unit too, but these complexes are derived in syntax.

The movement of predicative NPs, APs and PPs to the position preceding the copula will be argued to be essentially the same process as that of particle movement. These cases have never been likely candidates for a lexical complex predicate analysis, because that assumption would create massive redundancy in the lexicon. Their properties, however, suggest that we are dealing with the

<sup>20</sup>However, see Vicente’s (2007) analysis of predicate topicalization cases with independent movement of the verb and the particle to the left edge of the clause.

same type of process: predicate movement. Predicative phrases have to move to the preverbal position in copular clauses. At the same time, Chapter 3 will show that, contrary to regular copular clauses, there is no complex predicate formation in existential and locative sentences. This is the major difference between the different types of clauses that contain the verb ‘be’ in Hungarian.

This predicate movement derives the immediate adjacency of the verbal predicate and the non-verbal predicative elements in neutral sentences. When there is negation or a focus/*wh*-element in the clause, the verb moves on to higher functional projections (NegP or FocP, respectively), thus the adjacency is disrupted. This can be approached in two ways. On the one hand, one can say that there is no predicate movement in non-neutral sentences, that is, in clauses where the non-verbal predicate is not left-adjacent to the verb. É. Kiss (2002, 2006a) and Broekhuis and Hegedűs (2009) have developed analyses along these lines. An alternative would be to say that predicate movement takes place all the time, but that additional movement of the verb conceals it in non-neutral sentences. I will return to the previous proposals that consider the movement of VMs as predicate movement in Chapter 5, after we have seen the empirical evidence that bears on the issue.

# Copular Clauses, Existential and Locative Sentences

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## 3.1 Introduction

This chapter is about Hungarian sentences that contain BE as the verbal element.<sup>1</sup> As we will see, BE sentences all contain non-verbal predicates, which makes them one of the central sets of data when discussing predicate movement in Hungarian. The sentences will be divided into two main groups: copular clauses constitute one group, existential and locative sentences constitute another group; and the main split is characterized by the presence or lack of predicate movement.

Whether the uses of BE can be given a unified account, or whether there are different underlying structures depending on the function of the verb has been subject to much discussion in the linguistic literature (cf. Higgins 1979, Rothstein 1983, Williams 1983b, Heggie 1988, Moro 1997, etc.). The English verb *be* has often been claimed to be ambiguous between a main verb (e.g. in equative sentences like *Clark Kent is Superman*, see below) and a functional verb that is basically the spell-out of grammatical features (as in predicational sentences, *John is a doctor*), but there have also been arguments to derive all these uses of BE from a single underlying structure.

The aim of this chapter is to show that a Small Clause (SC) analysis for sentences with BE initially proposed by Stowell (1978) and later developed considerably (cf. Section 2.4) can fully explain the Hungarian data concerning copular clauses, existential constructions and locative sentences. All BE-sentences will be analyzed as having a SC-complement to the copula, their differences

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<sup>1</sup>To avoid confusion about the notation, I use BE as a language-independent cover term for the uses of the verb in copular clauses and existential sentences in the languages under discussion.

lying in the different derivational properties of the clause involved, namely, whether there is predicate movement (copular clauses) or not (existential and locative sentences) in neutral sentences. The main claim in the case of copular clauses is that the predicate of the SC-complement of BE moves into the preverbal position during the derivation of the clause and forms a syntactically complex predicate with the copula. Existential sentences are different, however, in that there is no complex predicate formation with the SC-predicate. This difference in structure correlates with the difference between the so-called categorical statements andthetic sentences (cf. Kuroda 1972). Existential sentences are furthermore differentiated from locative clauses in that the former but not the latter require focus on the verbal element.

Section 3.2 introduces the basic data and some aspects of the theoretical debate regarding the structure of sentences containing BE. Section 3.3 deals with the role of the copula in Hungarian and argues that SC-predicates move into the preverbal position in copular clauses. To support this claim, nominal, adjectival and adpositional predicates will be discussed in turn. I chose this way of presenting the issues and the discussion (instead of going through the different types of clauses mentioned in the beginning), because each category seems to raise different sorts of problems of its own. Nominal predicates (discussed in section 3.4) are interesting because of the referentiality properties of different nominals, in particular in sentences with two definite DPs. I will use embedding tests to show that, in principle, either of the two DPs in a DP-*be*-DP sentence can be the predicate, and that specificational and equative clauses, as well as the more obvious predicational ones, do involve a predication relation between the two nominals. Adjectival predicates raise a question related to the size of the constituent that can move into the preverbal position (cf. section 3.5). PP-predicates will be shown to behave differently in copular and existential sentences in that they move into the preverbal position in the former but not in the latter. Existential sentences seem to behave differently from locatives, but they are boththetic as opposed to copular clauses with PP predicates, as will be proposed in 3.6.

## 3.2 Data and previous analyses

Probably the most discussed issue regarding sentences with BE is the status of BE in the lexicon and its subcategorization properties. One crucial question is whether it is possible to describe all data by assuming just a single BE in the lexicon (cf. Williams 1983b, Heggie 1988, Moro 1997, den Dikken 2006 a.o.), or whether it is necessary to distinguish between a lexical, perhaps transitive, element and a less contentful, more ‘grammatical’ BE (cf. Higgins 1979, Rothstein 1983, Rapoport 1987) in the description of predicational, specificational and equative copular clauses.

Copular clauses contain a predicative phrase which can be nominal, adject-

tival or adpositional.<sup>2</sup> In this section, I will first introduce the different types of copular clauses as well as existential sentences in English, then I will discuss the Hungarian examples of the same type.

### 3.2.1 English copular clauses and existential constructions

The sentences in (1) have in common that they all state a property of *John*, and this property is expressed by the adjectival, nominal or prepositional phrase following the verbal element *is*. The real, contentful predicates in these types of sentences are in fact the non-verbal predicative phrases, the copular element being just what its name suggests: a ‘link’ between the subject and the predicate.

- (1) **Predicational copular construction**
- a. John is clever.
  - b. John is a doctor.
  - c. John is in the garden.

Besides the predicational type of copular clause there are also specificational and equative copular clauses, illustrated in (2) and (3), respectively. The typology of copular clauses goes back to Higgins (1979), although he had four classes, which have later been reduced to three (cf. Heycock and Kroch 2002, Mikkelsen 2004, den Dikken 2006, a.o.).

- (2) **Specificational copular construction**  
The best candidate was John.
- (3) **Equative copular construction**  
The Morning Star is the Evening Star.

As for the syntax of sentences containing BE, Stowell (1978) proposed that English *be* is a raising verb (just like *seem*, for instance) that takes a Small Clause (SC) complement, the structural subject of which is raised to the subject position of the matrix clause. That is, the underlying structures of examples like (1) are the following:

- (4) a. *be* [<sub>SC/AP</sub> John clever]  
 b. *be* [<sub>SC/NP</sub> John a doctor]  
 c. *be* [<sub>SC/PP</sub> John in the room]

The copula is nowadays normally analyzed as a verb that takes a SC-complement, where the SC is the projection of a functional head that connects the subject and the predicate as discussed in Chapter 2.

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<sup>2</sup>The copula *be* is also able to take a clausal complement as in modal infinitival constructions like *You are to leave the room now* in English or the modal existential *Van mit csinálnunk* ‘There is something for us to do’ in Hungarian. I will not deal with these cases here, but limit myself to structures with non-clausal (non-verbal) complements.

- (5) BE [<sub>SC</sub> Subj [ H Pred ]]

A closely related issue is whether all sentences with BE have the same structure. There are both semantic and syntactic considerations behind this question. It has been claimed that equative copular sentences do not involve the same predication relation as predicational (and probably specificational) ones. In equative sentences, BE connects two DPs, where both DPs seem to be referential, thus making them different from predicative clauses. Heycock and Kroch (1999) claim that since there are two referential DPs in equatives, there is no predication relation between the two DPs, but that they are both arguments of BE. A sentence like (6) does not predicate a property of Spiderman, rather the referent of the the first DP *Spiderman* is stated to be the same as that of the second one *Peter Parker*.

- (6) Spiderman is Peter Parker.

The issue is whether the differences between these sentences are due to the verbal element in them, or whether we are dealing with one BE (taking a SC) and the predication relation in the SC is different due to the nature of the SC-predicate.

A common test for determining whether a DP is referential or predicative is adjoining a non-restrictive relative clause to it. The observation is that non-restrictive relative clauses can only modify referential nominals (cf. Doron 1988). For example, the predicative nominal *a doctor* in (7) cannot be modified, only the subject DP *John* can. The fact that in (8) both DPs can be modified by a non-restrictive relative clause shows that both nominals in the sentence are referential.

- (7) a. \*John is a doctor, who is always very helpful.  
 b. John, who is always very helpful, is a doctor.
- (8) Spiderman, who is superhero, is Peter Parker, who is a journalist.

Besides the semantic difference between predicational and equative sentences, some languages also exhibit syntactic differences. For example, Hebrew distinguishes predicational sentences from equative ones in that the copula is present in the latter, but not in the former (cf. Rapoport 1987). Irish and Scottish Gaelic also use different copulas depending on the type of predication (cf. Adger and Ramchand 2003, Dalmi 2010).

Specificational sentences are an in-between group between predicational and equative structures. In a sentence like (9), either of the DPs could be referential, and thus be predicated about. The underlying structure of such sentences is controversial because they do seem to involve a predication relation, despite the fact that both DPs are definite, and thus, potentially referential.

- (9) The best candidate is John.

On the basis of the test of modification by a non-restrictive relative clause, we can say that only one of the DPs is predicative. This is illustrated (10). (10a) is grammatical, but (10b) is ill-formed, and this suggests that the DP which is seemingly in the predicate position is referential, whereas the DP in subject position is not.<sup>3</sup>

- (10) a. The best candidate is John, who is my friend.  
 b. \*The best candidate, who is my friend, is John.

Moro (1997) proposed that specificational copular sentences involve inversion around the copula, and he named them inverse copular structures. In inverse copular sentences, it is the predicate of the SC-complement of BE that moves to the subject position, whereas the subject of the SC stays low in the structure.

This explains the modification data, since in (10) the predicate of the SC has moved across the subject of the SC, the first DP in the clause is the underlying predicate, and thus cannot be modified by the non-restrictive relative clause. The postverbal DP is the SC-subject, and as such, it is referential. The underlying subject retains its referentiality even though it becomes part of the predicate of the matrix predication structure at least in the sense that “the logical subject” is the preverbal *the best candidate*.

Den Dikken (2006) has also argued that we can describe all three types of copular sentences with one BE and one underlying structure. He analyzes all sentences as involving SC-complements to BE, and in his analysis their typology depends on whether the subject or the predicate raises to the matrix subject position. Accordingly, he distinguishes between canonical and inverse copular sentences. Heycock and Kroch (2002) and others have been arguing that specificational copular clauses involve movement of the predicate instead of the subject essentially for information structural reasons. Inverse copular structures arise when the predicate is topic and the subject is (new information) focus. Den Dikken (2006) argues that in the case of equatives we do not have this information structural difference, and that, instead, the movement of the predicate takes place in order for an empty category to be licensed. It may be the case that the inversion takes place for different reasons in the two sentence types in English (information structural requirement in one case, licensing an empty element in the other), although both specificational and equative sentences are inverse copular constructions.

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<sup>3</sup>Dutch provides further evidence for the different status of the two DPs. While in main clauses we observe the same word order possibilities as in English, in embedded clauses the definite DP can only precede the proper name if the proper name receives contrastive stress, and this order is not only marked but completely ungrammatical with regular predicates (Broekhuis and den Dikken (2012), 1087, ex. (90a, 90a')).

- (i) a. dat Marie de beste leerling van deze klas is.  
 that Marie the best pupil of this group is  
 ‘that Mary is the best pupil of this class’  
 a’. dat de beste leerling van deze klas PETER/??Peter is.

The verb BE occurs in existential sentences as well. English existential sentences have received a lot of attention in generative grammar because we find a seemingly meaningless element, the expletive *there*, in the subject position (cf. (11a) and (11b)). Whether this element is a true expletive or is part of the argument structure of the clause (and if so, what function it has) has been subject to much debate (cf. Hartmann 2008 for a detailed discussion and analysis).

- (11) a. There is a tree in the garden.  
b. There are unicorns.

One of the interesting properties of existential sentences is that certain nominal phrases are disallowed in this environment. This restriction is called the Definiteness Effect/Restriction: definite nominals and DPs with strong quantifiers (in the sense of Barwise and Cooper 1981) such as *every* are disallowed. This can be illustrated with examples like the ones in (12).

- (12) a. There is a tree/There are some trees in the garden.  
b. \*There is the tree/every tree in the garden.

Milsark (1974) claims that this is a semantic restriction, strong quantifiers and definite NPs are ungrammatical in existential sentences, because of their semantic incompatibility with existential quantification. Hartmann (2008) gives an overview of the different claims that have been made about the Definiteness Effect with respect to English *there*-sentences, and argues for a syntactic account that is strongly related to the semantics of quantifiers and determiners by saying that existential sentences cannot contain nominals that have their D-layer filled by a strong quantifier or determiner.

### 3.2.2 Hungarian copular clauses and existential constructions

In Hungarian copular clauses, we find a difference between predicational and specificational/equative clauses with respect to the word order they exhibit. The examples in (13) show that non-verbal predicates in predicational clauses appear in the preverbal position in neutral sentences. This is one of the instantiations of predicate movement.

- (13) a. János okos volt.  
John clever was  
'John was clever.'  
b. János orvos volt.  
John doctor was  
'John was a doctor.'  
c. János a kert-ben volt.  
John the garden-INE was

‘John was in the garden.’

Similarly sentences with a DP predicate can be regular predicational structures. (14) illustrates this construction with a predicative DP in preverbal position.

- (14) János a barátom volt.  
 John the friend.POSS.1SG was  
 ‘John was my friend.’

Hungarian constructions corresponding to English specificational sentences involve focus on the subject of predication. Thus, the sentence corresponding to English (2) is (15), and this specificational copular construction is different from regular predicational sentences in that the subject is necessarily focused (as is the case with English specificational sentences).

- (15) A legjobb jelölt JÁNOS volt.  
 the best candidate John was  
 ‘The best candidate was John.’

We observe a similar information structural peculiarity in equative sentences. The sentences in (16) illustrate that the equative construction always involves a focused constituent. One of the DPs must be focused, the other DP is either in syntactic topic position or it is postverbal.<sup>4</sup>

- (16) a. Az Alkonycsillag A HAJNALCSILLAG volt.  
 the Evening.Star the Morning.Star was  
 ‘The Evening Star was the Morning Star.’  
 b. PETER PARKER volt Pókember.  
 Peter Parker was Spiderman  
 ‘Spiderman was Peter Parker.’

Both specificational and equative sentences have a DP-*be*-DP structure, that is they contain two definite nominals. Similarly to what we saw in the English cases, the referentiality properties of these DPs are different in the two sentence types: specificational sentences will be shown to have a referential and a non-referential DP, while both DPs are referential in equative sentences. Nevertheless, one of the DPs is a syntactic predicate in equative sentences as well. Section 3.4 will argue that Hungarian copular clauses can all be derived from the same underlying structure involving a Small Clause.

The copula also appears in the existential construction; the examples in (17) are Hungarian existential sentences. The first thing to observe about

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<sup>4</sup>Although equative sentences are prime candidates for expressing timeless statements, which are in present tense, I use past tense in the examples in (16) to show the position of the verb. These sentences would not have an overt copula in the present tense (see the discussion in Section 3.3.1).

existential sentences is that they are verb initial.<sup>5</sup> (17a) contains an indefinite NP and a locative PP, while (17b) contains only a bare plural NP.

- (17) a. Van egy fa a kert-ben.  
           is a tree the garden-INE  
           ‘There is a tree in the garden.’  
       b. Vannak szellemek.  
           are ghosts  
           ‘There are/exist ghosts.’

The verb-initial order is the only option with existential sentences that only contain BE and a nominal, like (17b). The other word order is not possible in this case; see (18).

- (18) \*Szellemek vannak.  
       ghosts are  
       ‘There are/exist ghosts.’

When there is a PP in the clause, the indefinite (non-specific) nominal may also precede the verb in these sentences, as in (19). The PP can be topicalized, but it is never in the verb-adjacent preverbal position.

- (19) Egy fa van a kert-ben.  
       a tree is the garden-INE  
       ‘There is a tree in the garden.’  
       (20) A kert-ben egy fenyőfa van.  
           the garden-INE a pinetree is  
           ‘There is a pinetree in the garden.’

In fact, the distinctions are quite subtle: the “real” existential sentence (17b) needs to be V-initial, but as soon as there is a PP in the sentence, the bare plural noun appears in the preverbal slot, where Hungarian bare plural nominals generally surface. Changing the word order in (21a) to a verb initial order results in an emphatic sentence, stating that contrary to previous assumptions, there are ghosts in the castle. This is an existential construction, rather than a locative.

- (21) a. Szellemek vannak a kastély-ban.  
           ghosts are the castle-INE  
           ‘There are ghosts in the castle.’  
       b. Vannak szellemek a kastély-ban.  
           are ghosts the castle-INE  
           ‘There ARE ghosts in the castle.’

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<sup>5</sup>Topics are allowed in existential sentences as well, it is the ‘comment’ part of the clause that has to be verb-initial.

The examples above show that regardless of whether the verb is focused or not, there is no predicate movement of the PP into the preverbal position. I will argue that this is the crucial difference between copular clauses on the one hand and existential sentences on the other. Before turning to existential sentences, however, the next section will deal with Hungarian copular clauses.

### 3.3 Copular clauses in Hungarian and predicate movement

This section will discuss the structure of Hungarian copular clauses. I will argue that the copula takes a Small Clause complement, the predicate of which can be nominal, adjectival or adpositional. The surface word order of neutral copular clauses is derived by moving the predicate to Spec,VP in all cases as an instance of predicate movement in order to create a complex predicate with BE.

First, I will discuss some language specific properties of the copula and the previous literature of copular clauses, then I will turn to the derivation of complex predicates with the non-verbal predicate preceding the copula.

#### 3.3.1 The (non-)presence of BE

Hungarian copular clauses differ conspicuously from their English equivalents in that the copula sometimes cannot be overtly expressed. Example (22a) shows that this is the case in predicational sentences in present tense indicative mood with a third person subject and a nominal or adjectival predicate. The examples in (22b) and (22c) show that the same holds for specificational and equative sentences.

- (22) a. Mari orvos / magas (\*van).  
 Mary doctor / tall is  
 ‘Mary is a doctor / tall.’
- b. Mari barátja JÁNOS (\*van).  
 Mary friend.POSS John is  
 ‘Mary’s friend is John.’
- c. Az Alkonycsillag a Hajnalcsillag (\*van).  
 the Evening.Star the Morning.Star is  
 ‘The Evening Star is the Morning Star.’

The third person subject can be either singular, as in (22), or plural, as in (23). In the latter case, adjectival and nominal predicates show number agreement with the subject.

- (23) a. A fiú-k orvos-ok / magas-ak.  
 the boy-PL doctor-PL / tall-PL  
 ‘The boys are doctors / tall.’

- b. A legjobb jelölt-ek Kovács-ék.  
 the best candidate-PL Smith-PL  
 ‘The best candidates are the Smiths.’

When the subject is first or second person, the copula must be present in the sentence even with nominal and adjectival predicates. This, however, does not affect the plural marking of the predicative phrase, as can be seen in the examples in (24): the nominal and adjectival predicates agree in number with the subject and the copula is inflected for person and number. Pronominal subjects can be dropped (unless they have a discourse function, that is, they are focused or contrastively topicalized), as is the case in the sentences in (24).

- (24) a. Beteg / orvos vagyok.  
 ill / doctor be.1SG  
 ‘I am ill / a doctor.’  
 b. Beteg / orvos vagy.  
 ill / doctor be.2SG  
 ‘You(sg) are ill / a doctor.’  
 c. Beteg-ek / orvos-ok vagyunk.  
 ill-PL / doctor-PL be.1PL  
 ‘We are ill / doctors.’  
 d. Beteg-ek / orvos-ok vagytok.  
 ill-PL / doctor-PL be.2PL  
 ‘You(pl) are ill / doctors.’

In past and future tense sentences and in non-indicative moods, the copula is obligatorily present throughout the paradigm. The examples in (25) show this for past and future tense. Although future is normally expressed in an analytic way with the help of the auxiliary element *fog*, BE does have a suppletive future form *lesz* that can be inflected (cf. Kenesei et al. 1998).

- (25) a. János beteg volt / lesz.  
 John ill was / will.be  
 ‘John was / will be ill.’  
 b. János orvos volt / lesz.  
 John doctor was / will.be  
 ‘John was / will be a doctor.’

The previous copular clauses all had nominal and adjectival predicates. When the predicate is a PP/an oblique case-marked DP, however, the copula must always be overt. This may be due to the fact that PPs/case suffixes cannot be marked for number, which must therefore be expressed by the copula; cf. (26).<sup>6</sup>

<sup>6</sup>In Chapter 4 I will argue following recent literature that spatial case suffixes belong to the category P, and are thus syntactically identical to postpositions.

- (26) a. János a kert-ben \*(van).  
 John the garden-INE is  
 ‘John is in the garden.’
- b. A fiú-k a ház előtt \*(van-nak).  
 the boy-PL the house before be-3PL  
 ‘The boys are in front of the house.’

In colloquial speech, however, the copula can sometimes be elided from sentences with PP-predicates, as in (27). These cases are clearly different from the sentences with nominal and adjectival predicates in 3rd person present tense in that they feel elliptical, and the copula can always be inserted, contrary to the type in (22) and (23), which require that the copula be omitted. Ellipsis is not possible in past or future tense, that is, the verbless clause can never be interpreted as referring to the past or the future.

- (27) a. Minden a helyé-n (van).  
 everything the place.POSS.3SG-SUP is  
 ‘Everything is in its place.’
- b. A kulcs a lábtörlő alatt (van).  
 the key the doormat under is  
 ‘The key is under the doormat.’

Interestingly adverbial predicates pattern with PPs and not with the adjectives they are often derived from. The copula is obligatory in sentences like (28). An important property that these adverbs share with PPs is that they cannot be marked for plural, number distinctions being restricted to [+N] categories, that is, nouns and adjectives in the language.

- (28) a. János jó-l van.  
 John good-ADV is  
 ‘John is (feeling) well.’
- b. Az üveg magas-an van (a polc-on).  
 the bottle high-ADV is the shelf-SUP  
 ‘The bottle is high up (on the shelf).’

The adverbial suffixes used to be locative suffixes, although they have lost their locative meaning by now. Diachronically, the suffix *-an/en* in (28b) developed from the same locative *-n* suffix as the present superessive *-on/en/ön* with a split between the locative from the ‘adverbial’ suffix originally depending on the preceding vowel (Kiss and Pusztai 2003). The suffix *-l* in (28a) also used to be a locative/ablative suffix (Kiss and Pusztai 2003). This shows that despite the loss of the spatial meaning, these adverbial suffixes are arguably still postpositions.

To sum up the observations so far, the copula must be omitted in present tense indicative 3rd person clauses when the predicate is nominal or adjectival, but has to be present throughout the paradigm in all other cases (with optional

ellipsis in the case of PP-predicates). We also saw that nominal and adjectival predicates agree with their subject regardless of the (overt) presence or absence of the copula. This implies that the relevant distinction with respect to the obligatoriness of the copula may be that DPs and APs are marked for number and thus show agreement with their subjects overtly (cf. É. Kiss 2002), which makes the copula superfluous as it would only spell out the default features in 3rd person present indicative. PPs, on the other hand, are not marked for number, and the copula therefore has to be spelled out to express this feature.

### 3.3.2 The structure of copular sentences

In regular copular sentences like (29), we find the predicate in the preverbal position in neutral sentences. Starting out with past tense examples help us identify the surface positions of the constituents. The non-neutral variants of this sentence in (30) and (31) have a different word order, with the focused constituent or negation preceding the copula, and the adjectival predicate following it.

- (29) János beteg volt.  
John ill was  
'John was ill.'
- (30) JÁNOS volt beteg.  
John was ill  
'It is John who was ill.'
- (31) János nem volt beteg.  
John not was ill  
'John wasn't ill.'

Assuming that the copula is a verb that takes a SC-complement, the word order of neutral copular clauses is derived by moving the predicate of the SC to the preverbal position and often by topicalizing the subject (it becomes the logical subject of the clause). In non-neutral sentences, either the predicate does not have to move to the preverbal position or the verb has to move to a higher functional projection (Foc or Neg) and this V-movement conceals the complex predicate previously created by predicate movement. Under the proposal by Broekhuis and Hegedűs (2009), predicate movement is into Spec,VP and the predicate does not move in non-neutral sentences. The derivations of the two word orders are the following (cf. Chapter 5 for discussion on this proposal):

- (32) [<sub>TopP</sub> János [<sub>VP</sub> beteg volt [<sub>SC</sub> t<sub>János</sub> t<sub>beteg</sub> ] ] ]
- (33) [<sub>FocP</sub> JÁNOS volt [<sub>VP</sub> t<sub>volt</sub> [<sub>SC</sub> t<sub>János</sub> beteg ] ] ]

In the present tense counterpart of the above examples, an important question arises about the status of the copula. The central question is whether the structure of sentences with and without BE are the same. Neutral sentences

do not help us decide this issue empirically, so non-neutral ones have to be considered as well, as was done by É. Kiss (2002). É. Kiss addresses this issue and argues that when there is no overt copula in the clause there is no verbal projection either, thus we have a matrix SC in these cases. She bases her claim on the difference in topicalization properties between sentences with and without an overt copula, as in (34). The / in the examples marks rising intonation, a characteristics of contrastive topics.

- (34) a. \* $[_{TOPP} /Beteg [_{FOCP} JÁNOS]]$ .  
           ill                  John  
           ‘As for being ill it is John, who is ill.’  
       b.  $[_{TOPP} /Beteg [_{FOCP} JÁNOS volt]]$ .  
           ill                  John was  
           ‘As for being ill, it is John who was ill.’

It has to be noted that the sentence in (35) is grammatical, that is, simply focusing the subject does not result in ungrammaticality. It is the (contrastive) topicalization (i.e., movement to the left periphery) of the predicative adjective that makes the sentence in (34a) ungrammatical.

- (35) JÁNOS beteg.  
       John ill  
       ‘It is John who is ill.’

At first sight it seems to be the case that when there is no copula in the clause, contrastive topicalization of the predicative adjective is impossible. É. Kiss (2002) attributes this to the fact that the whole (neutral) clause is an AP, thus we are dealing with a matrix small clause that has minimal structure (probably in the sense of Stowell 1981). Under this assumption, contrastive topicalization of the adjective must be head movement out of the AP, and this is not possible.

Example (36) shows that it is not possible to ‘repair’ the sentence in (34a) by adding the overt verb (just like in neutral sentences it is not possible to add the overt copula) in present tense.<sup>7</sup>

- (36) \* $/Beteg JÁNOS van$ .  
           ill John is  
           ‘As for being ill, it is John who is ill.’

The intended meaning can be expressed by a ‘doubling’ construction, in which the non-verbal predicate is moved to the left periphery, but also spelled out in its lower position. In these cases, the DP/AP bears dative case. Ürögdi (2006) analyzes this fronting as predicate topicalization, where the Predicative Phrase including the AP moves to the left periphery of the clause.

- (37) Beteg-nek JÁNOS beteg.  
       ill-DAT John ill

<sup>7</sup>The past equivalent of (36), which is (34b) is grammatical.



‘As for being the best candidate, it is John.’

Note that English sentences exhibit a similar contrast between ‘regular’ adjectival predicates and superlatives, as illustrated in (42), which are the inverted pairs of the sentences in (41). The phrases containing the superlative adjectives in the (b) sentences are arguably DPs, since the pronominal *one* can be added to them.<sup>8</sup>

- (41) a. John is intelligent.  
       b. John is the most intelligent (one).  
 (42) a. \*Intelligent (one) is John.  
       b. The most intelligent (one) is John.

Seeing that the difference holds for English as well, where there is no doubt that a verbal projection is present in the clause, we cannot maintain that the reason for the ungrammaticality of (34a) is the lack of a VP in the clause. We need to look for another explanation for the contrast between (34a) and (34b) that is not formulated in terms of a difference between having or not having a VP-projection.

Kádár (2006) gives a different analysis of these ‘verbless’ sentences, but she does not posit a VP in these clauses either. She claims that predicational copular clauses involve movement of the head of the predicative phrase to T when there is no verbal element in the clause and to Spec,TP when there is a verb (which moves to T itself). She claims that sentences like (34a), repeated here as (43), are out, because the nominal predicative head is in T, and T needs to be phonologically supported, so the predicate cannot move further on in the clause.

- (43) \*<sub>[TopP /Beteg</sub> [<sub>FocP</sub> JÁNOS]].  
       ill                  John  
       ‘As for being ill it is John, who is ill.’

Thus Kádár’s (2006) solution is that there is a TP in the sentence, so we are not dealing with a matrix SC, but there is no verbal projection. The subject is originally adjoined to the predicative AP/NP, which she does not call a Small Clause (she only assumes a SC in specificational sentences), but given that there is a predicate with a subject, it rather looks like a SC of the type proposed by Moro (1997).

Kádár (2006) distinguishes the structure of predicational sentences from that of specificational/equative sentences in that she posits a Predicative Phrase as the SC in the latter type of clauses. The Pred head mediates between the subject and the predicate in these sentences much as it is assumed by Bowers (1993) for all predications. The copula is again generated in T<sup>0</sup> in specificational sentences, and it is zero when there are no features to spell out.

<sup>8</sup>Thanks to Craig Thiersch (p.c.) for judgments and discussion of the data.

With respect to the structure of these clauses, a different way to view the data presented above is to say that there is always a copula in the clause. This is the proposal of Dalmi (2010), who posits a zero copula in seemingly verbless sentences and introduces it in the T head as an inflectional element.<sup>9</sup> I also propose that in all sentences there is a copula, selecting a SC, and I assume it to be in V, for two reasons. First, because the behavior of predicates in copular clauses seems identical to other VMs, which come from SC-complements to verbs. Secondly, because this helps explain the variation between copular and existential/locative sentences that we will turn to in the next section, and BE seems lexical in existential sentences.

The copula does not have to be spelled out when the default present tense 3rd person features are present, and there is no inflectional suffix that has to be attached to a root.<sup>10</sup> The full agreement between the subject and the predicate in 3rd person licenses a silent copula. In 1st and 2nd person, there is a person mismatch between the subject and the predicate, hence the copula is present, while in past and future tenses, the copula has to be spelled out to encode tense. The copula is also obligatory in present tense 3rd person when there is a mood or modality suffix that has to attach to a verbal element (e.g. in imperative sentences, where the copula bears a subjunctive suffix, such as (44)).

- (44) János legyen orvos.  
 John be.SBJV.3SG doctor  
 ‘John should be a doctor.’

The difference between nominal/adjectival and PP predicates is that the latter are not able to express number agreement with their subject, thus the verb has to be spelled out in order to be able to express the agreement between the subject and the predicate of the clause.

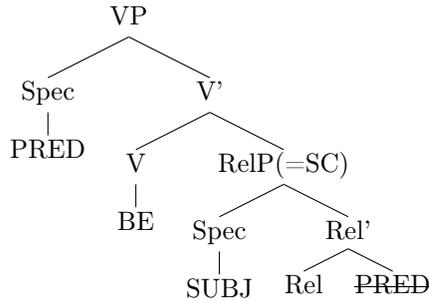
As we established in the beginning of this section, the word order of copular clauses is derived by moving the SC-predicate to the preverbal position, but it is not necessary that this verbal projection be phonologically filled. The final surface order can be PRED V SUBJ, or alternatively the subject of the SC can be in topic position, as is often the case with definite subjects. The result of the movement is complex predicate formation between the non-verbal and the verbal predicate.

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<sup>9</sup>Dalmi (2010) also proposes a rich SC-structure with functional projections for agreement on top of the lexical predicate. Her proposal is based on agreement facts and cross-linguistic data, and it is easily compatible with the simple SC I assume to encode the basic predicative relation.

<sup>10</sup>Present tense indicative 3rd person is unmarked, except for the plural.

(45)



The non-verbal predicate originates in a predicate position (in the SC) and ends up in a position where predicates of SCs are moved. In Spec,VP it can form a complex predicate with the V. This analysis can maintain one aspect of Kádár's (2006) explanation of why (34a) is ungrammatical, namely, that the silent copula needs to be supported by the non-verbal predicate, so movement of the predicate into the contrastive topic position is not possible.

Thus, we can conclude that all copular clauses contain a copula, even the ones that do not have it overtly. The zero-realization of the copula is licensed by the agreement on the nominal or adjectival predicate in 3rd person singular and plural present tense indicative. The uniform underlying structure includes the copula with a SC-complement, and the predicate of the SC undergoes predicate movement in neutral sentences.

### 3.4 Nominal predicates

Sentences with nominal predicates fall into the three groups introduced in the beginning of this chapter. (46a) is a predicational sentence, where the predicative NP states a property of the subject, (46b) is a specificational structure, where Peter is being specified as the husband of Mary's, and (46c) is an equative sentence, where it is established that the two DPs refer to the same entity in the world. For the sake of explicitness, I use sentences with an overt copula in order to be able to show the word order involving BE.

- (46)
- a. János orvos lesz.  
John doctor will.be  
'John will be a doctor.'
  - b. Mari férje PÉTER lesz.  
Mari husband.3SG Peter will.be  
'Mary's husband will be Peter.'
  - c. PETER PARKER volt Pókember.  
Peter Parker was Spiderman  
'Peter Parker was Spiderman.'

Sentence (46a) is a neutral sentence with level prosody. The predicative NP, that is, the SC-predicate, moves into the preverbal slot as has been described

above. The cases of (46b) and (46c) are more complicated, as these are not neutral sentences, the constituent preceding the copula is not a VM, but a focus. Thus, the derivations of (46b) and (46c) are either different from the neutral predicational sentences, in the sense that predicate movement does not apply, or there is more going on, and the focus conceals the predicate movement.

### 3.4.1 Predicational sentences

The predicate in predicational sentences is either a bare noun or an indefinite nominal expression. We often find bare nominals in Hungarian sentences where English would have indefinite noun phrases. This is the case in (47), in which the bare noun *orvos* ‘doctor’ functions as the predicate.

- (47) János orvos lesz.  
 John doctor will.be  
 ‘John will be a doctor.’

Komlósy (1994) argues that Hungarian bare nouns are always predicative, even when they are object arguments, and Farkas and de Swart (2003) argue that they have to incorporate into the verb. This accounts for the fact that they always surface in the preverbal position in neutral sentences. Embedded under the copula, bare nominals are SC-predicates stating a property of the subject. The predicate of the SC moves into the preverbal predicate position in order to be adjacent to the verbal predicate.

Indefinites are also possible as predicates, as example (48) illustrates, but bare nouns are much more frequent. These phrases are arguably smaller than DPs, that is, they are NPs or NumPs.

- (48) Az orvos egy vicces ember volt.  
 the doctor a funny man was  
 ‘The doctor was a funny man.’

Predicates of predicational sentences can also be definite DPs: in (49), the definite DP is the SC-predicate. The surface order of this sentence is the same as in the previous examples. Thus, despite the predicate being a definite DP, it is in the same preverbal position as other VMs in neutral sentences.

- (49) János a barátom volt.  
 John the friend.POSS.1SG was  
 ‘John was my friend.’

As we will see below, the difference between predicational and specificational DP-*be*-DP sentences is in their information structure. English specificational sentences of the *The best candidate is John*-type correspond to Hungarian sentences with the referential DP (*John* in this case) in focus, while examples like (49) are neutral predicational clauses and have the subject either as a topic or postverbally.

That the preverbal element of (49) is a VM and is not necessarily in focus can be shown by negation (cf. Szabolcsi 1981b). When a neutral clause is negated, the VM is postverbal: (50) shows the word order in a predicational sentence with a nominal predicate and its negated counterpart. It is also possible to negate the nominal predicate but then we are dealing with focus negation, there is a contrast implied (cf. (51)).

- (50) a. János orvos volt.  
 John doctor was  
 ‘John was a doctor.’  
 b. János nem volt orvos.  
 John not was doctor  
 ‘John wasn’t a doctor.’
- (51) János nem ORVOS volt (hanem ápoló).  
 John not doctor was (but nurse)  
 ‘John was not a doctor (but a nurse).’

Example (49) is negated with the order in (52), which shows that the DP is not focused, consequently, it must be a regular preverbal predicate in the positive sentence.

- (52) János nem volt a barátom.  
 John not was the friend.POSS.1SG  
 ‘John wasn’t my friend.’

Just like before, the predicate DP could in principle also be focused, but then the word order of the negative sentence would be as in (53). In this sentence the predicate DP is in focus and negated. This is in contrast with the sentence in (52), which is a regular negative predicational copular sentence with a DP predicate in preverbal position.

- (53) János nem A BARÁTOM volt (hanem a kollégám).  
 John not the friend.POSS.1SG was (but the colleague.POSS.1SG)  
 ‘John was not my friend (but my colleague).’

### 3.4.2 Specificational sentences

Specificational sentences contain two definite DPs. In principle, either or both of these DPs can be referential and thus the subject of predication, so one of the central issues of this construction is establishing whether there is a predication relation and, if so, which of the DPs is the subject and which is the predicate.

The referentiality of definite DPs is an issue that has been under debate. Enç (1991), for example, claims that definites are referential by definition, while others claim them to have different properties with respect to referentiality depending on the environment they appear in (e.g. Williams 1983b). The examples in (54) show that definite DPs are equally well suited to be predicates

or arguments: being the last candidate is predicated of John in (54a), but it is the referential subject argument in (54b).

- (54) a. János az utolsó jelölt volt.  
 John the last candidate was  
 ‘John was the last candidate.’  
 b. Az utolsó jelölt most ment haza.  
 the last candidate now went home  
 ‘The last candidate has just gone home.’

As mentioned in Section 3.2.1, English specificational sentences have been analyzed as inverse copular structures: it is not the subject of the SC complement of BE that moves into the subject position of the clause but the predicate, thus leaving the subject postverbally (cf. Moro 1997). As has been argued by Heycock and Kroch (2002), this word order corresponds to an information structural property. In inverse copular structures, the underlying subject is part of the informational focus (‘rheme’) of the clause, while the predicate is what links the sentence to the previous discourse, it is a topic. (55a) is a regular predicational sentence, the subject is in Spec,TP, the predicate is postverbal. This order is neutral when it comes to the marking of information structure. The sentence in (55b) is a specificational sentence, where *John* is (part of) the focus of the clause.

- (55) a. John was the best candidate.  
 b. The best candidate was John.

The syntax of Hungarian specificational sentences shows a similar sort of divergence from predicational sentences, and the word order supports an analysis based on information structure. It has been pointed out by Kádár (2006) that specificational copular clauses are not neutral sentences in Hungarian. The Hungarian equivalent of English specificational sentences has the subject DP in the structural focus position, while the nominal predicate can be postverbal or preposed as a contrastive topic. (56) illustrates these two possible word orders, and *János* is focused in both of them.<sup>11</sup>

- (56) a. JÁNOS volt a legjobb jelölt.  
 John was the best candidate  
 ‘The best candidate was John.’  
 b. A legjobb jelölt JÁNOS volt.  
 the best candidate John was  
 ‘The best candidate was John.’

This means that the Hungarian counterpart of the English specificational sentence *The best candidate was John* has two possible word order variants, but

<sup>11</sup>The sentences in (56) could also be rendered with the English sentence *JOHN was the best candidate* with focus stress on the subject.

in both cases, it is *János* that is focused. This is the main difference between specificational and predicational sentences, as in the latter, the predicate of the SC-complement of BE has to be immediately preverbal.

In DP-*be*-DP clauses where both DPs are definite descriptions and not proper names, either of the DPs could be the predicate. We find that DP in structural focus will be interpreted as the subject of predication. The following two sentences are equally possible, but they describe different scenarios.

- (57) a. A LEGJOBB JELÖLT lesz az elnök.  
           the best candidate will.be the president  
           ‘The best candidate will be the president.’  
       b. AZ ELNÖK lesz a legjobb jelölt.  
           the president will.be the best candidate  
           ‘The president will be the best candidate.’

Example (57a) describes a scenario where whoever will turn out to be the best candidate will be(come) the president as well. Thus ‘the president’ is the predicate of the clause. In (57b), on the other hand, the referent of ‘the president’ is already established, and the clause expresses that (s)he will be the best candidate; the subject of predication, *az elnök* ‘the president’, started out as the subject of the small clause.

In fact, when a proper name can be coerced into a predicative reading (e.g. a role reading), the predication structure can be interpreted in the opposite way as we might expect. Still, in a specificational sentence, the subject will be focused.<sup>12</sup> (58) illustrates this, with the descriptive DP interpreted as a referential subject in focus and the proper name as a role.

- (58) A LEGJOBB JELÖLT lesz Hamlet.  
           the best candidate will.be Hamlet  
           ‘The best candidate will be (=play) Hamlet.’

The fact that either DP can be a predicate is supported by the data provided by embedding these clauses under *consider*-type verbs. In English, these embeddings test whether we are dealing with a canonical predicational sentence or with an inverse one, because only in the case of canonical predications can we have a bare SC as the complement of *consider* (cf. Doron 1988 etc). In

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<sup>12</sup>The regular predicational version of this sentence would have *Hamlet* preverbally.

- (i) A legjobb jelölt Hamlet lesz.  
       the best candidate Hamlet will.be  
       ‘The best candidate will be Hamlet.’

This sentence is ambiguous but is disambiguated by its information structure: If the descriptive DP is referential, that is, if it is the subject of the SC-predication, it can be a topic, then *Hamlet* is either a regular VM or it can be in focus. If the descriptive DP is predicative, it can only be a contrastive topic, then *Hamlet* is referential and it gets a focus interpretation.

(59a), the copular verb can be left out in the embedded SC, but it is obligatory in the inverse construction in (59b).

- (59) a. I consider John (to be) the best candidate.  
 b. I consider the best candidate \*(to be) John.

The test works a bit differently in Hungarian. In SC-embedding contexts the predicate of the SC receives dative case. As can be seen in (60) either of the DPs in a specificational sentence can be marked with dative, and the sentences correspond to different readings and different predication structures. (60a) is an example with a regular predication structure embedded under *tart* ‘consider’. The definite predicative DP has dative case, while the subject of the SC gets accusative from the verb. This would correspond to the examples in (59), since the definite DP is the predicate in those sentences as well. In (60b), it is the proper name that bears dative case, and the sentence has a reading where the proper name is interpreted as a property. The sentence is embedded under *gondol* ‘think, believe’, meaning that the speaker’s belief is that the person (s)he knows to be the best candidate is called John.

- (60) a. JÁNOS-T tartom a legjobb jelölt-nek.  
 John-ACC consider.1SG the best candidate-DAT.  
 ‘I consider John the best candidate.’  
 b. A LEGJOBB JELÖLT-ET gondolom János-nak.  
 the best candidate-ACC think.1SG John-DAT  
 ‘I believe the best candidate to be (named) John.’

Similarly the predications in (57) with two definite descriptions in the SC have corresponding counterparts embedded under ‘consider’, and either of the DPs can appear in dative case with the shift in meaning discussed in relation to the copular clauses in (57).

- (61) a. A LEGJOBB JELÖLT-ET tartom az elnök-nek.  
 the best candidate-ACC consider.1SG the president-DAT  
 ‘I consider the best candidate the president.’  
 b. AZ ELNÖK-ÖT tartom a legjobb jelölt-nek.  
 the president-ACC consider.1SG the best candidate-DAT  
 ‘I consider the president the best candidate.’

In (61a) the referent of the DP *a legjobb jelölt* ‘the best candidate’ is considered to be the president (e.g. in a competition-like context, where the winner, i.e., the best candidate will become the president). In (61b), however, the predication is different: the referent of *az elnök* ‘the president’ is considered to be the best candidate (e.g. where the president enters a contest and comes out as the winner).

What these different interpretations and tests show us is that in DP-*be*-DP sentences, one of the DPs is predicative. In structural terms, the predicative

DP is the predicative complement of the SC-head; while the referential one is the SC-subject. Those sentences where the subject of predication (i.e., the SC-subject, the referential DP) is focused are the Hungarian counterparts of English specificational sentences.

### 3.4.3 Equative sentences

Equative sentences are another case where we have two definite DPs in the clause. It is hard to say just by looking at the sentences which of the DPs is predicative. Similarly to specificational structures, there is also an information structural peculiarity: one of the DPs is obligatorily focused in these sentences. In (62), it is the DP *Peter Parker* which is focused, while in (63) the DP *Pókember* ‘Spiderman’ receives focus accent.

- (62) (Kezdet-től fogva tudtuk, hogy) PETER PARKER volt  
beginning-ABL taken knew.1PL that Peter Parker was  
Pókember.  
Spiderman  
‘(We knew from the beginning that) Peter Parker (and not someone else) was Spiderman.’
- (63) (Szerintem) Peter Parker PÓKEMBER volt, (és nem Superman).  
according.1SG Peter Parker Spiderman was and not Superman  
‘(In my opinion) Peter Parker was Spiderman (and not Superman).’

Example (64) shows that that the two DPs can both be modified by non-restrictive relative clauses, so we can conclude that they are both referential.

- (64) Peter Parker-t, aki egy irodában dolgozik, tartottuk  
Peter Parker-ACC who an office.INE works considered.1PL  
Pókember-nek, aki melleleg minden nap életet ment.  
Spiderman-DAT who by.the.way every day lives.ACC saves  
‘We considered Peter Parker, who works in an office, to be Spiderman, who, by the way, saves lives every day.’

This does not mean, however, that neither of the DPs is a structural predicate in the sentence. To identify the predicate of equative sentences, I will use the same test as in (60) and (61), that is, I will embed the SC from equative clauses under *consider*-type verbs. In the following pair of sentences, we can see again that either of the DPs can bear dative case, and thus be the predicate under *consider*-type verbs.

- (65) Kezdet-től fogva PETER PARKER-T gondoltuk  
beginning-ABL taken Peter Parker-ACC believed.1PL  
Pókember-nek.  
Spiderman-DAT  
‘We believed Peter Parker to be Spiderman from the beginning.’

- (66) (Nem tudok sokat a szuperhősök alteregói-ról, de)  
 not know.1SG much the superheroes alteregoes-DEL but  
 PÓKEMBER-T gondolom Peter Parker-nek.  
 Spiderman-ACC think.1SG Peter Parker-DAT  
 ‘I don’t know much about the alteregoes of superheroes, but I believe  
 Spiderman to be Peter Parker.’

Hartmann and Hegedűs (2009) also established the predicative nature of the dative DP in the above examples by showing that it can only be used as a contrastive topic, not as a regular topic. This is due to the fact that regular, but not contrastive, topics have to be referential and specific, so the fact that the dative-marked DP can only be a contrastive topic is explained if it is predicative.

- (67) a. \* $[_{TopP}$  Pókember-nek  $[_{FocP}$  PETER PARKER-T tartottuk]].  
 Spiderman-DAT Peter Parker-ACC considered.1PL  
 ‘We considered Peter Parker to be Spiderman.’  
 b.  $[_{CT}$  Pókember-nek  $[_{FocP}$  PETER PARKER-T tartottuk ]].  
 Spiderman-DAT Peter Parker-ACC considered.1PL  
 ‘As for being Spiderman, we considered Peter Parker to be that.’

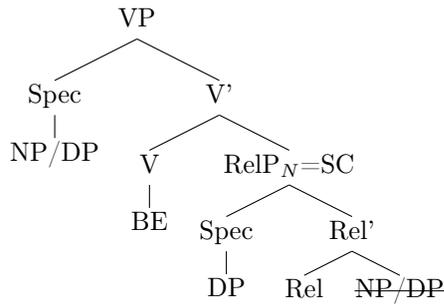
What we see in these examples is that equative sentences behave in essentially the same way as specificational ones. We can simply maintain the SC-analysis for these cases, according to which one of the DPs is a predicate.

### 3.4.4 The structure of copular clauses with nominal predicates

The above discussion shows that one of the nominal elements is always a predicate in copular clauses with two noun phrases. Thus there seems to be no essential difference between predicational, specificational and equative structures in their predicational properties, although the definite DPs introduce information structural complications in Hungarian (as well as in English).

The derivation of the complex predicate proceeds as was claimed above by moving the predicate of the SC-complement of BE to Spec,VP. This is the derivation of predicational sentences with a nominal predicate.

(68)



In specificational and equative sentences, we do not see this type of complex predicate formation, since in those sentences the subject DP is obligatorily in the structural focus position. We saw that specificational sentences differ from predicational ones in exactly this focus property, which is in line with what we see in English specificational sentences. Equative sentences always have focus on one of the DPs as well, and since both are referential, either one can be construed as the subject depending on the context. We saw that the DPs both pass referentiality tests in equative clauses, while only one of them is referential in specificational sentences. If we take É. Kiss's (2006b) observation that referential definite expressions always receive an identificational interpretation in a predicative position (which she also assumes to include the focus position), we may have an explanation of the difference between equatives and the other nominal predicational structures. Predicational and specificational clauses always have a non-referential predicate, even when it is a DP, but equatives have two referential DPs, so no matter which DP is preverbal, it will have an identificational interpretation, which is the interpretation we assign to focus as well.

The fact that equatives have no neutral interpretational variant is then due to the referentiality of the DPs, while the focus requirement on the subject of specificational clauses is just the way the sentence type itself is identified. Predicational sentences are the only ones that are neutral and thus exhibit predicate movement and complex predicate formation between the copula and the nominal predicate on the surface.

### 3.5 Adjectival Predicates

Sentences containing adjectival predicates are predicational copular clauses. As may be familiar by now and as illustrated in (69), we find the predicative adjective in the preverbal position in neutral sentences.

- (69) János szorgalmas volt.  
 John diligent was  
 'John was diligent.'

Adjectival predicates raise a different issue in Hungarian than nominal ones, which is illustrated in (70). The peculiarity of such sentences in Hungarian is that when the predicative adjective has a complement, the complement must be postverbal. The alternatives in (71), in which the AP pied pipes the complement, are ungrammatical.

- (70) A csapat büszke volt a győzelem-re.  
 the team proud was the victory-SUB  
 ‘The team was proud of the victory.’
- (71) a. \*A csapat [a győzelem-re büszke] volt.  
 the team the victory-SUB proud was  
 ‘The team was proud of the victory.’  
 b. \*A csapat [büszke a győzelem-re] volt.  
 the team proud the victory-SUB was  
 ‘The team was proud of the victory.’

The question that comes up when we look at this set of data is whether predicate movement is head- or phrasal movement. In the case of nominal predicates we saw that the movement must be phrasal, but it is not immediately obvious that we can maintain that for adjectival predicates as well, given the ungrammaticality of (71a) and (71b).

This section is organized as follows. First, I will dedicate a short excursus to the discussion of the structure of Adjectival Phrases (APs) in Hungarian in order to show their word-order properties in case of modification and complementation. After that, I will return to the main issue of preverbal adjectival predicates and argue that it is another case of predicate movement; the adjectival predicate of the Small Clause under BE moves into Spec,VP, the locus of complex predicate formation. Complements of adjectives cannot move there, but modifiers must, so we must conclude that it is an instance of phrasal movement after evacuation of the PP complement out of AdjP.

### 3.5.1 Excursus: On the structure of Adjectival Phrases

#### 3.5.1.1 Degree phrases

The extended structure of APs has been claimed to involve functional projections on top of the lexical projection of AP. Under such analyses the AP is dominated by a Degree Phrase (e.g. Abney 1987, Corver 1991, 1997). As Corver (1991) pointed out the structure of DegPs is minimally as illustrated in (72) for Dutch.

- (72) [<sub>DegP</sub> zo / 20 cm [<sub>AP</sub> hoog]]  
 so / 20 cm high

Corver (1997) further argues on the basis of Dutch data that there is reason to assume a separate QP between DegP and AP, since the two functional elements

can actually co-occur in the extended AP.

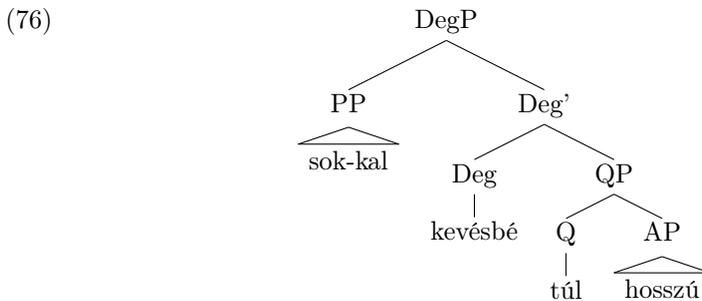
- (73) [<sub>DegP</sub> 20 cm [<sub>QP</sub> te [<sub>AP</sub> hoog ]]]  
           20 cm       too       high  
           ‘20 cm too high’

In Hungarian, the equivalent of (73) is ungrammatical (see (74a)). The modifier *20 cm* is in instrumental case, and it only co-occurs with comparative degree elements (cf. (74b) and (74c)). There must be a comparative element in the degree phrase in order for the modifier to be licensed there and a quantifier word like *too* is not suitable (contrary to Dutch).

- (74) a. \*20 cm-rel túl mély  
           20 cm-INS too deep  
           ‘20 cm too deep’  
       b. 20 cm-rel mélyebb  
           20 cm-INS deeper  
           ‘20 cm deeper’  
       c. sok-kal kevésbé érdekes  
           much-INS less interesting  
           ‘much less interesting’

The examples can be accommodated in a structure with a DegP when we assume that modifiers occupy the specifier of the comparative suffixes/elements in the Deg phrase. Example (75) shows that degree modifiers can co-occur with *túl* ‘too’ given that there is a comparative in the phrase. The structure is as in (76).

- (75) sok-kal kevésbé túl hosszú  
       much-INS less too long  
       ‘much less too long’



This structure accommodates the different elements that we can find in the extended adjectival projection, and makes the category of adjectives similar to other lexical categories in that it has its own category-specific functional projections.

### 3.5.1.2 Complements

Hungarian adjectives can take PP or CP complements. Some adjectives that take CP complements are: *biztos* ‘sure’; *fontos* ‘important’; *lehetetlen* ‘impossible’; *véletlen* ‘accidental’. Cinque (1990) argued for Italian that adjectives with CP complements are unaccusative adjectives, with the CP surfacing as subject. Similar arguments have been proposed by Bennis (2000) for Dutch unaccusative adjectives, and Stowell’s (1991a) analysis for mental property adjectives is in the same spirit as well. (77) is a Hungarian example of sentences with a predicative adjective and a CP-complement.

- (77) (Az) *biztos* volt, hogy ott leszünk.  
 that sure was that there will.be.1PL.  
 ‘It was sure that we would be there.’

PP complements of Hungarian adjectives have an oblique suffix that is lexically determined by the adjective (mostly instrumental or sublative case). Some examples for adjectives and their complements are given in (78).

- (78) a. INSTRUMENTAL: *elégedett* -val/-vel ‘satisfied with’;  
 b. SUBLATIVE: *büszke* -ra/-re ‘proud onto’; *dühös* -ra/-re ‘angry with’;  
 c. ILLATIVE: *szerelmes* -ba/-be ‘in.love with’

As for the ordering possibilities within the AP, we find that the complement can normally either precede or follow the adjectival head. The complement always precedes the modifiers when it precedes the adjective, that is, the complement cannot appear between the degree/quantifier elements and the adjectival head. The order is either Deg/Q - A - PP or PP - Deg/Q - A in Hungarian, but never Deg/Q - PP - A.<sup>13</sup>

- (79) a. (Mari-ba) *nagyon* (\*Mari-ba) *szerelmes* (Mari-ba)  
 Mary-ILL very Mary-ILL in.love Mary-ILL  
 ‘very much in love with Mary’  
 b. (az *eredmények-kel*) *nagyon* (\*az *eredmények-kel*) *elégedett* (az  
 the results-INS very the results-INS satisfied the  
*eredmények-kel*)  
 results-INS

<sup>13</sup>In this respect Hungarian is different from Dutch, for example, where the complement can also intervene between the modifier and the head with (pseudo-)participial adjectives as in (ib).

- (i) a. (op Marie) *erg* (\*op Marie) *trots* (op Marie)  
 on Mary very on Mary proud on Mary  
 ‘very proud of Mary’  
 b. (op Marie) *erg* (op Marie) *verliefd* (op Marie)  
 on Mary very on Mary in.love on Mary  
 ‘very much in love with Mary’

‘very satisfied with the results’

The head-final order must be the derived one, because the head and the complement are not adjacent.<sup>14</sup> This means that the complement of the adjective can move to the left edge of the extended adjectival projection. É. Kiss (1998b) calls it “topicalization” within the extended AP, which implies that it is A'-movement. I will not go into the syntactic details of the derived construction here, but simply follow É. Kiss in assuming that the movement is possible and the left edge of the AP may serve as an escape position through which the complement can move out of the AP.

The complement is always to the left of the adjectival head when the AP is prenominal, in accordance with Williams' (1982) Head-Final Filter; see the order PP - Deg/Q - A in (80). The complement of the adjective cannot be separated from the rest of the AP within the DP, as the ungrammaticality of (81) shows.

- (80) a győzelem-re nagyon büszke csapat  
 the victory-SUB very proud team  
 ‘the team very proud of the victory’
- (81) \*[A nagyon büszke csapat a győzelem-re] a második körben  
 the very proud team the victory-SUB the second round.INE  
 ki-esett.  
 out-fell  
 ‘The team very proud of its victory was disqualified in the second round.’

The examples in (82) show that some speakers also accept this head-final order when the predicative AP is moved, for example, into the contrastive topic position in the left periphery of the clause.

- (82) a. ?[<sub>CT</sub> A méhcsípésre allergiás] bármelyik gyerek lehet.  
 the bee.sting.SUB allergic any child can.be  
 ‘Any child can be allergic to bee stings.’
- b. ??[<sub>CT</sub> Az eredménnyel elégedett] csak János volt.  
 the result.INS satisfied only John was  
 ‘Only John was satisfied with the result.’

Thus, APs seem to exhibit some flexibility in their internal word order possibilities. In Hungarian, the degree modifiers precede the head, and the complement of the adjective can either follow the head, or it can – and in prenominal position it has to – precede everything in the phrase and occupy a left-peripheral position within the extended AP.

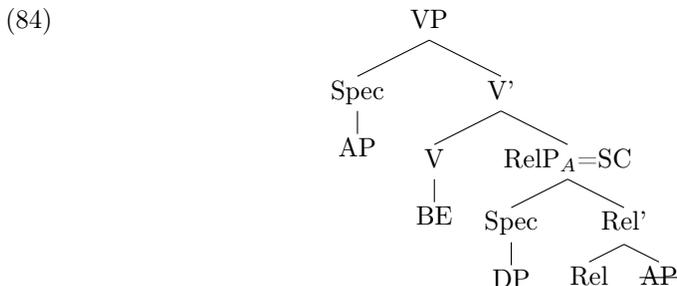
<sup>14</sup>Corver (1997) argues for the same base-order for Dutch, but note that the landing positions must be different in the two languages in those cases where Dutch has the Deg/Q - PP - A order since that one is ungrammatical in Hungarian.

### 3.5.2 Adjectival predicates in preverbal position

As in the case of nominal predicates, I assume here as well that BE takes a Small Clause complement and that the AP is the predicate of this SC. The predicative AP must move into the preverbal position as another instance of complex predicate formation. Since the adjective must pied-pipe its modifier, we can safely conclude that the movement is phrasal (contra É. Kiss 1998b). (83) gives an example of the attested order in copular structures.

- (83) A csapat nagyon / túlságosan / végtelenül büszke volt a  
 the team very / too / endlessly proud was the  
 győzelem-re.  
 victory-SUB  
 ‘The team was very / too / immensely proud of the victory.’

The structure is given in (84), which needs to be amended with the assumption that if the adjective has a complement, that must move out of the predicative AP before predicate movement takes place.



It is not clear why (85) is ungrammatical given that head-final APs are perfectly acceptable in prenominal position (cf. (80) above), which shows that the restriction is not simply on the head-finality of the preverbal phrase. For completeness' sake, (86) shows that head-initial APs are also ungrammatical in preverbal position.<sup>15</sup>

- (85) \*A csapat [a győzelem-re büszke] volt.  
 the team the victory-SUB proud was  
 ‘The team was proud of the victory.’
- (86) \*A csapat [büszke a győzelem-re] volt.  
 the team proud the victory-SUB was  
 ‘The team was proud of the victory.’

<sup>15</sup>This is different in Dutch, for example, where predicative APs are head-initial in examples like *dat Jan [AP trots op zijn vader] is* ‘that John proud of his father is’. Thanks to Hans Broekhuis for pointing this out to me.

The analysis given by É. Kiss (1998b) is that the adjective merges with the verb and together they take a(n oblique case-marked) complement, thus we are dealing with a base-generated complex predicate in her analysis (see (87)). Under these assumptions, the adjectival head and its complement do not form a constituent (excluding the verb) at any stage of the derivation. This seems undesirable, since it implies that adjectival phrases do not have a uniform structure. Contrary to attributively used APs, the complement of predicative adjectives is not generated within an AP, but as a complement in a VP with a complex A+V head.<sup>16</sup>

- (87)  $[[_{NP} \text{Éva}] [_{VP} \text{szerelmes volt (Pali-ba)}}]$ .  
           Eve       in.love   was (Paul-ILL)  
           ‘Eve was in love with Paul.’

It seems simpler and more advantageous to assume then that the adjective and its complement always form a constituent initially, and that the preverbal adjective is separated from its complement during the derivation. An empirical argument for the constituency is that the whole AP can be topicalized as illustrated by example (82) repeated here as (88), although such examples are not fully acceptable to all speakers (and are marginal for some).

- (88) a.  $?[_{CT} \text{A méhcsípésre allergiás}] \text{ bármelyik gyerek lehet.}$   
           the bee.sting.SUB allergic any child can.be  
           ‘Any child can be allergic to bee stings.’  
       b.  $??[_{CT} \text{Az eredménnyel elégedett}] \text{ csak János volt.}$   
           the result.INS satisfied only John was  
           ‘Only John was satisfied with the result.’

Thus, under my assumptions, the adjective and its complement originate as a constituent. As we have seen before, the complement can move to the left edge of the extended AP, and then be extracted from it. The remnant AP then moves to the preverbal position to form a complex predicate with the verb. As has been illustrated in (83), the pre-head modifiers must move with the adjective. Why the complement has to be extracted and why it cannot appear preverbally together with the A head is not clear, but it does seem to be the general tendency that referential arguments do not move into the preverbal position, and the complement of the adjective falls into that category, so it stays behind.<sup>17</sup> Put it differently, the minimal movable unit appears in the

<sup>16</sup>This analysis also has the disadvantage that “verbless” sentences have to have a completely different derivation under the assumption that the postverbal complement in (87) is the complement of the A+V unit. As was discussed above, É. Kiss (2002) analyzes “verbless” sentences as matrix Small Clauses, basically APs with an internal subject. But that implies that the adjectival head and its complement do form a constituent in those cases, with the clause having a completely different constituent structure from sentences with an overt verbal element.

<sup>17</sup>The fact that the referentiality of the complement is at issue here is supported by data, where the adjective has a non-referential complement, which moves into the preverbal

preverbal position and that excludes the complement of the predicative head, which can be extracted from the AP.

### 3.6 Adpositional predicates

BE can also have a complement SC which has a PP as its predicate. I will argue in this section that such sentences fall into three different groups: (i) copular clauses, (ii) locative sentences, and (iii) existential sentences. Copular clauses and the other two types differ in two very important ways, one is the presence or lack of predicate movement and the other is the type of subject that is licensed in the sentence.

Existential sentences have been in the center of attention in grammatical studies for various reasons. First and foremost, in English we find *there* in the subject position, while the nominal subject of the clause is lower down in the structure. This has raised issues about argumenthood, empty elements and thematic relations within the clause (cf. Hartmann 2008 for a detailed overview of the discussion in the literature and an analysis of the English existential sentence). While Hungarian does not have an element like *there* in existentials, they are still different from copular constructions.

Secondly, existential sentences (cross-linguistically) exhibit a restriction on the type of nominal phrases that may appear in the sentence (originally observed by Milsark 1974). There is a contrast in grammaticality between existential sentences containing indefinite nominals and those containing definite DPs or DPs with strong determiners in the sense of Barwise and Cooper (1981). The phenomenon is called the Definiteness Effect (or Restriction) and it essentially means that the latter group of nominals (i.e., definites and strong indefinites) are banned from existential sentences.

- (89) a. There is a tree in the garden.  
 b. There are unicorns.
- (90) a. \*There is the tree in the garden.  
 b. \*There is every unicorn.

The Definiteness Effect (henceforth: DE) has received analyses along syntactic, semantic and pragmatic lines. The common denominator of the analyses is that the nominal in existentials needs to be discourse new. The proposals differ as to whether the restriction is attributed to a syntactic principle (cf. Safir 1987) or a semantic restriction (e.g. Milsark 1977, Szabolcsi 1986, Heim 1987). As was pointed out by Szabolcsi (1986), the syntactic account is heavily

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position with the head:

- (i) A lányok dícséret-re méltók voltak.  
 the girls praise-SUB worthy.PL were  
 ‘The girls were worthy of praise.’

I would like to thank Anikó Lipták for pointing these data out to me.

influenced by the properties of English, where *there*-insertion applies, but is harder to maintain for languages like Hungarian. Here I will concentrate on the Hungarian data.

The contrast between (91a) and (91b) illustrates that existential sentences in Hungarian do not allow for definite DP subjects or DP subjects with strong determiners. In fact, it is the notion of specificity that is crucial: indefinite nominals that appear in these sentences cannot be interpreted as specific in the sense of Enç (1991), that is, as referring to a previously established discourse referent (cf. É. Kiss 1995, Maleczki 2001). For example, the indefinite NP in (91a) cannot refer to a cat that is a member of a given or previously established set.

- (91) a. Van egy macska a tető-n.  
           is a cat the roof-SUP  
           ‘There is a/some cat on the roof.’  
       b. \*Van a macska / minden macska a tető-n.  
           is the cat / every cat the roof-SUP  
           ‘There is the cat / every cat on the roof.’

Szabolcsi (1986) argues that displaying the DE is an important feature of a large number of verbs which express existence or appearance (in a certain place or manner). These verbs constitute different classes, the class of existential verbs being one of them. Another example is given (92) with the verb *kap* ‘receive’, a member of another class of verbs with indefinite objects that show the DE. These verbs also have a meaning component ‘appear’ and that is why they require an indefinite argument.<sup>18</sup> Other examples of DE-verbs are *születik* ‘be born’, *érkezik* ‘arrive’, *főz* ‘cook’.

- (92) a. János kapott egy könyv-et.  
           John received.INDEF a book-ACC  
           ‘John received a book.’  
       b. \*János kapta a könyvet.  
           John received.DEF the book.ACC  
           ‘John received the book.’

Following Milsark’s (1977) analysis of English existential sentences, Szabolcsi (1986, 1992) claims that these verbs contain an EXIST component in their semantic description and hence are incompatible with DPs that have existential presuppositions. If the DE is a lexical phenomenon, that is, if certain verbs specify in their lexical descriptions that they require indefinite arguments, then BE in existential sentences and BE in copular clauses must be different lexical entities, since copular clauses do allow for definite subjects.

<sup>18</sup>The verb has different inflections in the examples in (92). This corresponds to a change in the definiteness of its object (cf. Bartos 1999 a.o.): verbs with definite DP objects exhibit definite inflection, those with no objects or indefinite objects have indefinite inflection.

However, there has been a considerable amount of work in the literature that assumes only one BE in the lexicon and reduces the differences to syntax (cf. Williams 1983b, Heggie 1988, Moro 1997, den Dikken 2006 a.o.). A further fact noted by Szabolcsi (1986, 1992) about Hungarian points in this direction as well. She shows that the DE can be “neutralized” by focusing a constituent other than the argument which is required to be indefinite in the sentence. This is shown by the following perfectly grammatical example, in which the subject is focused (e.g. (93a)). In this and similar sentences (like (93b) with focus on the verb), there is no problem with having a definite DP object.<sup>19</sup>

- (93) a. JÁNOS kapta a könyv-et.  
 John received the book-ACC  
 ‘It was John who received the book.’  
 b. KAPTA János a könyv-et.  
 received John the book-textscacc  
 ‘John received the book.’ (e.g. He didn’t buy it.)

Another way of neutralizing the DE is by having a particle as a secondary predicate in the sentence, for example, *meg* (cf. Bende-Farkas 2001), which is a semantically almost completely bleached particle expressing telicity.

- (94) János meg-kapta a könyv-et.  
 John PRT-received the book-ACC  
 ‘John received the book.’

The analysis I propose for particles in Chapter 4 posits completely different argument structures to sentences with and without a particle, so in this case the DE is not lifted on the object as much as the subcategorization of the verb is different, and the object is introduced by the SC containing the particle. This makes examples like (94) more similar to copular clauses with a non-verbal predicate in preverbal position, forming a complex predicate with the copula. The DE does not apply to clauses with complex predicates.

Kálmán (1995) notes that the DE in existential sentences is different from other DE constructions. The DE only applies to a certain word order with the verb BE, namely, to verb initial sentences. He argues that when the verb BE is initial (in the sense that it is not preceded by a VM), it is in fact the focus of the clause. Focus does not only change the word order, but also changes the use of the verb BE. When BE is not the initial constituent, it becomes more of a ‘locative’ verb according to Kálmán (1995). This is true: while (95a) involves focus on the verb and has an existential meaning, (95b) is much more the description of the location under the table than a claim about the existence of a mouse.

<sup>19</sup>Once the DE is lifted, the (definite) object can also appear in the topic position, DE-arguments are excluded from this position, since they are not specific.

- (95) a. Van egy egér az asztal alatt.  
           is a mouse the table under  
           ‘There is a mouse under the table.’  
       b. Egy egér van az asztal alatt.  
           a mouse is the table under  
           ‘There is a mouse under the table.’

This observation can partially be connected to Szabolcsi’s (1986) semantic account. Verb focusing highlights the existential meaning of the verb, and is therefore not compatible with definite/strong DPs; when something else is focused in the sentence, the existential meaning is backgrounded.

Example (95b) is a neutral sentence, neither the subject *egy egér* ‘a mouse’, nor the verb is Focused. The subject is not a topic either, since non-specific nominals cannot be regular aboutness topics. It is in the preverbal position, the place where we find VMs as well. However, (95b) still exhibits the DE, a definite DP is ungrammatical in (96), unless the DP is interpreted as a focus. This means that it is not only the verb-initial order that shows the DE, locative sentences do not allow definite DPs either.

- (96) \*Az egér van az asztal alatt.  
       the mouse is the table under  
       ‘There is the mouse under the table.’

To sum up, what we have observed is that we have the following word order in clauses that contain the copula BE and a PP-predicate:

- (97) a. [<sub>Top</sub> DP [<sub>VP</sub> PP V]]  
       b. [<sub>VP</sub> NP V PP]  
       c. [<sub>Foc</sub> V [<sub>VP</sub> ... NP (PP)]]

The first pattern is a regular copular sentence with a PP predicate in the preverbal position, forming a complex predicate with the copula. These sentences do not exhibit the DE. The second and third word orders do not involve predicate movement and complex predicate formation overtly, they both exhibit the DE, the subject is always a non-specific indefinite. In the (b) order, the VM position is filled by the subject, while in the (c) order the copula is focused. The difference between verb-initial existential sentences and locative sentences, where the indefinite nominal precedes the verb will be discussed in more detail in section 3.6.2. However, I will first turn to copular clauses with PP-predicates.

### 3.6.1 Copular clauses with PP predicates

É. Kiss (1995) contested the claim that BE in existentials cannot appear with a definite argument on the basis of data similar to (98). She says that in this sentence, the preverbal PP is focused and this neutralizes the Definiteness

Effect. However, I do not think that this PP is necessarily focused: it can be interpreted as focus, but the sentence may also have a neutral reading, in which case the PP carries the main stress but is not focused.

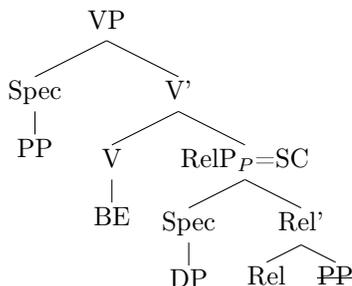
- (98) A macska a tető-n van.  
 the cat the roof-SUP is  
 ‘The cat is on the roof.’

That the locative is not focused can be seen from the negation of the sentence in (99a). Focus negation has the word order in (99b).

- (99) a. A macska nincs a tető-n.  
 the cat not.be the roof-SUP  
 ‘The cat is not on the roof.’  
 b. A macska nem a tető-n van (hanem a fá-n).  
 the cat not the roof-SUP is but the tree-SUP  
 ‘The cat is not on the roof (but on the tree).’

This sentence in (98) is not an existential construction, but a predicational copular clause, which do have definite subjects. I believe that this is not because there is a different BE in this sentence, but because by moving the PP to the preverbal position, the main predication is no longer about existence, but about being in a certain location. I propose that, similarly to nominal and adjectival predicates, predicative PPs move to the preverbal position in order to form a complex predicate with the verb. As for its semantic content, this sentence type is a predication about an entity and thus a categorical statement (cf. Kuroda 1972).

(100)



Predicate movement creates a complex predicate and the subject of the SC becomes the subject of the PP+V complex as well. A consequence of this is that we observe the opposite of the DE, namely, a restriction that the subject be specific. (101) cannot be uttered out of the blue and only has a coherent interpretation when we are speaking about a specific cat.

- (101) Egy macska a tető-n van.  
 a cat the roof-SUP is  
 ‘A (certain) cat is on the roof.’

Copular clauses are different from existential and locative constructions in that they are categorical statements, the predication is about a logical subject and that logical subject has to be specific. In the next section, I will discuss the properties of existential and locative sentences and we will see that they have different syntactic properties when it comes to complex predicate formation.

### 3.6.2 Existentials and locatives

The distinction between copular clauses and existential/locative constructions can be captured with the distinction between categorical andthetic sentences (cf. Kuroda 1972). Categorical sentences state properties of individuals (as copular clauses do), while thetic sentences do not have this structure, they are descriptions/presentations of situations. Existential sentences fit into this latter category.

Besides (102), there is another word order possibility: the indefinite nominal can precede the verb, as in (103). This word order also corresponds to a thetic sentence, it has a presentational meaning.

- (102) Van egy macska a tető-n.  
 is a cat the roof-SUP  
 ‘There is a cat on the roof.’
- (103) (Egy) macska van a tető-n.  
 (a) cat is the roof-SUP  
 ‘There is a cat on the roof.’

In fact it often happens that the nominal precedes the verb. The question is where exactly it is located in the sentence structure. Those cases where the nominal is a bare noun (be it singular or plural) have been analyzed as involving quasi-incorporation of the noun into the verbal predicate (Farkas and de Swart 2003). As has been noted in various places, these nominals are more similar to secondary predicates than to other argument nominals (e.g. Komlósy 1994). While I believe that these bare nouns are subjects of predication in the SC, their syntactic position seems the same as that of VMs, as is clear from the fact that they are in complementary distribution with structural focus as well.

- (104) ÉJJEL volt (egy) macska a tető-n.  
 night.at was (a) cat the roof.on  
 ‘It was at night that there was a cat on the roof.’

It has been noted by Maleczki (1999) that the NP V PP word order of (103) is attested quite frequently. An interesting fact about these sentences is that they are only grammatical when there is a PP present. This is illustrated in (105): the verb initial order is possible regardless of the presence of the PP in the clause, but the nominal can only be preverbal when there is a PP in the sentence.

- (105) a. Vannak egyszarvúak.  
are unicorns  
'There are unicorns.'
- b. \*Egyszarvúak vannak.  
unicorns are  
'There are unicorns.'
- c. Vannak egyszarvúak a kert-ben.  
are unicorns the garden-INE  
'There ARE unicorns in the garden.'
- d. Egyszarvúak vannak a kert-ben.  
unicorns are the garden-INE  
'There are unicorns in the garden.'

Maleczki also observed that this is not only a property of existential verbs. The sentences in (106) also involve preverbal nominals and an obligatory PP. The nominal in these sentences can only be postverbal if the verb is focused. There is a contrastive interpretation on the focused verb in those cases.

- (106) a. Csalogányok dalolnak \*(az ablakom-ban).  
nightingales warble the window.1SG-INE  
'Nightingales warble in my window.'
- b. Őr áll \*(a ház előtt).  
guard stands the house in.front.of  
'There is a guard standing in front of the house.'

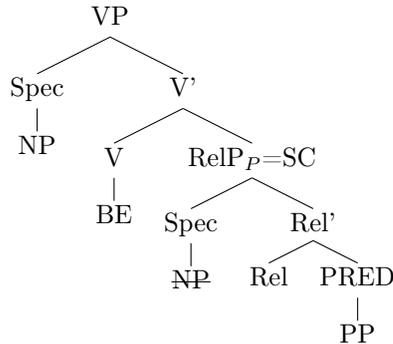
Those sentences where the PP is optional and the nominal is postverbal are only possible with the copula and they are 'true' existential sentences, while those with a preverbal indefinite non-specific noun phrase are locatives with a predicative PP.<sup>20</sup> Existential sentences involve verb focus, maybe as part of the existential closure of the clause. The existential interpretation of the clause comes from focusing the verb: the existential meaning of the copula is generally quite bleached, but focusing highlights this lexical meaning by means of its contrastive interpretation.

The copula is more of a positional unaccusative verb in locative sentences, where it is not focused. In locative sentences, the indefinite nominal appears preverbally. Bare nominals necessarily have to be preverbal in neutral clauses, so it is not so surprising that they behave like that in locative sentences as well. Indefinite nominals, however, are generally licensed postverbally as well, but they are still preverbal in locatives (and in the other sentences with unaccusative verbs). I assume that they are in Spec,VP and since these nominals are all 'weak' internal arguments, they cannot move to the left periphery in the designated positions for topic or (distributive) quantifier phrases. The postver-

<sup>20</sup>Hartmann (2008) argued for a similar distinction for the English cases, although in her analysis the two have radically different subject–predicate relations in the SC.

bal field is also restricted to referential arguments as has been shown by Alberti (1997).

(107)



This is the structure that corresponds to locative sentences. Maleczki (1999) argues that the PPs can be the logical subject and thus the topic of these sentences, meaning that the logical predication is about a location. Gécseg and Kiefer (2009) also argue that the logical subject can be a locative, although they would distinguish it from discourse topics. I agree with this, and it is possible to have the PP in the syntactic topic position, but this only makes them the “discourse subject”. The syntactic subject of the SC is the nominal, and the PP is syntactically a predicate in the embedded predication.

Both existentials and locatives are *thetic* sentences as opposed to the categorical copular clauses with PP-predicates. The syntactic difference between the two types of sentences is in the presence or lack of predicate movement. As has been argued throughout this chapter, predicative phrases undergo movement to a predicative position and take part in complex predicate formation in copular clauses. This has been the case with predicate nominals, adjectivals, and also with PPs. In locative sentences the predicative PP does not move to the preverbal position, no complex predicate is created with the verb, thus the Definiteness Effect introduced by BE is maintained. The situation is similar in existential sentences, but there the verb is additionally focused, which contributes the existential meaning.

The difference between locatives and existential sentences is twofold. Firstly, the PP-predicate is obligatory in locative sentences, but it is optional in existentials.<sup>21</sup> Secondly, existential sentences involve focus on the verb BE, locatives lack that.

This derives the observed differences between the three sentence types by assuming one BE and the same underlying relations. The different word

<sup>21</sup>This could mean that the PP is an adjunct in existentials along the lines of the analysis of English existentials by Hartmann (2008). However, an alternative is to assume that the predicative PP is empty in those existential sentences. We would have to assume that the empty PP is some generic or deictic locative, which can be left unexpressed when the sentence makes a claim about existence.

orders are the result of different derivations which are compatible with different semantics in all three sentence types.

It also means that, in fact, there is a variation concerning the moved element of the embedded SC. In locative sentences it is the subject of the Small Clause that moves into Spec,VP, and the predicative PP remains postverbal or moves to the left periphery. In copular clauses with PP-predicates, however, the PP (or possibly the remnant SC) moves into Spec,VP as an instance of predicate movement, and forms a complex predicate with the verb.

### 3.7 Summary

In this chapter, I have shown that a Small Clause analysis for sentences with BE can explain the Hungarian data concerning copular clauses, existential constructions and locative sentences. All BE-sentences can be analyzed with BE as an unaccusative verb that has a SC complement. The SC has a nominal subject, which surfaces as the subject of the clause, and a nominal, adjectival or adpositional predicate.

In copular clauses, the predicate of the Small Clause undergoes predicate movement to the preverbal position (Spec,VP), and forms a complex predicate with the copula. This is also the case in copular sentences without an overt copula in the sentence, since I assume that underlyingly the copula is always present. The subject of the SC is often topicalized, or can stay postverbally as well depending on the information structure of the clause.

Existential and locative sentences have been claimed to be different from copular constructions in that they lack predicate movement; there is no overt complex predicate formation in such sentences. This difference in structure correlates with the difference between the so-called categorical statements andthetic sentences. Existential sentences are different from locative clauses because the former but not the latter require focus on the verbal element. Existential sentences have focus on the verb and this makes the statement to be about existence as opposed to 'being-at-a-location', while locative sentences have the nominal subject in the preverbal VM position.

# Predicative PPs and Particles

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## 4.1 Introduction

The structure of Adpositional Phrases (PPs) has gained considerable interest in the past couple of decades.<sup>1</sup> Alongside the detailed studies on the functional structure of the lexical projection of nouns, various analyses of PPs appeared based on cross-linguistic data, attributing slightly (e.g. van Riemsdijk 1990) or considerably (e.g. Koopman 2010, den Dikken 2010, a.o.) extended structures to adpositional projections. It is spatial PPs that have mostly been in the center of attention, and this chapter intends to contribute to the understanding of this semantic class of adpositions in general, as well as to the structure of Hungarian PPs in particular.

One of the aims of this chapter is to show that the structure that has arisen from studying various languages can be readily adapted to also account for the Hungarian data, and that this illuminates some of the peculiar properties of PPs in this language. Hungarian is a particularly interesting language to study from this perspective, because (i) it has both suffixal and postpositional spatial elements, the syntactic category of which has been under much discussion for a while, and (ii) it also has spatial particles and adverbs which are morphologically related to postpositions but are usually not identical with them.<sup>2</sup>

Another goal of the present chapter is to investigate how particles fit into the structure of Hungarian PPs, and to show that they belong to the extended

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<sup>1</sup>I will use PP as an abbreviation and neutral term for adpositional phrases whenever it is not relevant whether we are speaking of PlaceP or PathP. Furthermore, I will use pP to refer to the structure extended with particles.

<sup>2</sup>In line with the literature on Germanic, I will call the Hungarian preverbal elements particles, and not prefixes as is often the practice in the literature on Hungarian. In this respect, I follow Kiefer and Honti's (2003) distinction between inseparable prefixes and separable particles or preverbs, except that they choose the name preverb for the latter.

domain of PPs. Not only will this enable us to unify postpositions, case suffixes, particles and locative adverbs under one syntactic category (instead of three or four different ones), but it will also shed light on some properties of particles. By claiming that particles are adpositional elements in the extended domain of the PP, we gain insight in the distributional variations displayed by particles and other PPs in the preverbal field of Hungarian.

After establishing the internal structure of PPs, their role in the sentence will be explored. Chapter 3 has dealt with the syntax of PPs in copular clauses, this chapter will extend the study to other cases of predicative PPs. Particles and PPs often appear in the preverbal position of Hungarian sentences, and this is where this chapter ties in with the general topic of the thesis. The movement of particles or other PPs will be argued to be an instance of predicate movement.

I will begin in section 4.2 by discussing the inventory of spatial elements in Hungarian in order to provide the background of the discussion of the structure of Hungarian PPs. I will argue that there is no need to distinguish between spatial case suffixes, particles and (space-denoting) adverbs as categories different from postpositions; they can all be united under the category of adposition. Section 4.3 will first give a brief review of recent developments in the cross-linguistic study of the syntax of PPs, and subsequently apply these to the structure of Hungarian PPs. I will also include particles in the PP-structure: their syntactic properties, distribution and semantic contribution in the PP and in the clause will be explained by assuming that they are part of an extended projection of the PP, which we will call pPs. I will show that particles undergo movement into the preverbal position as a type of complex predicate formation. Section 4.4 will show that this syntactic movement has the semantic repercussion of creating telic (or perfective) complex predicates. This section will also deal with some variation with respect to the distribution of particles and PPs in the clause, especially with the problem of reduplication patterns. Finally, I will turn to other cases of adpositional secondary predicates, namely, in depictive, resultative and *consider*-constructions. Section 4.6 will conclude the chapter.

## 4.2 The inventory of spatial elements in Hungarian

Hungarian uses various sorts of elements to express spatial relations: postpositions, oblique case suffixes, spatial particles and certain adverbs. These have been analyzed in the descriptive literature as belonging to different word classes, thus, presumably, projecting different syntactic structures. This section will give an overview of these ‘word classes’, and argue that they belong to the same category: they are all adpositions. The differences between them are due to their different (morpho-)phonological status and to their syntactic positions within the PP.

The first group of elements are postpositions: most of them are spatial, but there are also some non-spatial ones. Hungarian postpositions can be divided into two groups depending on the case of the complement they take. One group of postpositions takes a complement DP without any case marking and bears an agreement marker when its complement is pronominal (agreeing/‘dressed’ Ps). The other group of postpositions take oblique case-marked complements and are never inflected (non-agreeing/‘naked’ Ps). Some examples are given in (1a) and (1b). Besides postpositions, there are quite a few oblique case suffixes (often referred to as ‘adverbial case suffixes’ in descriptive grammars) that are used to express spatial relations as well (cf. (1c)). Furthermore, there are spatial particles and adverbs, which are illustrated in (1d) and (1e), respectively.

- (1) a. agreeing (‘dressed’) postpositions: *alatt* ‘under’, *mellett* ‘beside’, *mögé* ‘(to) behind’, *után* ‘after’, etc.
- b. non-agreeing (‘naked’) postpositions: *át* ‘across’, *végig* ‘over’, *belül* ‘inside’, etc.
- c. oblique case suffixes: *-ba/-be* ‘illative’, *-ra/-re* ‘sublative’, *-on/-en/-ön* ‘superessive’, etc.
- d. particles: *be* ‘into’, *ki* ‘out’, *le* ‘down<sub>dir</sub>’, *fel* ‘up<sub>dir</sub>’, etc.
- e. adverbs: *bent* ‘inside’, *kint* ‘outside’, *lent* ‘down<sub>loc</sub>’, *fent* ‘up<sub>loc</sub>’, etc.

The properties of these elements and especially the differences between them have been discussed in various places in the literature on Hungarian, and the conclusions drawn are of two types. One line of research represented by Marác (1986, 1989) puts the five groups of data in (1) into four categories: in his classification, there are postpositions ((1a) and (1b) in the same class), cases, particles and adverbs. Another line of research in the past decade has been using syntactic criteria (claiming that they are more relevant than other, morpho-phonological criteria), and classifies agreeing/‘dressed’ postpositions together with case suffixes, while distinguishing them from the non-agreeing/‘naked’ postpositions. This line of research is represented by É. Kiss (1999a, 2002), Asbury (2005, 2008), Hegedűs (2006), Asbury et al. (2007), Trommer (2008), and Dékány (2012). I will take the second approach as my point of departure. I will further show that particles and adverbs are also adpositions, contrary to the traditional classification that distinguishes them from postpositions (and which often takes adverbs and particles to be of different categories), which has been adopted in generative descriptions as well (cf. É. Kiss 2002, etc.).

### 4.2.1 The historical origins of spatial elements

It is not only a semantic similarity that we find between postpositions and suffixes, their historical origins are often the same as well. Many of the suffixes and postpositions can be traced back to nominal origins in possessive structures.

Some developed from unmarked possessive constructions (cf. Section 4.2.1.1), others from agreement-marked possessives (see Section 4.2.1.2). Yet another source of postpositions goes back to appositive structures, as will be illustrated in Section 4.2.1.3

#### 4.2.1.1 Unmarked possessives

Diachronically, most of the spatial case suffixes developed from postpositions, which, in turn, can be traced back to (unmarked) possessive constructions. The possessives developed into postpositions and at later stages some of the postpositions became case suffixes (Kiss and Puztai 2003). The fact that possessive relations were not morphologically marked helped the process of this grammaticalization. This change is illustrated in (2).<sup>3</sup> In the early written texts of Old Hungarian (896–1526), we find the three stages co-existing with some elements (e.g. the developing inessive case suffix).

- (2) a. ház bele-n  
house inside-at  
'at (the) inside of (the) house' [unmarked possessive]
- b. ház ben  
house in  
'in house' [postposition]
- c. ház-ban  
house-INE  
'in house' [case suffix]

In the oldest stage, illustrated in (2a), we are dealing with a possessive construction, and there is a locative suffix *-n* on the possessee. In Proto-Hungarian (c. 1000 BC–896), the possessive relation was supposedly not marked on either of the elements involved. Later, possessive marking and agreement on the possessee appeared, which is what we see in the earliest written texts already and in present day Hungarian as possessive marking, as in (3a). The dative suffix also became a case marker on possessors (cf. (3b)). These markings are assumed to have been absent from the language when many of the postpositions began to grammaticalize.

- (3) a. Mari könyv-e  
Mary book-POSS'  
'Mary's book'
- b. Mari-nak a könyv-e  
Mary-DAT the book-POSS  
'Mary's book'

<sup>3</sup>I follow the orthographical tradition in that I take the suffix to form a single word with the stem it attaches to — here separated by a hyphen in order to make the semantic and morphological composition transparent. Postpositions are independent words in writing.

In possessive constructions like (2a), only the word order was instructive as to the relation between the two nouns: the possessee always followed the possessor. According to Korompay (1991) this stage of unmarked possessives was a fortunate configuration for the grammaticalization of some possessives with general meanings, mostly nouns referring to orientation points or body parts. It is a well documented grammaticalization path that such orientational nouns can become adpositions (cf. Waters 2009 for English); Svenonius (2006) names this class of nouns Axial Parts. The nouns that were originally possessives lost some of their nominal properties; their forms got reduced and their nominal meaning became less transparent. The original locative suffix (which was a marker on the second element of the [N-N] complex) and the noun were reanalyzed as one morphological item, the new postposition. This is the stage in (2b) (cf. also Hegedűs 2010 for Old Hungarian data and analysis of grammaticalization).

Some of the postpositions became suffixes at yet a later stage in the history of the language, as can be seen in the case of the inessive suffix in (2c). Not all postpositional elements have reached this stage, however. As will be discussed below, suffixes and postpositions share several common properties, so distinguishing between them is not an easy task if we look at their syntactic properties. In the historical process, the transition point in the change has been problematic as well (cf. Sebestyén 2000 for discussion). The main criteria for separating suffixes from postpositions are non-syntactic: (i) monosyllabicity, (ii) vowel harmony, and (iii) orthography (being spelled as one word) (cf. Kiss and Pusztai 2003, Korompay 1991). According to Korompay (1991), the full list of suffixes that definitely developed from postpositions is the following:

|     |                          |             |
|-----|--------------------------|-------------|
| (4) | <i>-ban/-ben</i>         | ‘in’        |
|     | <i>-ba/-be</i>           | ‘into’      |
|     | <i>-ból/-ből</i>         | ‘out of’    |
|     | <i>-ra/-re</i>           | ‘onto’      |
|     | <i>-ról/-ről</i>         | ‘off’       |
|     | <i>-nál/-nél</i>         | ‘at’        |
|     | <i>-hoz/-hez/-höz</i>    | ‘to’        |
|     | <i>-tól/-től</i>         | ‘from’      |
|     | <i>-nak/-nek</i>         | ‘to’        |
|     | <i>-val/-vel</i>         | ‘with’      |
|     | <i>-ért</i>              | ‘for’       |
|     | <i>-szor/-szer/-ször</i> | ‘times’     |
|     | <i>-kor</i>              | ‘at’ (time) |

At the stage when the possessed nouns became postpositions, the original, primary locative case marker (like the *-n* locative suffix in (2b)) was no longer transparent; it was the postposition that had a spatial meaning. An important consequence of the original case markings on the possessee, however, is that postpositions and spatial case suffixes often come in triplets: they originate in the old case marked forms corresponding to locative (‘at’), lative (‘to’) and

ablative ('from') meanings. The oldest locative suffixes were: *-t* and *-n* for locative case, *-l* for ablative case, and *-á/-é* (originally being diphthongs) for lative case (Kiss and Pusztai 2003, Korompay 1991). The three forms are illustrated in (5) for postpositions and in (6) for oblique case suffixes.<sup>4</sup>

- (5) a. a ház mellett  
the house beside.at  
'beside the house' [locative]
- b. a ház mellé  
the house beside.to  
'(to) beside the house' [lative]
- c. a ház mellől  
the house beside.from  
'from beside the house' [ablative]
- (6) a. a ház-ban  
the house-INE  
'in the house'
- b. a ház-ba  
the house-ILL  
'into the house'
- c. a ház-ból  
the house-ELA  
'out of the house'

Only the old postpositions/suffixes have this ternary division, because only those originated in nominal constructions illustrated in (2). With the old, primary locative suffixes losing ground and possessives becoming marked in the language, this grammaticalization pattern was no longer a productive process, which means that postpositions that developed later do not show this property of three-directionality. Even though the original suffixes are no longer transparent, and most probably no speaker would say that these elements are made up of two morphemes, the old system is preserved in these forms.

#### 4.2.1.2 Marked possessives

At a later stage of the language, the possessive relation was marked on the possessee, and with the reanalysis of these structures, a new class of postpositions began to appear in the language. In these Ps, the locative suffix was attached after an agreement marker on the possessee. This is how postpositions, like those in (7) developed (cf. Kiss and Pusztai 2003).

- (7) a. út + á + n > után  
road + POSS + locative

<sup>4</sup>I indicate the locative, lative or ablative nature of the postpositions by adding a preposition to their glosses whenever it may be relevant, but it is worth mentioning that synchronically these suffixes are not really transparent.

- ‘after’
- b. ellen + é + re > ellenére  
 opposite + POSS + sublative  
 ‘against’

This possessive construction is still a productive source of newly grammaticalizing postpositions in the language. É. Kiss (1999a) considers the interesting issue of drawing a line between possessive constructions and PPs, and claims that at the point when morpheme boundaries have become obscure and the original possessee has lost some of its nominal qualities, we can identify new postpositions.

#### 4.2.1.3 Appositives

Another group of postpositional elements did not develop from possessive constructions, but from appositive structures. The would-be postposition (at the time locative, adverbial element on its own) was adjoined to a suffixal space-denoting DP. We have examples like the ones in (8). These structures had appositive meanings originally, something like, ‘at/on the road, namely, across’, and ‘at the house, namely, inside’ (Kiss and Pusztai 2003).<sup>5</sup>

- (8) a. az út-on által  
 the road-SUP across  
 ‘across the road’
- b. a ház-on belül  
 the house-SUP inside  
 ‘inside the house’

The adjoined locative elements got reanalyzed as postpositions later. According to Kiss and Pusztai (2003) this has been a productive process until a few centuries ago, but has not been very frequent in Modern Hungarian, where grammaticalization of postpositions from marked possessives is a more productive process.

#### 4.2.1.4 The development of particles

Some of the space denoting elements have developed into verbal particles throughout the history of Hungarian (Kiss and Pusztai 2003). Most of them had originally been lative suffixed nouns or postpositions but this is no longer transparent from a synchronic point of view as the forms often got reduced. The oldest particles are *ki* ‘out’, *le* ‘down’, *meg* ‘originally: to back’, *el* ‘away’, *be* ‘into’, and *fel* ‘up’. It is a matter of debate what elements actually belong to the class of particles. In some places, locative elements get classified as

<sup>5</sup>Note that the old locative suffix on the noun had a more general meaning than the superessive suffix does now, so it was used in various different locative contexts (Kiss and Pusztai 2003).

adverbs (as in Marácz 1989, cf. also section 4.2.3), while the directional ones are called particles. This semantic distinction, however, often does not correspond to a syntactic difference, so it is not obvious what criteria are used when distinguishing one class from the other.

Since particles grammaticalized from adpositions, it makes sense to assume that they are functional adpositions – which would be in accordance with Roberts and Roussou’s (2003) claim that grammaticalization happens when lexical elements become reanalyzed as functional elements generated under a functional head.

## 4.2.2 Are postpositions and case suffixes different?

Postpositions have been argued to be of two types and to form a distinct category from case suffixes.<sup>6</sup> The distinction between the two types of postpositions has been noticed for long (cf. Sebestyén 1965 for some discussion). Marácz (1985, 1986, 1989) provides a detailed study of PPs in the generative framework, and gives catchy, though not immediately obvious, names to the two groups: he speaks of ‘dressed’ and ‘naked’ postpositions. Marácz distinguishes the two groups of Ps from oblique case suffixes by assuming that suffixes constitute a different category altogether. This section will argue that there is no reason to make a categorial distinction between postpositions and case suffixes, and at least the dressed Ps belong to the same category as the case suffixes.

First I will discuss the properties of the two groups of postpositions, giving a list of the properties they share and properties they differ in. Then, I will turn to case suffixes and compare their behavior to the postpositional elements.

### 4.2.2.1 ‘Dressed’ and ‘naked’ Ps

Marácz (1986, 1989) makes a distinction between two groups of Ps, which he names ‘dressed’ and ‘naked’ Ps.<sup>7</sup> The differences between these two groups of postpositions were already noticed in the descriptive literature (e.g. Sebestyén 1965), but Marácz is the first to give a systematic study in the principles and parameters framework. (9) and (10) give a representative, but not exhaustive list of both types.

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<sup>6</sup>The discussion in this section is mostly based on the observations collected in Marácz (1989), É. Kiss (2002), Asbury (2005, 2008), and Dékány (2012).

<sup>7</sup>The two groups have also been called case-like vs ‘real’ postpositions (cf. Kenesei et al. 1998) and agreeing vs non-agreeing postpositions (cf. Asbury 2008). I will stick to Marácz’ terminology but with one caveat: he assumes that ‘dressed’ Ps assign nominative case, while I believe their complement is caseless and it is the dressed P that is case-like (see also Dékány 2012).

- (9) **‘Dressed’ Ps**  
 alatt ‘under.at’      alá ‘under.to’      alól ‘under.from’  
 mellett ‘beside.at’      mellé ‘beside.to’      mellől ‘beside.from’  
 előtt ‘before.at’      elé ‘before.to’      elől ‘before.from’  
 mögött ‘behind.at’      mögé ‘behind.to’      mögül ‘behind.from’  
 között ‘between.at’      közé ‘between.to’      közül ‘between.from’  
 után ‘after’  
 helyett ‘instead of’  
 nélkül ‘without’
- (10) **‘Naked’ Ps**  
 át ‘across, over’  
 végig ‘along’ (lit. ‘to end’)  
 belül ‘inside’  
 innen ‘on this side’  
 keresztül ‘through’  
 kívül ‘outside’  
 túl ‘over’  
 szemben ‘opposite’

The main difference between ‘dressed’ and ‘naked’ Ps concerns the case of the complement they take. ‘Dressed’ Ps take caseless complements, while the complements of ‘naked’ Ps bear oblique case. This is illustrated in (11) and (12), respectively. The oblique case on the complement of ‘naked’ Ps varies with the individual postpositions, but it is most often instrumental (as in (12a)) or superessive case (for example (12b)).

- (11) a ház mellett  
 the house beside  
 ‘beside the house’ [‘dressed’ P]
- (12) a. a ház-zal szemben  
 the house-INS opposite  
 ‘opposite the house’ [‘naked’ P]  
 b. a ház-on belül  
 the house-SUP inside  
 ‘inside the house’ [‘naked’ P]

A second difference concerns the form of the postpositions. As can be seen from the examples in (9), many ‘dressed’ Ps show the distinction between locative, lative and ablative forms, which is related to the fact that those elements

developed from possessive constructions demonstrated above, that is, they used to be case marked nouns. Many of the ‘naked’ Ps originally formed appositive structures with oblique case marked DPs, and in those structures they were already “adverbial”, that is, they never showed the tripartite classification.

A third difference between the two groups lies in their form when they take pronominal complements which can be a silent *pro* in all forms. In these cases, ‘dressed’ Ps bear an agreement marker, indicating the person and number of the empty pronominal element (which explains the origin of the name ‘dressed’ given by Marácz 1986: the P is inflected, “dressed”). ‘Naked’ Ps, however are not marked for person and number agreement, but the oblique case marker on the complement is (hence, the name ‘naked’ for the P: bearing no agreement ever). Since all the case suffixes involved developed from nouns, they can have agreement marking.<sup>8</sup> The relevant examples are given in (13) and (14).

- (13) (te-) mellett-ed  
(you-) beside-2SG  
‘beside you’
- (14) a. \*te szemben  
you opposite  
‘opposite you’  
b. \*te szemben-ed  
you opposite-2SG  
‘opposite you’  
c. \*te-vel szemben  
you-INS opposite  
‘opposite you’  
d. (te-)vel-ed szemben  
(you-)INS-2SG opposite  
‘opposite you’

The examples in (14) show that there must be an agreement marker in pronominal PPs, but a ‘naked’ P like *szemben* ‘opposite’ cannot take this agreement marker. When its complement is a pronoun, the oblique case suffix on the pronoun is marked for agreement.

- (15) a. (én-)mellett-em  
I-beside-1SG  
‘beside me’  
b. (te-)mellett-ed  
you-beside-2SG  
‘beside you’

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<sup>8</sup>The observation works in the other direction as well. The fact that the instrumental case suffix can bear an agreement marker has been used as an argument for its nominal origin in e.g. Korompay (1991), this feature being common to inflectional suffixes of nominal origin.

- c. (ő-)mellett-e  
(s)he-beside-3SG  
'beside him/her'
- d. (mi-)mellett-ünk  
we-beside-1PL  
'beside us'
- e. (ti-)mellett-etek  
you-beside-2PL  
'beside you'
- f. (ő-)mellett-ük  
(s)he-beside-3PL  
'beside them'
- (16) a. (én-)vel-em szemben  
I-INS-1SG opposite  
'opposite me'
- b. (te-)vel-ed szemben  
you-INS-2SG opposite  
'opposite you'
- c. (ő-)vel-e szemben  
(s)he-INS-3SG opposite  
'opposite him/her'
- d. (mi-)vel-ünk szemben  
we-INS-1PL opposite  
'opposite us'
- e. (ti-)vel-etek szemben  
you-INS-2PL opposite  
'opposite you'
- f. (ő-)vel-ük szemben  
(s)he-INS-3PL opposite  
'opposite them'

This property suggests that it is not 'dressed' and 'naked' Ps in Marác's classification that are similar here, but 'dressed' Ps and oblique case suffixes. There are only two exceptions to this otherwise vastly correct generalization: (i) the in most respects regular 'naked' P *kívül* 'outside' can bear agreement marking next to a pronominal complement: *kívül-em* 'lit. outside-1SG' or *rajt-am kívül* 'lit. on-1SG outside', both meaning 'outside/apart from me'; and (ii) the 'dressed' P *nélkül* 'without' can appear with an agreeing dative marker as complement: *nélkül-em* 'lit. without-1SG' or *nál-am nélkül* 'lit. to-1SG without', both meaning 'without me'.<sup>9</sup>

A fourth difference that sets the two classes of postpositions apart is related to word order: 'dressed' Ps always strictly follow their complement, they

<sup>9</sup>Both forms are present synchronically in the language but there is individual and possibly dialectal variation with respect to their acceptability.

can never precede it, while ‘naked’ Ps can sometimes also precede the complement.

- (17) a. a ház mellett  
the house beside  
‘beside the house’  
b. \*mellett a ház  
beside the house  
‘beside the house’ [‘dressed’ P]
- (18) a. a ház-zal szemben  
the house-INS opposite  
‘opposite the house’  
b. szemben a ház-zal  
opposite the house-INS  
‘opposite the house’ [‘naked’ P]

A fifth difference concerns modification: modifiers can never intervene between a ‘dressed’ P and its complement (as illustrated in (19)), but can surface between a ‘naked’ P and its complement when the P follows the complement. As (20) shows both of these orders are grammatical in the case of ‘naked’ Ps.

- (19) a. \*a ház közvetlenül mellett  
the house immediately beside  
‘immediately beside the house’  
b. közvetlenül a ház mellett [dressed P]
- (20) a. a ház-zal közvetlenül szemben  
the house-INS immediately opposite  
‘immediately opposite the house’  
b. közvetlenül a ház-zal szemben [naked P]

What is impossible, however, is for the modifier to surface between the ‘naked’ P and its complement whenever the P precedes the complement. In that case, the modifier must precede the P.

- (21) a. közvetlenül szemben a ház-zal  
immediately opposite the house-INS  
‘immediately opposite the house’  
b. \*szemben közvetlenül a ház-zal

A final difference is related to intransitive use of Ps. Marácz (1985, 1986) noted that ‘naked’ Ps can be used intransitively, as in (22a), while ‘dressed’ ones can never appear without a complement (see (22b)).

- (22) a. János szerintem át-jött.  
John according.1SG over-came

- ‘John came over in my opinion.’ [‘naked’ P]  
 b. \*János szerintem mögött van.  
 John according.1SG behind is  
 ‘John is behind/in the back in my opinion.’ [‘dressed’ P]

A related fact is that ‘naked’ Ps may appear separated from the rest of the PP, whereas ‘dressed’ Ps cannot be separated from their complement, so (23b) is ungrammatical (Marác 1986).<sup>10</sup>

- (23) a. János tegnap át-jött a híd-on.  
 John yesterday over-came the bridge-SUP  
 ‘John came across the bridge yesterday.’  
 b. \*János tegnap mögött maradt a ház.  
 John yesterday behind stayed the house  
 ‘John stayed behind the house yesterday.’

Marác (1989) argues that the cases with seemingly intransitive ‘naked’ Ps, and ‘naked’ Ps not forming a phrase with what could be their complement are fundamentally different from the ‘naked’ PPs we have been dealing with before. He claims that the preverbal element in these examples is generated as a particle that forms a complex predicate with the verb (a lexical particle+V unit), and that the complex verb governs the oblique marked argument in (23a). In other words, the same element is sometimes used as a postposition and sometimes as a particle.

Something similar was proposed by É. Kiss (1999a, 2002), although she goes a step further by eliminating the whole category of ‘naked’ Ps. She proposed classifying some of them as adverbs (*túl* ‘over’, *végig* ‘along’, etc.), some as participles (*nézve* ‘regarding’, *kezdve* ‘beginning’, etc.), and some as case suffixed nouns (e.g. *számára* ‘for’, *folyamán* ‘during’, etc.) because of their syntactic properties. By eliminating ‘naked’ Ps, the category of Ps becomes homogeneous in her analysis in that it consists only of elements that immediately follow their caseless complements and take an agreement marker when their complement is pronominal (É. Kiss 1999a, 2002).

I take both of these positions to be essentially correct, which is not as contradictory as it might seem on first sight. I follow É. Kiss (1999a, 2002) in assuming that there is no category of ‘naked’ Ps and will generalize Marác’s

<sup>10</sup>Extraction with dative marking on the complement and agreement on the postposition – resembling possessive constructions – is to some extent possible (cf. É. Kiss 1998c, 2002, Surányi 2009a).

- (i) ?János tegnap után-a futott a busz-nak.  
 John yesterday after-3SG ran the bus-DAT  
 ‘John ran after the bus yesterday.’

The fact that the extraction process is not productive for all speakers (and with all postpositions) suggests that we are not dealing with a possessive extraction but with grammaticalized particles in such cases.

(1989) proposal by saying that all ‘naked’ Ps must be analyzed as particles (see also den Dikken 2004b). I will propose that particles originate in extended PPs, that is, I follow Marác (1989) in taking these elements to be adpositional. This means that in my analysis the preverbal particle in (23) does form a constituent with the post-verbal PP at some point during the derivation, as will be discussed in detail in section 4.3.2.2, where constituency tests will provide evidence for this claim.

The question may arise why we categorize ‘dressed’ and ‘naked’ Ps as belonging to the same word class at all if they exhibit so many differences. Apart from the obvious semantic similarities, Marác (1989) lists a few (morphological) reasons, so let us see what these two groups of Ps have in common.

One property that the two types of Ps share is that they can both be affixed. Locative postpositions can have an additional sublative or delative suffix added to them, as can be seen in (24). Furthermore, both types of locative Ps allow adding the modifier suffix *-i* to them. This suffix allows PPs to be prenominal modifiers. Examples are given in (25).

- (24) a. a ház mögött-re / mögött-ről  
 the house behind-SUB / behind-DEL  
 ‘to / from the back of the house’ [‘dressed’ P]
- b. a híd-on túl-ra / túl-ról  
 the bridge-SUP over-SUB / over-DEL  
 ‘to / from over the bridge’ [‘naked’ P]
- (25) a. a ház mögött-i kert  
 the house behind-MOD garden  
 ‘the garden behind the house’ [‘dressed’ P]
- b. a ház-on túl-i kert  
 the house-SUP over-MOD garden  
 ‘the garden over the house’ [‘naked’ P]

Another characteristic shared by ‘naked’ and ‘dressed’ Ps is that they can be elided in coordination structures. Both the complement and the P can undergo ellipsis in conjunctions, as can be seen in (26) and (27) (cf. also Kenesei 1992, 581ff).

- (26) a. a ház előtt és mögött  
 the house before and behind  
 ‘in front of and behind the house’ [‘dressed’ P]
- b. a ház és a garázs mellett  
 the house and the garage beside  
 ‘beside the house and the garage’ [‘dressed’ P]
- (27) a. a ház-on innen és túl  
 the house-SUP here.at and over  
 ‘at this side and that side of the house’ [‘naked’ P]

- b. a ház-on és a kert-en túl  
 the house-SUP and the garden-SUP over  
 ‘over the house and the garden’ [‘naked’ P]

A final property that all postpositions share is that they do not take part in vowel harmony. This is a sharp contrast with case suffixes, for which showing vowel harmony is one of the defining criteria, and to which I will turn now.

#### 4.2.2.2 Oblique case

As has been illustrated in section 4.2.1, the so-called ‘adverbial’, spatial case suffixes developed from postpositions (which in turn developed from case marked nouns). The historical origins are the same for Ps and case suffixes, and this is not the only property they have in common.

Arguments for the different grammatical status of postpositions and case suffixes mostly emphasize that suffixes but not postpositions take part in vowel harmony (cf. e.g. Marác 1989 for this line of argumentation). Vowel harmony is illustrated in (28), and the lack of it in the case of a postposition is shown in (29).

- (28) a. a ház-ban  
 the house-INE  
 ‘in the house’  
 b. a kert-ben  
 the garden-INE  
 ‘in the garden’
- (29) a. a ház előtt  
 the house before  
 ‘in front of the house’  
 b. a kert előtt  
 the garden before  
 ‘in front of the garden’

It is true that only suffixes show vowel harmony, but even among them there are exceptions, so this is not a decisive argument for distinguishing between the two (cf. Asbury 2005, 2008). To put it differently, showing vowel harmony is not a necessary condition for being a suffix.

Another reason to distinguish between postpositions and case suffixes is that they behave differently in conjoined structures, namely, suffixes cannot be elided, whereas postpositions can (Marác 1989, Kenesei 1992, É. Kiss 2002). We have already seen in (26) that in the case of coordinated postpositional phrases it is possible to elide the complement of the postposition. The examples in (30) show that case marked DPs do not allow ellipsis at all.

- (30) a. \*a ház- és a garázs-hoz  
 the house and the garage-ALL

- ‘to the house and the garage’
- b. \*a ház-on és -ban  
 the house-SUP and -INE  
 ‘on and in the house’

A third distinctive feature noted by Marácz (1989) is that it is to some extent possible to add a further inflection to postpositions (under the semantic restriction that the P has to be locative), whereas it is never possible to stack inflectional suffixes (be it spatial or non-spatial, structural or inherent case). For example, as the examples in (24) show, place-denoting postpositions can be supplemented with sublative (‘onto’) or delative (‘off’) case endings, but the same is not possible with locative suffixes. The grammaticality of (24) shows this for both ‘dressed’ and ‘naked’ Ps, and is in contrast with the ungrammaticality of (32)).

- (31) a. a ház mögött-re  
 the house behind-SUB  
 ‘to behind the house’
- b. a híd-on túl-ra  
 the bridge-SUP over-SUB  
 ‘to over the bridge’
- (32) \*a ház-ban-ra  
 the house-INE-SUB  
 ‘to in(side) the house’

Examples like (24) are not so frequent with ‘dressed’ Ps, though. This is because there is a competing form, namely (33a), where the lative form of the postposition is used instead of stacking a (sub-)lative suffix onto a locative postposition, which would result in a semantically very similar combination of spatial relations. Recall that the P used to be a suffixed noun but is no longer decomposable for present-day speakers. Similarly, example (32) has a grammatical counterpart where a “simple” suffix expresses the same meaning (cf. (33b)).

- (33) a. a ház mögé  
 the house behind.to  
 ‘(to) behind the house’
- b. a ház-ba  
 the house-ILL  
 ‘into the house’

In fact, the most common and unmarked way of expressing the relevant meaning is by using the lative form. For me, (31a) has a more special interpretation, which I tried to express with the translation assigned to it: the space-meaning of the postposition is more transparent, so the phrase means more something like ‘to the space behind the house’ (e.g. in contexts about where we plan

to put a swimming pool), while the postposition in (33a) has simply a path meaning and a wider use.

Note that it is not possible to add a lative suffix when the ‘dressed’ P has an agreement suffix, that is, when its complement is pronominal. This property of postpositions distinguishes them from nouns with an agreement suffix, since in the latter case, locative suffixes can be added to the agreeing noun. An example to a possessive-marked noun with a lative suffix is given in (35).

- (34) \*én mögött-em-re  
 I behind-1sg-SUB  
 ‘to behind me’
- (35) az én ház-am-ra  
 the I house-1sg-SUB  
 ‘onto my house’

The differences mentioned above led Marác (1989) to conclude that postpositions and case suffixes are fundamentally different categories with P being a case-assigning category. However, I will follow É. Kiss (2002) and Asbury (2005, 2008) in assuming that these differences result from the suffixal nature of some of the elements and the morphologically slightly more independent behavior of others. Ultimately, postpositions and case suffixes are instantiations of the same category, which I take to be the category of adpositions. Along the same lines, É. Kiss (2002) and Asbury (2005, 2008) give the following reasons for unifying the two categories.

First of all, postpositions and case suffixes behave in the same way syntactically. As (36) and (37) show they are both right-adjacent to their complement; they must follow their complement.

- (36) a. \*mellett a ház  
 beside the house  
 ‘beside the house’  
 b. a ház mellett  
 the house beside  
 ‘beside the house’
- (37) a. \*ban a ház  
 INE the house  
 ‘in the house’  
 b. a ház-ban  
 the house-INE  
 ‘in the house’

Furthermore, (38) shows that they cannot be separated from their complements by intervening modifiers (e.g. degree phrases). In this respect, they are both different from ‘naked’ postpositions, see (20).

- (38) a. (két méter-re) a ház (\*két méter-re) mögött  
 two meter-SUB the house two meter-SUB behind  
 ‘two meters behind the house’  
 b. (két méter-re) a ház (\*két méter-re) -tól  
 two meter-SUB the house two meter-SUB -ABL  
 ‘two meters from the house’

Secondly, their forms next to pronominal complements look the same as well. We have already seen in the examples above that ‘dressed’ and ‘naked’ Ps behave differently, and it is the case marker in the complement of ‘naked’ Ps that is similar to ‘dressed’ Ps. What we can observe is that the pronominal form is created by adding an agreement suffix to the postposition or the case marker. This is illustrated in (39).

- (39) a. (én-) mögött-em  
 (I-) behind-1sg  
 ‘behind me’  
 b. (én-) tól-em  
 (I-) ABL-1sg  
 ‘from me’

Thirdly, postpositions and case suffixes are both reduplicated on the demonstrative pronoun in demonstrative phrases as can be seen in the examples in (40).<sup>11</sup> ‘Naked’ Ps are different in this respect as well, since it is only the case suffix that is duplicated and not the ‘naked’ P.

- (40) a. a mögött a ház mögött  
 that behind the house behind  
 ‘behind that house’ [‘dressed’ P]  
 b. ab-ban a ház-ban  
 that-INE the house-INE  
 ‘in that house’ [‘dressed’ P]
- (41) a. az-zal (\*szemben) a ház-zal szemben  
 that-INS opposite the house-INS opposite  
 ‘opposite that house’ [‘naked’ P]  
 b. az-on (??át) a híd-on át  
 that-SUP across the bridge-SUP across  
 ‘across that bridge’ [‘naked’ P]

Van Riemsdijk (1990) analyzes the demonstrative constructions on a par with German circumpositional phrases, saying that the demonstrative pronoun is similar to the deictic element on German postpositions. The problem with

<sup>11</sup>The demonstrative pronoun is *az*, but the final consonant is dropped before Ps beginning with a consonant, and it assimilates to the next consonant when the pronoun is inflected, hence the form *ab-* in (40b). The postposition is only duplicated on the demonstrative pronoun and does not appear on other elements in the PP.

that analysis is that it is not only oblique cases and ‘dressed’ Ps that appear next to the demonstrative pronoun, but that structural cases (accusative and dative) are also “reduplicated”. The problem, thus, seems to be more general than the appearance of a postposition on a determiner-like element.<sup>12</sup>

What these tests show is that analyzing case as fundamentally different from ‘dressed’ Ps leads to disregarding some important shared properties. The syntactic tests show that ‘dressed’ Ps and oblique case suffixes are the same: they both immediately follow their complements, they are inflected for person and number when their complement is pronominal, and they appear on the demonstrative pronoun. The fact that they differ with respect to ellipsis and vowel harmony shows that ‘dressed’ Ps are not suffixal, but these differences could also be explained by the different phonological status of the two groups.

Although there seems to be no compelling reason to take case and ‘naked’ Ps to be the same category, I will still assume that they are both adpositions, and argue that the differences in their behavior are due to the fact that they are inserted in the structure in different places.

### 4.2.3 Particles and adverbs

Particles normally occur in the preverbal position in neutral clauses. This holds equally for directional and locative elements, as well as some less obviously spatial words (cf. (42)). The prime example of a particle with hardly any spatial meaning is *meg* in (42c), which is one of the oldest particles and semantically almost completely empty. It used to have a spatial meaning ‘(to) back’, but in present-day Hungarian it is basically a telicizing functional element lacking lexical content.<sup>13</sup>

- (42)
- a. János be-nézett az ágy alá.  
John into-looked the bed under.to  
‘John looked under the bed.’
  - b. A labda bent maradt az ágy alatt.  
the ball in stayed the bed under.at  
‘The ball stayed under the bed.’
  - c. János meg-találta a labdát.  
John MEG-found the ball-ACC  
‘John found the ball.’

<sup>12</sup>The solution may lie in the fact that demonstratives developed in appositive structures. The demonstratives are (distal and proximal) deictic elements indeed that were originally adjoined to DPs but turned into a determiner-like functional category. However, it is mostly a property of case and not of Ps to appear distributed in the DP, so this may argue for the case-status of postpositions.

<sup>13</sup>The old meaning is still somewhat transparent in examples like *meg-ad* ‘back-give, return’, which are few and far between. In Old Hungarian texts we find more examples with transparent, directional meaning of *meg*, but another particle, *vissza* ‘back’ took over the more spatial function of *meg* (cf. Hegedűs 2012).

A representative, but not exhaustive list of particles is given in (43). The elements in the first column of (43) are directionals, while those in the second column are their locative counterparts.

|      |                    |                       |
|------|--------------------|-----------------------|
| (43) | <b>Directional</b> | <b>Locative</b>       |
|      | le ‘down’          | lenn/lent ‘down’      |
|      | ki ‘out’           | kinn/kint ‘out(side)’ |
|      | fel ‘up’           | fenn/fent ‘up’        |
|      | be ‘into’          | benn/bent ‘in(side)’  |
|      | el ‘away’          |                       |
|      | vissza ‘back’      |                       |
|      | meg ‘orig. back’   |                       |

An important argument for taking particles to be adpositional is that they have the same distribution as PPs. For example, locative verbs can take either a particle or a full PP as their argument (see (44)), and the same is true for motion verbs with directional complements (as in (45)). There is also allomorphy between Ps used as postpositions and as particles, which we find in other languages as well.<sup>14</sup>

- (44) a. A labda **bent** van.  
 the ball in is  
 ‘The ball is in.’ [particle]
- b. A labda a kapu-**ban** van.  
 the ball the goal-INE is  
 ‘The ball is in the goal.’ [PP]
- (45) a. A labda **be**-gurult.  
 the ball into-rolled  
 ‘The ball rolled in.’ [particle]
- b. A labda a kapu-**ba** gurult.  
 the ball the goal-ILL rolled  
 ‘The ball rolled in the goal.’ [PP]

The distribution of particles is the same as that of PPs, and in this respect there is no difference between the locative and the directional ones. There is no difference between their positions in the clause either, as we will see in section 4.4.

In traditional grammars as well as some generative analyses, however, locative elements like *bent* ‘in(side)’ are classified as adverbs. One particular case of such a generative analysis is given by Marác (1989), who argues that adverbs need to be distinguished from particles because of their different suffixational properties; adverbs can be combined with a lative suffix, while particles

<sup>14</sup>Germanic Ps are a case in point. For example, Dutch *met* (preposition) and *mee* (stranded preposition or particle) ‘with’ is a case similar to the allomorphy in (45). I would like to thank Henk van Riemsdijk (pc) for pointing this out to me.

cannot (cf. (46)). Following this reasoning, *bent* ‘in(side)’ is an adverb, while *be* ‘in(to)’ is a particle. In fact, this draws the line exactly between locative and directional elements, so I believe there is nothing deeper in this test than that. There is no reason to categorially set apart locative and directional elements.<sup>15</sup>

- (46) a. bent-re  
           inside-SUB  
           ‘to inside’  
       b. \*be-re  
           into-SUB  
           ‘to into’

What ‘particles’ and ‘adverbs’ have in common is that neither of them is a lexical category. The term particle refers to those spatial elements that are or can be predicative modifiers of verbs. As for adverbs, being adverbial is a function, so calling an element adverbial still does not resolve the issue of its categorial make-up. On the basis of their semantic properties and syntactic distribution, particles and adverbs elements are best regarded as adpositions, different from the postpositional ones in that they do not have nominal (DP) complement

Marác (1989) takes the fact that particles do not take DP complements and cannot be inflected for person and number as evidence that they are not adpositional. There is reason to reject this conclusion since it has often been argued for English that particles are in fact intransitive prepositions (cf. Emonds 1972, Jackendoff 1973, Van Riemsdijk 1978, Emonds 1985 among others). If so, there is no reason to assume that it does not hold for Hungarian so that the fact that particles do not take DP complements is completely compatible with assuming that they are adpositional in nature. Assuming that particles are intransitive Ps also accounts for the fact that they cannot be inflected for person and number given that agreement requires there to be a DP complement in the first place. So the only difference between particles and other Ps is that the former do not have DP complements.

#### 4.2.4 Summary

This section discussed the inventory of spatial elements, summarizing the arguments for and against treating the different types of spatial elements as belonging to one class or another, and suggesting a reasonable-seeming classification that will be given a syntactic representation in the next section.

<sup>15</sup>Another difference is that directional elements have a more obvious telicizing contribution to the meaning of the verbal predicate. Thus if we assume that particles are aspectual elements (as has been sometimes assumed, e.g. É. Kiss 2002), then the locative ones are slightly different since they do not make events telic (they are used with stative predicates in the first place). As has been pointed out in 2.3, É. Kiss (2004, 2006b) concluded that the common property of VMs (including particles) is their predicative nature – in that respect locative and directional elements are the same.

The conclusions that we could draw from the distributional properties of the different elements are the following. One group of postpositions, namely, the ‘dressed’ Ps exhibit the same properties as oblique case suffixes, so they can be taken to be categorially identical (É. Kiss 2002, Asbury 2005, 2008, etc.). They take DP complements. Another group of elements, the so-called ‘naked’ Ps from Marácz’s (1989) study, show different behavior, and I argued that this group is to be classified with particles. Particles can be locative and directional as well, and their categorial features are adpositional. Particles and adverbs either co-occur with a postpositional phrase or occur on their own in the clause.

There are various properties of these elements and phrases that we need to account for. To begin with, we need to be able to derive the difference between agreeing and non-agreeing Ps. The different word order possibilities (including the placement of modifiers in PPs), and the probably related fact that ‘naked’ P are separable from their complements while ‘dressed’ Ps are not are also properties that we should be able to derive. In the next section, I will therefore turn to the syntactic analysis of spatial adpositional elements in Hungarian.

### 4.3 The syntax of Hungarian PPs

In this section, I will discuss the syntactic structure of Hungarian PPs. I will first give a brief overview of the results of cross-linguistics studies concerning the structure of adpositional phrases, introducing the necessary Place and Path projections and further possible functional layers. Then, I will provide evidence that Hungarian adpositions can be described by this universally available structure, and that particles are part of the extended PP, which I will call pP.

$$(47) \quad [{}_{pP} P \ [{}_{PathP} Path \ [{}_{PlaceP} Place DP \ ]]]$$

The proposed structure will give a straightforward explanation for the observed differences between ‘dressed’ and ‘naked’ Ps and the similarities between ‘naked’ Ps and particles.

#### 4.3.1 The structure of PPs cross-linguistically

Jackendoff (1973) complained that prepositions did not receive the attention they deserved, and were a neglected category. Although it is still true that more attention is paid to verbs and nouns (and especially to their extended projections), by now a considerable amount of research has been done on the structure of Prepositional Phrases (cf. Van Riemsdijk 1978, 1990, to appear; den Dikken 1995, 2010; Koopman 2010 Svenonius 2004, 2006, 2010; Zwarts 1997; etc.).

It has long been a matter of debate whether prepositions are lexical or functional elements. There are several arguments in favor of assuming that

they are functional elements. First of all, languages have a limited number of adpositional elements. Secondly, new members do not frequently arise, which is something typical of closed word classes, where functional elements usually belong. Thirdly, it is also true that some prepositions have little lexical meaning, but rather serve to glue parts of the sentence together. On the other hand, it must be noted that some adpositions, especially the spatial PPs, have quite clear lexical semantics and even seem to have functional structure of their own. It has been suggested that the lexical-functional distinction is a gradient notion, and that there may be semi-lexical categories as well. At least some of the adpositions would be excellent candidates for such a category (cf. van Riemsdijk 1998, and Corver and van Riemsdijk 2001 for an overview of the issue).

Jackendoff (1973) gave one of the earliest analyses of the syntax of PPs in the generative tradition. He observed that PPs exhibit various complementation properties: they can be intransitive or take DPs and other PPs as complements, as is illustrated for English in (48).

- (48) a. John came [in].  
 b. John came [in the room].  
 c. John came [from behind the tree].

He further noted that some modifiers, like English *right* appear only in PPs. This feature has been used later as a diagnostics for identifying PPs by van Riemsdijk (1978) and Emonds (1985) for Dutch and English. The assumption that English particles are in fact intransitive prepositions also originated here. Various people have been arguing for the correctness of this assumption, including van Riemsdijk (1978), Emonds (1985), den Dikken (1995), and also Horvath (1978) for Hungarian.

Jackendoff (1983) dealt with the semantics of spatial prepositions. His distinction between PLACE and PATH in the semantic compositions of PPs has had a major influence not only on subsequent semantic studies (e.g. Zwarts 1997) but also on syntactic studies on PPs. Jackendoff argued for the necessity to distinguish between PLACE and PATH because of conceptual reasons and because of the different selectional restrictions on the two groups of PPs. Place-denoting and path-denoting PPs appear with different semantic classes of verbs. Place denoting PPs can be selected by verbs like *live*, *stay*, *remain*, while directional PPs appear with motion verbs like *go*, *come*, *run*, etc. He also argued that the distinction is valid because there are languages that show systematic differences in their place- and path-denoting PPs, such that locative and directional PPs are morphologically or lexically different throughout the inventory of PPs. Hungarian is such a language — as the discussion in Section 4.2 has already shown, PPs come in three morphological variants corresponding to place, goal and source; see the examples in (9).

The seminal study of the internal structure of (Dutch) PPs by Van Riemsdijk (1978) was the first to establish that PPs do have some functional structure by showing that there is need to postulate PP-internal movement in

order to derive the postpositional order of PPs containing locative R-pronouns from the more regular prepositional order. Van Riemsdijk argues that the landing site of the R-pronoun can also be used as an escape hatch for movement out of the PP, making it similar to the clause-initial position, which serves as an escape hatch for wh-movement, for example.

The study of the extended functional structure in the verbal, nominal, and (to some extent) the adjectival domain gave rise to the question whether Ps share the property of having functional extensions with the other lexical categories or are fundamentally different from them (maybe so different that they are not even lexical categories). Van Riemsdijk (1978) already made it clear that PPs are similar to the other categories, and later more elaborate structures have been proposed. Van Riemsdijk (1990) argued for a functional projection labelled pP on top of the lexical PP to account for the structure of German circumpositional phrases. Some examples are given in (49), taken from Van Riemsdijk (1990, p. 233, my glosses - VH).

- (49) a. auf den Berg herauf  
           on the<sub>ACC</sub> mountain up  
           ‘up onto the mountain’  
       b. im Tal unten  
           in.the<sub>DAT</sub> valley down  
           ‘down in the valley’

German is mostly prepositional, but it also has postpositional and circumpositional phrases, and Van Riemsdijk (1990) argues that the postpositional element in such phrases (that is, *herauf* and *unten* in (49a) and (49b), respectively) realizes the functional projection pP, which encodes spatial information not expressed by the preposition, like directionality or orientation. The structure proposed for (49) is given in (50). The surface order, where the p element follows the PP, is either base-generated  $[[P-DP] p]$  order in the pP or derived by movement of PP around the p element,  $[[P-DP]_i [p t_i ]$ .

- (50)
- $$\begin{array}{c}
 \text{pP} \\
 \diagup \quad \diagdown \\
 \text{p} \quad \text{PP} \\
 \quad \quad \diagup \quad \diagdown \\
 \quad \quad \text{P} \quad \text{DP}
 \end{array}$$

Thus, German has prepositions, which are more lexical, and postpositions, which are more functional. An important characteristic property of postpositions is that they may appear outside the pP in the verbal domain, that is, they can be verbal particles.

In the past decade, there have been various proposals concerning the internal syntax of PPs and the syntactic and semantic roles they can have in the clause. One of the best studied languages in this respect is Dutch. The analyses of Dutch PPs rely on the generalizations established by Van Riems-

dijk (1978, 1990). Koopman's (2010) detailed analysis extends the structure of the Dutch PP considerably, in order to find hosting positions for phrase internal movements that need to be assumed to account for word order variation. There is a difference in Dutch between locative and directional PPs in that postpositional phrases are always directional – although not all directional PPs are postpositional. The crucial thing for us is that Koopman (2010) argues that the semantically motivated classes of PLACE and PATH are syntactically expressed by means of the the projections PlaceP and PathP, thus mirroring Jackendoff's (1983) semantic classes. Den Dikken (2010) augments Koopman's analysis to account for further data from Dutch, and to include German PPs as well, but the basic hypothesis remains: Place and Path are different functional projections.

Other languages also provide evidence for this distinction. Svenonius (2004) examines English PPs, and arrives at the same conclusion. Van Riemsdijk and Huijbregts (2007) take data from various languages, not only with pre- and postpositional elements (like German) but also with suffixes (like Lezgian), and claim that in the languages they examine Path (which they call Direction) is always structurally higher in the extended projection of the PP than Place (or Location). Furthermore, Van Riemsdijk (to appear) argues that Direction has to be split up into Route and Source/Goal, where the latter is the outermost layer of the extended projection of spatial adpositions.

In short, there seems to be a general consensus that the structure of PPs minimally involves projections for place-denoting elements (PlaceP/LocP) and for path-denoting elements (PathP/DirP), as in (51). This is supported by cross-linguistic data from different adpositional systems, be it languages with prepositions, postpositions, circumpositions, or locative affixes. Recent analyses decompose PPs even further, but this distinction is present in all analyses (cf. Svenonius 2010, den Dikken 2010).



With the emergence of more extended functional structures to accommodate adpositional elements, the status of particles became an issue once again. Van Riemsdijk (1990) claimed that those elements that can be separated from the rest of the PP and become particles are generated in pP, the extended projection of the lexical PP. This line of analysis brings in the possibility to account for the special property of particles that they can incorporate into the verb. Since they are base-generated in higher projections in the PP (e.g. in pP in Van Riemsdijk 1990), they are visible for the verbal domain, and can move out of the extended PP. Ramchand and Svenonius (2002) assume a separate PrtP as the base position of particles, but as far as I can see nothing hinges on

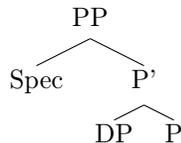
the label itself.

In Section 4.3.2, I will show that the Hungarian spatial elements that have been assigned various labels so far can be united under the adpositional umbrella, and that the structure of these PPs provides support for the universal structure in (51).

### 4.3.2 PPs in Hungarian

In section 4.2, I have discussed the earliest and most detailed studies of Hungarian PPs in generative grammar by Marác (1985, 1986, 1989), who distinguished postpositions from case suffixes, and treated ‘dressed’ and ‘naked’ Ps on a par. The structure Marác proposed for PPs is a head-final phrase structure conforming to X'-theory, with an additional agreement possibility for ‘dressed’ Ps with a pronominal complement. He claimed that the category P is a governing category, or, more precisely, that Hungarian ‘dressed’ Ps assign nominative case, while ‘naked’ Ps govern various oblique cases depending on the individual postpositions.

(52)



É. Kiss (1999a, 2002) includes ‘dressed’ Ps but not ‘naked’ Ps in her analysis of PPs, and argues that oblique case and postpositions are the realization of the same underlying category, which she labels *Kase*. We have already seen her arguments for this unification of oblique case and ‘dressed’ Ps, but the fact that she labels the projection *Kase* makes her position even more different from Marác’s, as it implies that both case suffixes and postpositions are functional elements.

Using the name *Kase* is a statement about functional status of adpositions, and implies that the extended category is nominal in nature, being a (semi-)functional layer on the extended projection line of nominals. Asbury (2008) and Dékány (2012) regard the PP as an extended projection of the DP as well.<sup>16</sup> Marác (1989), however, explicitly states that the category Postposition is to be distinguished from Case and is to be treated as a separate lexical category.

In this section, I will show that Hungarian adpositional elements can be analyzed along the lines suggested by cross-linguistic studies. Postpositions lexicalize Place and Path heads in the structure, which always surface head

<sup>16</sup>Dékány (2012) furthermore claims that suffixes and ‘dressed’ Ps lexicalize both *Kase* and P. In the nanosyntactic framework Dékány (2012) adopts, one lexical element can span more than one node in the tree structure as long as it is not discontinuous. This proposal makes it possible that ‘dressed’ Ps take a caseless complement, since they lexicalize the *Kase* head as well as Place/Path.

finally in Hungarian because of their suffixal nature. Particles will be argued to be base generated in a separate projection, which I label pP.

#### 4.3.2.1 Places and Paths

Section 4.2 has shown that postpositional and suffixal P elements can be either place-denoting or path-denoting. There is no division of labor between the two along these lines. Place denoting PPs are illustrated in (53).

- (53) a. az asztal alatt  
           the table under.at  
           ‘under the table’ [postposition]
- b. az asztal-on  
           the table-SUP  
           ‘on the table’ [case suffix]

PPs that denote place can appear as complements of stative verbs, expressing the location of the Figure argument, that is, the argument that is located with respect to a Ground (Svenonius 2010). The Figure can surface as the subject or the object argument in the clause, as in (54a) and (54b), respectively.

- (54) a. [*Figure* A kutya] [*Ground* az asztal] alatt maradt egész  
           the dog                   the table under stayed whole  
           délután.  
           afternoon  
           ‘The dog stayed under the table all afternoon.’
- b. [*Figure* A kulcsomat] [*Ground* az asztal]-on hagytam.  
           the key.1SG.ACC           the table-SUP left.1SG  
           ‘I left my key on the table.’

Assuming that Place has its own projection in the PP-structure, the following structure can be assigned to these locative PPs:

- (55)
- ```

graph TD
    PlaceP --> Spec
    PlaceP --> Place_prime[Place']
    Place_prime --> Place
    Place_prime --> DP
    Place --> alatt[alatt]
    DP --> az_asztal[az asztal]
  
```

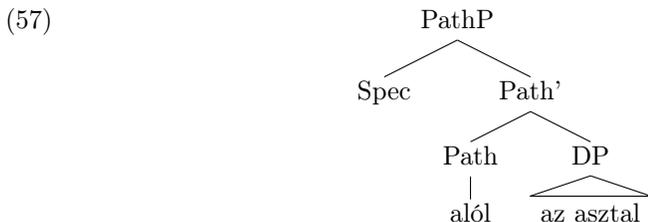
These phrases have been analyzed as base-generated head-final structures by Marácz (1989). According to Kayne (1994), all phrases are head-initial underlyingly, which would give rise to the linear order Spec - Head - Complement. Thus, even though the head of PlaceP surfaces in final position, it is a base-generated head-initial structure. There are two ways to derive the head-final

spell-out form. One is to say that the complement of Place moves to the Specifier position of PlaceP during the derivation. Another way, as proposed by É. Kiss (2002), would be to derive head-finality without overt movement of the DP, by assuming that it is a matter of linearization at spell-out and the morphologically suffixal nature of the P elements (even of the more independent ones) determines the surface order. Bartos (1999) proposes that morphological merger derives the head-final order in Hungarian, the merger does not involve overt movement but joins the suffixal functional heads with their complements. Thus, we can assume the base-generated order to be the one in (55), and derive the P-final order by a syntactic or post-syntactic process.

PPs can also refer to paths in space. In fact, Jackendoff (1983) makes a distinction between various PATH categories in the conceptual structure, namely, GOAL, ROUTE, and VIA PATHS. Although these subcategories may very well be conceptually motivated and syntactically relevant in some cases (cf. van Riemsdijk (to appear) on German Route and Goal/Source paths), I see no reason at this point in the case of Hungarian PPs for making a syntactic distinction between different PATHS. Thus I will use the overarching PATH category for all different paths, and label the projection PathP (following e.g. Koopman 2010, den Dikken 2010, and also van Riemsdijk and Huijbregts 2007). Examples are given in (56).

- (56) a. az asztal alól  
           the table under.from  
           ‘from under the table’  
       b. az asztal-ról  
           the table-DEL  
           ‘off the table’

The structure that I assign to Hungarian PathPs is the one in (57), again assuming that the base order is head-initial and that the surface order is derived either in syntax or at spell-out.



Semantic analyses take Paths to be construed of Places, and thus presuppose that whenever there is a Path, there is also a Place in the structure (see Zwarts 1997 for arguments). Hungarian examples like (58) show that the two semantic groups of postpositions can sometimes co-occur overtly. The Path denoting sublative and delative suffixes can be added to Place denoting postpositions, thus realizing the more extended PP-structure in (59).

(58) a ház mögött-re  
 the house behind-SUB  
 ‘to behind the house’

(59) [<sub>PathP</sub> -re [<sub>PlaceP</sub> mögött [<sub>DP</sub> a ház ]]]

Another instance of the same phenomenon involve directional ‘naked’ Ps with locative marked DPs as complements. The examples in (60) show the possibility of two word orders: there is a locative (suffixal) element and a directional P as well in such examples. The suffixal element is a Place-denoting element, while the ‘naked’ P refers to a Path. Since these Path elements are not suffixal, they do not necessarily surface at the end of the surface structure as can be seen in the different orderings in (60a) and (60b).

(60) a. végig a folyosó-n  
 along the corridor-SUP  
 ‘along the corridor’  
 b. az út-on át  
 the road-SUP across  
 ‘across the road’

One of the generalizations by Van Riemsdijk and Huijbregts (2007) is that when Place and Path are simultaneously realized, the latter is the top layer in the structure. This seems to be true of prepositional, postpositional and mixed structures as well. This is confirmed by the Hungarian examples (58) and (60) above, which show that the suffixal locative element is closer to the DP than the directional suffix or particle/‘naked’ P. This linear closeness to the DP reflects their hierarchical position in the structure.

#### 4.3.2.2 Particles

It is often the case in Hungarian that there is a locative or directional PP in the clause that is somehow associated with a particle in the preverbal position. In such cases, the PP is often optional, as is the case in (61).

(61) Az egér be-szaladt (az ágy alá).  
 the mouse into-ran the bed under.to  
 ‘The mouse ran in (under the bed).’ (directional)

I will show in this section that the particle can in fact form a constituent with the postverbal PP in some cases, and I will argue that this is due to the fact that the particle is base-generated as part of the PP. More specifically, this section will argue that particles belong to the extended projection of PPs, which I will label pP.<sup>17</sup> The head is empty when there is no particle in the clause but it is

<sup>17</sup>Svenonius (2003, 2010) also uses the label pP for the projection that introduces the Figure argument in its Specifier. Svenonius (2003) introduces the p projection as an adopted label from Van Riemsdijk (1990) and claims that particles occupy the p head. Svenonius

always projected when there is a Figure argument.

Structures like (61) are quite similar to those cases in the Germanic languages where the separable particle is preverbal. It seems to be the case that the original structure resembles the German and Dutch ones in that the particle originates in the extended PP; it is moved out during the derivation. That is to say, Hungarian also exhibits pPs (to use Van Riemsdijk's 1990 label), and the structure of the pP is very similar to the German ones, although the surface order is the mirror image, as can be seen in (62) and (63). The German (62) involves a locative PP with a directional postposition, which Van Riemsdijk (1990) argued to be a particle. Similarly, the Hungarian (63) has a directional particle ('naked' P) and a locative PP.

(62) [<sub>pP</sub> [<sub>PP</sub> unter der Brücke] durch]  
under the bridge through

(63) [<sub>pP</sub> át [<sub>PP</sub> a híd alatt]]  
through the bridge under.at

In the Hungarian examples in (64), we find a prepositional pP and a postpositional PlaceP or PathP. The projection which is realized by the particle expresses orientation, directionality, and/or proximity, similarly to German postpositions.

- (64) a. lent a völgy-ben  
down the valley-INE  
'down in the valley'  
b. be az ágy alá  
into the bed under.to  
'(to) under the bed'  
c. ide hoz-zám  
here ALL-1sg  
'here to me'

There are a number of constituency tests that can be used to show that the particle and the PP form a constituent. The pP can appear as a modifier of nominals as in (65); a test used by Van Riemsdijk (1990) to show constituency. It can also move as a constituent, for example, as contrastive topic (cf. (66)), it can be used as an answer in question-answer pairs (see (67)), and it can be used as the first constituent in the PP-with-DP construction (as in (68)), which is an environment where we only find directional PPs (again cf. Van Riemsdijk 1990).

- (65) a csatorna [lent a város alatt]  
the tunnel down the city under.at  
'the tunnel under the city'

---

(2010) does not specify which elements can occupy the p head in the even more extended structure he proposes. I will claim that it is the projection occupied by particles.

- (66) [Lent a pincé-ben] nem maradt már semmi.  
down the cellar-INE not remained yet nothing.  
'Down in the cellar, there is nothing left.'
- (67) a. Hová szaladt az egér?  
where.to ran the mouse  
'Where did the mouse run?'  
b. [Be az ágy alá.]  
into the bed under.to  
'Under the bed.'
- (68) [Le a pincé-be] az üres üvegek-kel!  
down the cellar-ILL the empty bottles-INS  
'Down to the cellar with the empty bottles!'

These tests show that spatial particles start out as part of the PPs. This, however, is often concealed by the fact that particles obligatorily move to the preverbal position during the derivation. The details of this movement will be addressed in Section 4.4.

When the pP is an adjunct, the movement to the preverbal position does not take place, and we find many cases where the particle and the rest of the PP form a constituent. This is the case in (69), where the adjunct pP is focus, or in (70), where it remains in postverbal position.

- (69) A kedvenc lemezemet [csak fent a padlás-on] találtam  
the favorite record.1SG.ACC only up the attic-SUP found.1SG  
meg.  
MEG  
'I could only find my favorite record (up) in the attic.'
- (70) A kedvenc lemezemet meg-találtam [fent a padlás-on].  
the favorite record.1SG.ACC MEG-found.1SG up the attic-SUP  
'I found my favorite record up in the attic.'

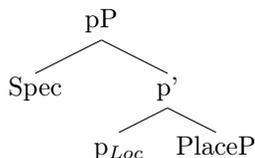
Where to insert particles in the PP is not immediately obvious. There are three types of patterns in Hungarian: (i) both the particle and the PP are locative (as in (71a)); (ii) the particle is directional and it appears with a directional PP (e.g. in (71b)); (iii) the particle (previously analysed as 'naked' P) is directional, while its complement is locative, a PlaceP (cf. (71c)).

- (71) a. lent a völgy-ben  
down the valley-INE  
'down in the valley'  
b. be az ágy alá  
into the bed under.to  
'(to) under the bed'  
c. át az út-on  
across the road-SUP

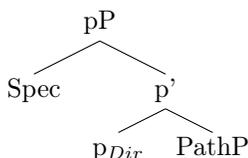
‘across the road’

The fact that particles and postpositions of the same semantic type can co-occur excludes the possibility of base-generating particles in the Place or Path heads in those cases. Thus, the particle must be inserted into the structure in its own pP projection, which is a higher functional layer of the adpositional phrase. We can hypothesize that in Hungarian there is a selectional restriction on the complement of the particle, namely, locative particles take locative complements, and directional particles go with directional complements.

(72)

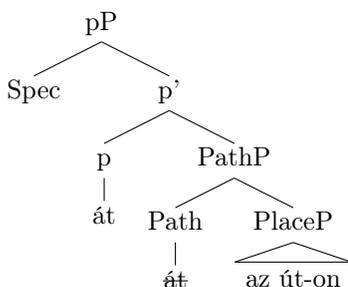


(73)



This hypothesis works for two of the above mentioned patterns but excludes the possibility of having a directional particle with a locative postposition; these are the ‘naked’ Ps and their oblique (mostly superessive) complements (see also Section 4.2.2). In order to account for such cases, I assume that some particles are not generated in *p*, but raise there from a lower position.<sup>18</sup> This especially holds for Path elements that are not suffixal/clitic-like in the sense of morphological properties mentioned about the spell-out of head final orders in section 4.3.2.1. So in (74) *át* ‘across, over’ originates in the Path head and moves to the *p* head, essentially becoming a particle during the derivation.

(74)



It is important to note that this derives the fact that ‘naked’ Ps can be both prepositional and postpositional: they are in PathP when they surface as post-

<sup>18</sup>Van Riemsdijk (1990) proposes the same thing for some elements in the German pP.

positions, but in pP when they surface as prepositions.<sup>19</sup> Furthermore, the hypothesis that there is a selectional restriction between particles and their complements in terms of semantic class and syntactic projection also follows: directional particles in these “mixed” phrases originate in the Path position.

That this raising option is only available for ‘naked’ Ps can be explained by their different relationship to their complements. ‘Dressed’ Ps and suffixes behave alike in that they must immediately follow their complement and nothing can intervene between the P and the noun. ‘Naked’ Ps are different, since their complements are already inflected, these elements have not become suffixal, and are therefore “freer” in a syntactically relevant sense.

If we take pP to be a parallel to vP in that it can license the external argument of the PP (the internal argument of the V), then my pP is analogous not only to Svenonius’ (2003, 2010) pP, but also to the Particle Phrase (PrtP) proposed by Ramchand and Svenonius (2002), and prepositional Relator Phrases (RelP) in den Dikken’s (2006) analysis of predication structures. Under these assumptions, particles are linkers in the sense of den Dikken (2006): they are functional elements that establish a connection between a predicative PP and its subject. This is illustrated in (75).



This proposal implies that predicative spatial PPs will always contain a pP projection, since the p-head establishes the predication relation with their subject. However, the p head is not always spelled out morphologically.

#### 4.3.2.3 Summary

To summarize the claims above, we have seen that Hungarian PPs involve Place and Path projections as well as an additional projection pP for particles.

$$(76) \quad [_{pP} \text{ p } [_{PathP} \text{ Path } [_{PlaceP} \text{ Place DP } ]]]$$

Particles are either base generated in pP or move there from PathP provided that their morphological properties do not require them to surface at the right edge of their complement, that is, when they are not suffixal. The elements base-generated in p select for PathPs if they are themselves directional, and for PlacePs if they are locative.

<sup>19</sup>Dékány (2012) always generates ‘naked’ Ps in the Place or Path head, what changes in her analysis is that the case suffix only lexicalizes Kase when there is a ‘naked’ P in the structure but both Kase and Place/Path when there is no ‘naked’ P.

Despite the fact that particles originate in pP or PathP, their normal surface position in the Hungarian clause is the preverbal position. How and when they move there is the topic of the next section.

## 4.4 Particle/PP-movement

Section 4.3 discussed the syntax of particles within the pP. This section will address the issue of particle and PP movement, that is, we will consider the behavior of predicative PPs in the clause.

In neutral sentences, we find particles in the preverbal position of the Hungarian clause. Particles are one group of the Verbal Modifiers that move into this designated position. The essential claim of this section is that particle movement is an instance of predicate movement, it takes place in order to syntactically create complex predicates; the target of the movement is Spec,VP, the locus of complex predicate formation. I will extend this analysis to account for all instances of PP-movement into the preverbal position, that is, to cases where a full-fledged predicative PP appears preverbally, and to those cases where the preverbal particle co-occurs with a postverbal PP.

### 4.4.1 Particle movement

I proposed in Chapter 2 that the movement of predicates is to Spec,VP and that this movement results in complex predicate formation with the verb in syntax. Chapter 3 showed that complex predicate formation takes place in copula clauses with nominal, adjectival and PP predicates. I will extend this proposal to the movement of particles and other cases of PP-movement as well. Since particle-movement does not involve more than the particle head, the question is what constituent moves in these cases. Another question concerns the relationship between the particle and the postverbal PP when the two co-occur.

As for the nature of the movement, there are various options already proposed for similar phenomena in the literature, like particle incorporation phenomenon in Dutch and particle shift in English. I will assume that these can be conceived of as being similar to Hungarian particle movement. Assuming pPs to be small clauses in themselves, with the particle in the head position, gives us an analysis roughly along the lines of den Dikken (1995, 2006). There seem to be only two options: the particle head moves, or after extraction of the complement of pP, the whole remnant small clause moves.<sup>20</sup>

I have been assuming so far that predicate movement is phrasal, that is, it involves maximal projections. I argued that in copula clauses the preverbal element is phrasal even in the cases for which it may seem dubious at first sight;

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<sup>20</sup>They can also be regarded as base generated, just like the particle+V unit in Hungarian. I take the movement approach to be on the right track, so I will not go into the other approaches, like e.g. Neeleman (1994) here; cf. Chapter 2 for arguments.

although adjectival predicates must strand their complements, their modifiers are pied-piped with them, thus showing that we are dealing with phrasal movement. The position of the modifier in examples like (77) likewise shows that particle movement is phrasal: since the modifiers *egyenesen* ‘straight’ and *teljesen* ‘completely’ must precede the particle in preverbal position, they must have been pied-piped by the particle.

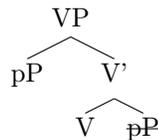
- (77) a. Az egér egyenesen be-szaladt az ágy alá.  
 the mouse straight into-ran the bed under.to  
 ‘The mouse ran straight under the bed.’
- b. Az autó egyenesen neki-hajtott a kerítés-nek.  
 the car straight to-drove the fence-ALL  
 ‘The car drove straight into the fence.’
- c. Mari teljesen be-verte a szöget a fal-ba.  
 Mary completely into-hit the nail.ACC the wall-ILL  
 ‘Mary hammered the nail completely into the wall.’

Similarly, when the particle is of the purely resultative type in the sense that there is no related PP in the clause, its modifier must be preverbal. In this respect particles behave exactly like other resultative phrases. Resultative constructions will be dealt with in Section 4.5.3, so I will not go into the details of these examples, but note that the preverbal particle in (78a) and the resultative phrase in (78b) exhibit the same properties.

- (78) a. A gyerekek teljesen szét-szedték a játékot.  
 the children completely apart-took the toy.ACC  
 ‘The children took the toy completely apart.’
- b. A kovács teljesen lapos-ra kalapálta a vasat.  
 the smith completely flat-SUB hammered the iron.ACC  
 ‘The smith hammered the iron completely flat.’

This means that particle movement does not involve head movement of *p* out of the SC, but movement of the whole *pP*, where the complement *PathP* or *PlaceP* are stranded, just like the complement of adjectival predicates is stranded in copula clauses.

(79)



The difficulty with a phrasal analysis is that the complement of the particle, namely, the *PathP* or *PlaceP* cannot move along with the particle. It is important to note, however, that Van Riemsdijk (1997) established independently for Dutch that particles may get separated from their complements by movement of the latter. In the case of Hungarian particles, we may claim that the

movement is forced by the same constraint that forces predicative adjectives to strand their complements, namely, that the preverbal material be as small as possible.

A consequence of having a phrasal movement analysis of particle movement is that it is handled in the same fashion as other types of predicate movement. All predicative PPs are predicted to behave in the same way as particles do (and vice versa). This results in a unified analysis of predicate movement.

Verbs expressing motion (directed motion verbs and manner of motion verbs) also take small clauses with PP-predicates. Depending on their semantics, they either require a particle, or they ‘just’ need any directional PP. If there is no particle in the clause, the PP will appear preverbally in neutral clauses, as expected under the unified analysis of predicate movement.

- (80) Az egér az ágy alá szaladt.  
 the mouse the bed under.to ran  
 ‘The mouse ran under the bed.’

#### 4.4.2 Variation and the “duplication” pattern

The data that will be discussed in this section involve spatial particles accompanied by a spatial PP, where the particle is morphologically almost identical to the suffixal postposition. All elements involved are directional. The following particles and suffixal PPs are the “doubling” ones.

- (81) Péter **bele**-ugrott a tó-**ba**.  
 Peter into-jumped.3SG the lake-ILL  
 ‘Peter jumped into the lake.’
- (82) Valaki **rá**-lépett a lábam-**ra**.  
 someone onto-stepped.3SG the foot.1SG-SUB  
 ‘Someone stepped on my foot.’
- (83) A sofőr **neki**-hajtott a kerítés-**nek**.  
 the driver to-drove.3SG the fence-DAT  
 ‘The driver drove (in)to the fence.’
- (84) A mai számlát **hozzá**-adtam a tegnapi-**hoz**.  
 the today bill.ACC to-added.1SG the yesterday-ALL  
 ‘I added today’s bill to yesterday’s.’

There have been various accounts proposed in the literature. Under one analysis, the particle forms a lexical unit with the verb, and it is the complex that takes an oblique case marked DP (cf. Kálmán and Trón 2000, Laczkó and Rákosi 2011, who deal with this type of data). Since I have been advocating a movement based approach to particle-verb units in the previous section (based on the fact that particles can form complex pPs with the postverbal PPs), I will try to incorporate these pieces of data under a syntactic approach as well.

Another account, proposed by É. Kiss (2002), claims that we have two co-indexed PPs in the sentence, with the particle being an argument PP and the other PP a co-indexed adjunct. The particle is supposed to have undergone the usual particle movement to the preverbal position in the cases at hand. Co-indexing the particle (the preverbal PP) with the postverbal PP mirrors an agreement relation between the two, this is how the almost identical morphological forms are accounted for.

A third group of accounts are based on copy theory, where the preverbal particle is the spell-out of the formal features of the PP, and therefore it has no lexical content of its own (Ürögdi 2003). The particle is identical in form with the suffix in the PP, because they spell out the same features. Surányi (2009c,a,b) also proposes a copy-based analysis, claiming that the preverbal and the postverbal elements form a movement chain and spell out different parts of the same phrase after chain reduction.

There are empirical problems with all these proposals, which have mostly to do with variation. The variation that we find in these cases concerns the optionality/obligatoriness of the particle in the sentence. The particle can be left out in sentences like (81) and (82), in which case the preverbal position is filled by the PP as shown in (85) and (86).

- (85) Péter a tó-ba ugrott.  
Peter the lake-ILL jumped  
'Peter jumped into the lake.'
- (86) Valaki a láb-am-ra lépett.  
someone the foot-1SG-SUB stepped  
'Someone stepped on my foot.'

In other cases, the variation is not present or at least it is not a free variation, since the sentence without the particle is at least slightly degraded.

- (87) ?A gyerek az ajtó-nak szaladt.  
the child the door-DAT ran  
'The child ran into the door.'
- (88) ??A mai számlá-t a tegnapi-hoz adtam.  
the today bill-ACC the yesterday-ALL added.1SG  
'I added today's bill to yesterday's.'

This variation is unexpected under all accounts, as far as I can see, but the situation seems worst under the copy-theory approach. If the particle is just the spell-out of some features of the postverbal PP, then it is unexpected to have a difference in acceptability between the options of spelling out only some features or actually the whole PP preverbally. At the same time, the lack of this alternation, that is the obligatoriness of the particle, is also unexpected. If the full copy of the PP can be spelled out in the higher position in some cases, then it is hard to see why it cannot be in other cases, and vice versa, if

it is sufficient to spell out some formal features in the higher position, then it is unexplained why we can also choose to spell out the whole PP there in some cases.

That the particle can also be present in positions other than the preverbal position is another serious problem for accounts that assume that particles are just place fillers (cf. Ürögdi 2003). The examples in (89) show that the particle can also appear in non-neutral sentences with negation or focus immediately preceding the verb. This refutes the idea that particles are only necessary to fill in the preverbal position of neutral clauses.

- (89) a. Péter nem ugrott bele a medencé-be.  
Peter not jumped into the pool-ILL  
'Peter did not jump into the pool.'  
b. A sofőr DIREKT hajtott neki a kerítés-nek.  
the driver on.purpose drove to the fence-DAT  
'The driver drove (in)to the fence ON PURPOSE.'

A further problem for the co-indexation and copy-based approaches is the possibility (or sometimes necessity) of lack of agreement between between the co-indexed phrases or copies, respectively. One of the main reasons why É. Kiss (2002) argues for co-indexation between the two PPs is that they can agree in number. The data that she presents are subject to lexical and dialectal variation, however, and in my dialect, it is not possible for these particles to agree with the PP complement (cf. Kenesei 2005 for the same judgments). The exact factors that determine the variation are still to be explored.<sup>21</sup>

- (90) a. %Péter **rá-juk** nézett a lány-ok-**ra**.  
Peter onto-3PL looked the girl-PL-SUB  
'Peter looked at the girls.'  
b. %Az autó **neki-k** ment a kerítés-ek-**nek**.  
the car to-3PL went the fence-PL-DAT  
'The car bumped into the fences.'

I propose that we treat particles in such duplication structures the same way as all other particles, that is, they originate in the pP complement of the verb. They function as small clause heads which take the associated PathP as their complement. When the particle moves to the preverbal position, it licenses the directional PP as a complement of the complex predicate.

The alternation patterns that we observed here can be explained by the function of the particle in the clause. Complex predicate formation can be obtained either by moving the particle, or, when the particle is morphologically unexpressed, the PP into the preverbal position. In both cases, however, we are dealing with movement of a predicative pP. When exactly the particle can

<sup>21</sup>For those who find the agreeing variants grammatical, the structure assigned to the constructions with agreeing "particles" may very well be different.

remain unexpressed is subject to future research but it seems to be determined by the selecting verb and its lexical properties.

## 4.5 Extension: More adpositional secondary predicates

### 4.5.1 Three types of constructions

Secondary predicates have been classified as belonging to at least two different types. Halliday (1967) distinguishes between depictives and resultatives. The following sentences show examples of the two types; (91) contains the depictive predicate *black*, (92) contains the resultative predicate *green*. It is indicated by the indices that the secondary predicate denotes a property of one of the arguments in the clause, in these cases the object of the sentence.

(91) He drinks his coffee<sub>*i*</sub> black<sub>*i*</sub>.

(92) He painted the door<sub>*i*</sub> green<sub>*i*</sub>.

Halliday (1967, p. 63) defines the difference between the two types of predicates as follows: “The ‘depictive’ element is an attribute which characterizes the attribuant in relation to the process, but as a concomitant, not a result, of the process; the ‘resultative’ is one which results from the process”.

Depictive predicates can be subject- or object-oriented; as (93) shows, the predicate *drunk* can be either about John or about Mary. In transitive constructions, resultatives are predicated of the object; example (94) shows that *crazy* can only be understood to refer to a property of Mary, not of John.<sup>22</sup> The differences between depictives and resultatives have been taken to be related to their structural position in the clause, which is in turn dependent on their argument or adjunct status.

(93) John<sub>*i*</sub> saw Mary<sub>*j*</sub> drunk<sub>*i/j*</sub>.

(94) John<sub>*i*</sub> drives Mary<sub>*j*</sub> crazy<sub>*\*i/j*</sub>.

When we turn to the Hungarian examples, resultative secondary predicates seem to be no exception from the pattern we have observed so far regarding the syntactic behavior of SC-predicates. They appear in the preverbal position in neutral sentences, which we have seen to be a derived position and the place where predicative elements have to move. Depictives are different, however, in that they are obligatorily focused, that is, there is no neutral word order variant of sentences with depictives. The depictive predicate precedes the verb because it is focused.

<sup>22</sup>It has been claimed that there are subject-oriented resultatives, for example, with motion verbs (cf. Wechsler 1997, Rappaport Hovav and Levin 2001, a.o.), however, Matushansky et al. (2012) have convincingly argued against it, claiming that such expressions are actually Path denoting adjuncts.

- (95) János zöld-re festette az ajtó-t.  
 John green-SUB painted the door-ACC  
 ‘John painted the door green.’
- (96) János FEKETÉ-N issza a kávé-t.  
 John black-ADV drink the coffee-ACC  
 ‘John drinks coffee black.’

Hungarian secondary predicates are case-marked as can be seen in the following examples. Resultatives are marked with the sublative case *-ra/-re* ‘onto’, which has a spatial directional meaning.

- (97) Mari kék-re festette a fal-at.  
 Mary blue-SUB painted the wall-ACC  
 ‘Mary painted the wall blue.’

Depictive elements are marked with the suffix *-an/-en*, the adverbial suffix. Diachronically, this suffix goes back to the same ancient locative suffix as the present-day locative *-on/-en/-ön* ‘on’, but it has no spatial meaning in present day Hungarian (Kiss and Pusztai 2003).

- (98) János hideg-en szereti a sör-t.  
 John cold-ADV like the beer-ACC  
 ‘John likes beer cold.’

Since they are predicative, these phrases cannot be topicalized, but they can be contrastive topics. As we have seen in previous examples, the difference between discourse/sentential (“aboutness”) topics and contrastive topics is that the former but not the latter have to be specific referential elements. Contrastive topics gain reference via the contrast in their meaning, thus predicative elements are also allowed in this position (É. Kiss 2002).

- (99) a. \*Kék-re Mari tegnap festette a kerítés-t.  
 blue-SUB Mary yesterday painted the fence-ACC  
 ‘Mary painted the fence blue yesterday.’
- b. /Kék-re Mari TEGNAP festette a fal-at.  
 blue-SUB Mary yesterday painted the fence-ACC  
 ‘Blue, Mary painted the wall YESTERDAY.’

We also find verbal particles as resultative predicates. As was discussed in the previous chapter, most of the particles are directional (and they all originated as directional elements), but some of them just seem to serve the purpose of making an event telic or of expressing resultativity.

- (100) a. János meg-itta a kávé-t.  
 John MEG-drink the coffee-ACC  
 ‘John drank up the coffee.’

- b. János le-festette a fal-at.  
 John down-painted the wall-ACC  
 ‘John painted the wall.’

There is also a third group of constructions, which has been often cited when discussing subject–predicate relations and SC-structures. These constructions consist of *consider*-type verbs and their SC-complements (cf. Stowell 1981, 1983, Bowers 1993, a.o.). An English example is given in (101), and (102) is a Hungarian equivalent from Komlósy (1994).

- (101) I consider [John very stupid].  
 (Stowell 1981, 257 ex.(13))
- (102) Péter okos-nak tartja Marit.  
 Peter clever-DAT consider Mary.ACC  
 ‘Peter considers Mary clever.’

Again, we find that the predicative element is case-marked in the Hungarian construction; it bears a dative marker. Furthermore, just like in all other cases, the predicative element is preverbal.

In the next sections, I will discuss the structural properties of these constructions with different secondary predications. I will start with depictives, then turn to resultatives and finally to *consider*-type constructions.

### 4.5.2 Depictives

Halliday (1967) makes a distinction between adjectival predicates, for example, depictive secondary predicates, and adverbs. While (103) contains an adjectival phrase as the secondary predicate of the clause, (104) contains an adverb, which is just an adjunct in Halliday’s analysis.

- (103) John left the room angry.  
 (104) John left the room angrily.

When we turn to Hungarian, we find that all depictives have the adverbial suffix *-an/-en*. As a result, an example like (105) can function as the Hungarian equivalent of both (103) and (104). The secondary predicate cannot be an adjective as shown by (106).

- (105) János dühös-en hagyta el a szobá-t.  
 John angry-ADV left away the room-ACC  
 ‘John left the room angry/angrily.’
- (106) \*János dühös hagyta el a szobá-t.  
 John angry left away the room-ACC  
 ‘John left the room angry.’

Depictives are often obviously associated with the internal argument (e.g. (107)), but sometimes the sentence is ambiguous between the reading where the secondary predicate attributes a property to the external argument or to the internal one (e.g. (108)).

- (107) Mari<sub>i</sub> feketé-n<sub>\*i/j</sub> issza a kávé-t<sub>j</sub>.  
 Mari black-ADV drink the coffee-ACC  
 ‘Mari drinks coffee black.’
- (108) Mari<sub>i</sub> fáradt-an<sub>i/j</sub> látta János-t<sub>j</sub>.  
 Mari tired-ADV saw John-ACC  
 ‘Mary saw John tired.’

Interestingly, when the clause contains both a depictive and a resultative predicate (in this case a verbal particle as resultative), it is the external argument that the depictive is associated with. Furthermore, we find that both the order with the depictive predicate in the preverbal position and the resultative postverbally and the one with the resultative preverbally and the “depictive” one higher up in the clause are grammatical.

- (109) a. Mari<sub>i</sub> fáradt-an<sub>i/\*j</sub> látogatta meg János-t<sub>j</sub>.  
 Mary tired-ADV visited PRT John-ACC  
 ‘Mary visited John tired.’  
 b. Mari fáradt-an meg-látogatta János-t.  
 Mari tired-ADV PRT-visited John-ACC  
 ‘Mary visited John tiredly.’
- (110) a. Az őr dühös-en vezette ki János-t.  
 the guard angry-ADV led out John-ACC  
 ‘The guard led John out angrily.’  
 b. Az őr dühös-en ki-vezette János-t.  
 the guard angry-ADV out-led John-ACC  
 ‘The guard led John out angrily.’

When we compare these sentences to those where the depictive predicate has to be predicated of the internal argument for semantic reasons, we find that in the latter case, only the order with the depictive being preverbal and the resultative postverbal is possible. These examples also shed light on the semantic difference between the (a) and (b) sentences in the previous examples as well.

- (111) a. Mari hideg-en itta meg a kávéjá-t.  
 Mary cold-ADV drank PRT the coffee.3SG-ACC  
 ‘Mary drank (up) her coffee cold.’  
 b. ??Mari hideg-en meg-itta a kávéjá-t.  
 Mary cold-ADV PRT-drank the coffee.3SG-ACC  
 ‘Mary drank (up) her coffee cold(ly).’

The sentence in (111a) corresponds to the English sentence with an adjectival depictive predicate. (111b) is not grammatical because the adverb cannot be associated with the object, and the subject-oriented reading is not available in this case. (111b) would rather be the equivalent of the English sentence with an adverbial adjunct, except that the adverb is not the most appropriate one to be used as a manner adverb related to the event of drinking. However, it seems that Halliday's (1967) distinction between adjectival predicates and adverbs appears as a distinction in word orders in Hungarian, but the use of adjectives as secondary predicates is not an option. Although Hungarian uses adverbial forms to express depictive predicates, depictives are lower in the structure, and are strictly preverbal, while manner adverbs appear higher in the structure, and thus do not interfere with the position of the particle preverbally.

According to Rapoport (1991), depictives differ from resultatives and other secondary predicates in that they are adjuncts, but they still need to be licensed in the clause. She claims that these adjunct-predicates are event related and not selected by the verb, and she adjoins both subject- and object-related predicates to VP. The Hungarian data shows that depictives interfere with the particle-verb order, which we assumed to be in VP, but it may not be obvious at first sight what the appropriate structure is.

In fact, sentences with a depictive predicate are never neutral clauses in Hungarian. When we negate the sentence in (111a), we can see that the depictive is in focus, since the negative sentence has the order in (112), while regular VMs appear postverbally in negative sentences.

- (112) Mari nem HIDEG-EN itta meg a kávéját.  
 Mari not cold-ADV drank PRT the coffee.3SG.ACC  
 'Mary didn't drink her coffee cold.'

The fact that we are dealing with focus implies that the presence of depictives right before the verb is not the result of predicate movement but of focusing. Depictive predicates are obligatorily focused and only another focus can override this. In (113), focusing the PRT-V unit renders the depictive postverbal, and the sentence says that Mary did drink her coffee even in its cold state.

- (113) Mari MEG-ITTA hideg-en (is) a kávéját.  
 Mari PRT-drank cold-ADV (too) the coffee.3SG.ACC  
 'Mary did drink her coffee (even when) cold.'

Since depictive elements are always focused and appear in non-neutral sentences, we can exclude them from our predicate movement analysis, by saying that their preverbal status is not due to the regular complex predicate formation we see in neutral sentences.

### 4.5.3 Resultatives

Resultative secondary predicates attribute a property to the object of the verb. As it was mentioned earlier, they denote a property that is the end result of the process denoted by the main predicate of the clause. That is, in (114) the adjectival predicate *green* denotes the end result of the process of painting, and its subject is the object of the main predicate.

(114) He painted the door<sub>i</sub> green<sub>i</sub>.

Resultatives can also be predicated of a non-thematic argument of the verb. While the verb *drink* in (115a) is optionally transitive, its object argument is not a thematic argument of the verb but, again, the subject of the resultative predicate in a SC (cf. Hoekstra 1988). In other cases a ‘fake’ reflexive pronoun appears in the clause. In (115b), the intransitive verb *laugh* appears with a ‘fake’ object, which is in fact the subject argument of the secondary predicate *sick*.

(115) a. They drank the bar dry.  
b. John laughed himself sick.

In Ramchand’s (2008) analysis, which follows Hale and Keyser (2002), resultatives are part of the ‘first phase’ of structure building. There is a Result Phrase under VP with the DP as subject, and the subject argument of ResP becomes the object of the verb by moving into Spec,VP. This analysis relies on the assumption that complex theta-roles are allowed, that is, the same argument DP can be thematically related to more than one predicate.

SC-analyses would also assume that the object originates as the subject of the resultative predicate, that is, as a SC-subject. This accounts for the non-thematic arguments appearing in these sentences: it is the secondary predicate that introduces the object argument, therefore the accusative marked DP is not thematically related to the verb (cf. Hoekstra 1984, 1988).

Resultative predicates are of two basic types in Hungarian. We find either oblique case suffixed APs/NPs (i.e. PPs) or particles as resultative predicates. The case appearing on the resultative predicate is sublative, which is primarily a directional case suffix expressing the meaning ‘onto’.

(116) a. János lapos-ra kalapálta a vas-at.  
John flat-SUB hammered the iron-ACC  
‘John hammered the iron flat.’  
b. A váza darabok-ra tört.  
the vase pieces-SUB broke  
‘The vase broke to pieces.’

Resultative complements of verbs like *become* or *turn (into)* are marked differently. The predicate in these sentences is in the translative case, which is not a spatial case, but a marker of change of state.

- (117) a. A vihar ijesztő-vé vált.  
the storm scary-TRANS turn  
'The storm turned scary.'
- b. Univerzális kereső-vé alakul a Google.  
universal searcher-TRANS change the Google  
'Google will turn into a universal search engine.'

Similarly to the English examples we have seen above, Hungarian resultatives also introduce arguments in otherwise intransitive environments. The subject of the resultative predicate gets accusative case in these sentences. As the examples in (118) show the verb *aggódik* 'worry' normally does not assign accusative case, but it can have an oblique case marked complement. The accusative-marked reflexive pronoun in (119) is not the argument of the verb, but is introduced by the secondary predicate.

- (118) a. Mari aggódott.  
Mary worried  
'Mary worried.'
- b. \*Mari aggódta magát-/János-t.  
Mary worried self-ACC/John-ACC  
'Mary worried about herself/John'
- c. Mari aggódott magát-ért/János-ért.  
Mary worried self-CAU/John-CAU  
'Mary worried about herself/about John.'
- (119) Mari beteg-re aggódta magát.  
Mary sick-SUB worried herself  
'Mary worried herself sick.'

Apart from case-marked adjectives, particles can also express a result state: *meg*, *ki* 'out', *le* 'down', *el* 'away' are all particles that have resultative meaning. The particle *meg* has basically lost all its semantic content other than resultativity, but the other particles are primarily spatial elements. Particles can also introduce object DPs, (120a), and 'fake' (reflexive) objects also appear in sentences with particles as resultative predicates, (120b).

- (120) a. Mari át-aludta az éjszaká-t.  
Mary through-slept the night-ACC  
'Mary slept through the night.'
- b. Mari ki-aludta magát-t.  
Mary out-slept self-ACC  
'Mary slept enough.'

No matter whether the resultative is a particle or a case-marked adjective, the predicate moves to the preverbal position. This is another instance of predicate movement, the purpose of which is to create complex predicates. Since I argued above that both oblique case and particles are adpositional heads, and since

resultatives are either oblique-marked APs or particles, we can assume that in all resultative constructions we are dealing with PP-predicates and adpositional SCs. The case suffix can either be selected by the resultative SC-head or it could also be thought of as the lexicalization of the SC-head, since we are dealing with adpositional SCs.

Since the resultative meaning can be encoded by a sublative PP (as in (121)) or by a particle (cf. (122)), the question arises whether the two can co-occur.

- (121) Mari kék-re festette a fal-at.  
 Mary blue-SUB painted the wall-ACC  
 ‘Mary painted the wall blue.’
- (122) Mari le-festette a fal-at.  
 Mary down-painted the wall-ACC  
 ‘Mary painted the wall.’

A cross-linguistically valid observation seems to be that one clause cannot contain two resultative predicates. Yet, the resultatives from the previous two sentences can appear in the same sentence.

- (123) Mari le-festette a fal-at kék-re.  
 Mary down-painted the wall-ACC blue-SUB  
 ‘Mary painted the wall blue.’

If we adopt the view on particles presented in the previous chapter, this is no longer such a big mystery. Particles originate in extended PPs, thus when we have both a particle (which is directional in meaning) and a directional PP (which the sublative marked AP actually is), it just means that the p head of the pP is lexically filled with a particle. The neutral option in these cases is to move the particle, which will result in the word order in (123). When we find the sublative PP preverbally, as in (124), it is in fact focused, the sentence is non-neutral in meaning or in intonation.

- (124) Mari kék-re festette le a fal-at.  
 Mary blue-SUB painted down the wall-ACC  
 ‘It was blue that Mary painted the wall.’

There are, however, still cases where the particle cannot really be combined with another result-predicate. The particles that seem to fall under this restriction in Hungarian are particles like *meg* that have no spatial meaning left and, consequently, cannot take a spatial PathP as their complement (cf. the ungrammaticality of (126)).

- (125) a. János meg-verte Pál-t.  
 John MEG-beat Paul-ACC  
 ‘John beat Paul up.’

- b. János lapos-ra verte Pál-t.  
John flat-SUB hit Paul-ACC  
'John beat Paul to pulp.'
- (126) a. \*János meg-verte Pál-t lapos-ra.  
John MEG-beat Paul-ACC flat-SUB  
'John beat Paul up pulp.'
- b. \*János lapos-ra verte meg Pál-t.  
John flat-SUB hit MEG Paul-ACC  
'John beat Paul up pulp.'

Resultative predicates are thus always PPs in Hungarian. The sublative case is generated in a PathP, particles are generated in pPs, and the two can be lexically filled in some cases. This means that the previous examples do not contradict the generalization that two resultatives cannot co-occur, because we are dealing with one extended phrase. In these cases, it is the particle that will move to the preverbal position since it is closer. The PathP can only undergo focus-movement.

#### 4.5.4 Consider-type verbs

Verbs like *tart* 'hold, consider', *hisz, vél* 'believe', *gondol* 'think' also take predicative complements. In Hungarian, the predicate is in dative case in these constructions, regardless of it being nominal or adjectival.

- (127) a. Anna okos-nak tartja Andrást.  
Anna clever-DAT hold Andrew.ACC  
'Anna considers Andrew clever.'
- b. Anna mérnök-nek hitte Katit.  
Anna engineer-DAT believed Kate.ACC  
'Anna believed Kate an engineer.'
- c. Anna jobb-nak gondolta Mari ötletét.  
Anna better-DAT thought Mary idea.3SG.ACC  
'Anna considered Mary's idea better.'

These sentences are a classical case of complex predicates, and as I have been arguing so far, they can be given a syntactic analysis in terms of a SC structure and predicate movement.

The Hungarian dative case has developed from a lative (directional) case marker (cf. Kiss and Pusztai 2003) and is arguably still a P head in Modern Hungarian. In some cases, the dative PP can have a directional meaning, which suggests that the spatial meaning is still present to some extent, although it is one of the least lexical postpositions as far as their semantic properties are concerned. If this assumption that *-nak/-nek* is a P(ath) head is indeed correct, we can regard the examples in (127) as another instance of moving adpositional predicates into the VM position.

## 4.6 Summary

This chapter provided an overview of spatial elements in Hungarian and the various predication structures instantiated by adpositional elements. I argued that postpositions, spatial case suffixes, particles and space-denoting adverbs can all be united under the category of adpositions. I showed that we have to include particles in our PP-structure and proposed to have a pP projection (in line with what has been proposed for other languages as well), that is, a SC with a p head that can be lexicalized by particles. We have further seen that p may select Path and Place projections. I showed that particles and other predicative PPs undergo movement to the preverbal position to form complex predicates with the verb. This syntactic movement has the semantic repercussions of creating telic (or perfective) complex predicates (section 4.4). I also discussed some variation whereby we can alternately find a particle or a PP in preverbal position. Lastly, I extended my proposal for predicate movement to other cases of adpositional secondary predicates, namely, resultative and *consider*-constructions. I also discussed depictive secondary predicates, but since these are obligatorily focused, they are not subject to the predicate movement we observe in neutral sentences.

# Predicate Movement

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## 5.1 Non-verbal predication

The previous chapters investigated the syntactic properties of non-verbal predication and the interaction of non-verbal predicates with the verbal predicate in Hungarian neutral sentences. I have shown that nominal, adjectival and adpositional predicates of SCs undergo movement, and I have claimed that this results in syntactically formed complex predicates. First, copular clauses were shown to have a uniform underlying structure, where the nonverbal predicate forms a SC with the subject in the base-generated structure but ends up before the verb in neutral sentences due to complex predicate formation. Then, predicative PPs were also shown to move to the preverbal position of verbal predicates other than BE, and since particles were argued to start out within an adpositional phrase, particle movement could also be analyzed as an instance of predicate movement of a syntactic predicate. We also saw in Chapter 2 that bare nominal internal arguments (objects and unaccusative subjects) behave in the same way and that infinitival complements of a certain class of verbs also form so-called verb clusters with the finite verb.

It has remained an open issue so far how exactly to account for the movement itself. In Chapter 2, the overview of the previous approaches to VMs concluded that recent research suggests that since the predicative nature of the moving constituent is the common trait of VMs, the analysis should reflect that. There are two main approaches to the syntactic treatment of this predicate movement. This chapter will take a closer look at them to see how they fare with respect to their empirical coverage and their theoretical appeal.

## 5.2 Two approaches to predicate movement

Previous proposals that analyze the derivation of the surface order of VMs and verbs as syntactic predicate movement have been along two lines. One line of thinking takes the movement as an instance of semantically motivated displacement into a position designated for predicative elements (cf. Csirmaz 2004, É. Kiss 2006b, Surányi 2009c); I will refer to this as the PredP approach. The other proposal takes movement of a predicate as a subcase of movement into an argument position, which is ultimately motivated by a property of the verb rather than that of the moving element (Broekhuis and Hegedűs 2009); I will refer to this as the  $\phi$ -feature agreement approach. The two proposals cover almost the same range of empirical data with one having advantages where the other faces difficulties and vice versa.

### 5.2.1 The PredP approach

Under the assumption that movement takes place because the (secondary) predicate has to appear in a designated predicative position in the clause, the landing site of the movement has been taken to be the specifier of Predicative Phrase (PredP), a functional projection that attracts the verb into its head and the secondary predicate into its specifier position. Zwart (1993) and Koster (1994) proposed an analysis for Dutch predicative complements along these lines, and Csirmaz (2004) and É. Kiss (2006b) adapted it to Hungarian. A neutral sentence has the following schematic structure:

- (1) [ ... [<sub>PredP</sub> VM Pred+V [ ... t<sub>V</sub> ... t<sub>VM</sub> ... ] ] ]

As Koster (1994) argues, NPs, APs and PPs can be full arguments of the verb or they can be part of the predicate, and if the latter is the case, they have to incorporate into the verb, which formally means that they have to move into a special functional projection, PredP, which is above VP and below AgrO in Koster's proposal. Koster (1994) assumes that movement into PredP is obligatory since the predicative element gets licensed in that way. He proposes that predicates have Case-like N-features that can only be checked by movement.

The analysis that handles movement into PredP as motivated by a feature on the predicate can naturally cover most of the cases discussed in this thesis, although assuming that movement is necessary to check Case-like features is not as natural for Hungarian as it is in the case of Dutch. The rule is that predicates of SCs have to move into the predicative position in Hungarian as well. This restriction does not only apply to syntactic predicates (discussed in Chapter 3 and 4) but also to bare nominal object arguments because they are weak nouns in the sense of Milsark (1974). It has been shown in several places that bare nouns are not referential in Hungarian, thus semantically they are weak, denoting properties and not individuals (cf. Maleczki 2001, Farkas and de Swart 2003). This approach draws a line between referential and predicative

arguments and predicts for Hungarian that only the latter are VMs and only the former can be licensed as referential arguments.

However, Chapter 3 showed that sentences with BE and a PP-predicate may give rise to three different surface orders. The possible surface orders include one with the predicate in the VM-position (cf. (2)). However, it is also possible to move the subject of the SC preverbally, as in (3), or to have a verb-initial order with focus stress on the verb (see (4)) but since this is not a neutral sentence, we can disregard it for now.

- (2) A macska [<sub>VP</sub> a tető-n van].  
 the cat the roof-SUP is  
 ‘The cat is on the roof.’
- (3) [<sub>VP</sub> Egy macska van a tető-n].  
 a cat is the roof-SUP  
 ‘There is a cat on the roof.’
- (4) Van egy macska a tető-n  
 is a cat the roof-SUP  
 ‘There is a cat on the roof.’

The variant with the preverbal subject in (3) poses difficulty for the PredP approach since we expect to find the predicative PP rather than the subject of predication preverbally in neutral sentences. This sentence type also contradicts the possible assumption that movement of predicative elements into PredP is obligatory in neutral sentences, as has been assumed for Dutch by Koster (1994). We can observe, however, that moving the predicate or the subject of the SC results in completely different sentence types. The sentence with predicate movement results in a complex predicate and expresses a categorical judgment in the sense of Kuroda (1972), while moving the subject does not create a complex predicate and results in athetic sentence.

We can draw the conclusion that the PredP approach handles the data well but for the difference between (2) and (3). Movement of bare nominal arguments falls under the movement of predicative weak nouns (covered by Koster’s 1994 analysis of Dutch) but the other option in locative sentences with preverbal referential weak nouns is unexpected since their movement takes precedence over the movement of the syntactic and semantic predicate in the construction. This is unexpected if movement of the predicate is obligatory in neutral sentences and is into a position designated for predicative elements. (3) could only be derived with the help of additional assumptions either with respect to the nature of the movement or concerning the landing site of the SC-subject in that sentence.

Another argument against the PredP approach is that it would be desirable to derive the adjacency of the non-verbal predicate and the verb without having to resort to positing an extra functional projection if possible. Furthermore, it is not obvious what the trigger of the movement would be and how

this movement differs from other A-movements so that we can account for the different word orders. Related to this is the issue of the obligatoriness of the movement: it seems that predicate movement is obligatory in neutral clauses (except for the locatives in (3), which is related to the categorial/thetic type of the clause), but it is not clear at all what is the case in non-neutral sentences like (4), and what the approach would say when there is no visible complex predicate.

### 5.2.2 The $\phi$ -feature agreement approach

The proposal put forth by Broekhuis and Hegedűs (2009) is that predicate movement is movement into an argument position in order to check  $\phi$ -features. It builds on the hypothesis that either the subject or the predicate of a SC can move to check  $\phi$ -features (cf. Broekhuis 2008), and since these SCs are internal arguments, movement is into Spec,VP. The underlying structure assumed in this analysis is the one in (5); it shows that the subject DP and predicate XP within the RelP/SC agree in  $\phi$ -features and thus V can attract either of them.

(5) [ ... V<sub>[u-phi]</sub> ... [RelP DP<sub>[v-phi]</sub> Rel XP<sub>[v-phi]</sub> ] ]

An advantage of this proposal is that there is no need to assume a separate functional projection as the landing site of the predicate (and the verb), and no extra feature has to be hypothesized to trigger the movement, the  $\phi$ -features on V are responsible for that.

Broekhuis and Hegedűs (2009) assume that there is an agreement relation between the subject and the predicate of a SC and this ensures that either the non-verbal predicate or its subject can move into Spec,VP. This leads to a straightforward explanation of word order variation. Broekhuis (2008) showed that English locative inversion is an alternative to subject movement, and that the optionality between moving the subject or the predicate of the SC complement of the verb follows from the interaction of feature-checking requirements and information structural constraints, namely, the subject of (secondary) predication stays postverbal when it is focused and thus has to be on the right edge of the clause to be stressed.

The same alternation seems largely to be missing from Hungarian, except for the variation with sentences containing the copula illustrated in (2)-(4). In locative sentences involving the copula as the verbal element, there is no complex predicate formation, in sentences like (3) we find the subject of the SC preverbally. This is in contrast to predicational copular clauses, where the PP predicate appears preverbally, as in (2).

The analysis that allows alternation between moving the SC-subject and the SC-predicate can easily account for these data, it actually even expects such alternations, which is an advantage over the PredP analysis. A predicate movement analysis to a designated predicative position has to say something

about the preverbal indefinites, since they differ from bare nominal arguments in that they are referential.

Under the assumption that the movement targets an argument position, we expect any internal argument (objects of transitive verbs or subjects of unaccusative verbs) to be able appear preverbally as VM. The proposal also handles preverbal bare object arguments like the one in (6) with no difficulty but has to include a restriction that prevents definite (in fact, [+specific]) objects from moving to the preverbal slot. Such an example is (7), where the definite object is not preverbal in the neutral sentence.

- (6) János könyv-et olvas.  
 John book-ACC reads  
 ‘John is reading a book.’
- (7) János szereti Mari-t.  
 John loves Mary-ACC  
 ‘John loves Mary.’

The proposal is formulated as an OT-ranking of constraints, where checking of  $\phi$ -features locally is not highly ranked in Hungarian but movement is still motivated by another, higher-ranked, constraint that requires (finite) verbs not to bear the main stress of the clause. However, what we find is that when the internal argument is definite, it does not move to the preverbal position and the verb carries the main stress. Since we are dealing with violable constraints, the NO-STRESS- $V_{Fin}$  (‘do not put stress on finite verbs’) constraint can naturally be overranked by some other constraint in this case. We saw in the previous chapters that the VM has to be in some sense minimal so one might think that DPs are simply too big to appear there. Definite DPs are different, however, from the other observed cases, since in AP and PP predicates it is the complement of the predicate that has to be separated from the moving constituent, while functional projections on top of the predicative element are allowed (e.g. degree and measure expressions move with the adjectival predicate). Therefore, we cannot claim the ban on DPs in preverbal position in neutral clauses to be the same as the other observed size restrictions.

It is also crucial that definite DPs can be VMs in copular clauses when they are predicative. This makes the above hypothesis about the ban on DPs as VMs untenable, since it seems that only argument DPs are excluded from Spec,VP.

- (8) János a barátom volt.  
 John the friend.1SG was  
 ‘John was my friend.’

In the predicational copular clause in (8), the preverbal predicative DP can, of course, have a focus interpretation, but it can also be a neutral sentence. In that case it is not the only (exhaustive) property of John’s that he was my

friend, he could have been my colleague or roommate at the same time as well. The relevant difference between (7) and (8) is that in the first case the DP is a referential object argument and in the second case it is a predicate in the SC under BE.<sup>1</sup>

Under the proposal of Broekhuis and Hegedűs (2009) the determining factor for the movement is “stress avoidance” in all cases, that is, the requirement on verbs to be unstressed. The original idea goes back to Kálmán et al. (1986) and Komlósy (1989), who claim that there is a class of verbs in Hungarian that are stress avoiding, that is, do not like to take the main stress of the clause. This fact is taken to be a consequence of a constraint on stress assignment on finite verbs. The fact that finite verbs can sometimes get stressed is not a problem in an OT-analysis where constraints are violable, because the stress-avoidance requirement can be outranked by some other constraint. Stress avoidance has been shown to be a property of a class of verbs. These verbs have also been described as auxiliary verbs (Csirmaz 2004) or deficient verbs (Brody 2004), and we often find them as matrix verbs in verb clusters: VMs raise to the preverbal position of the matrix clause when there is no other constituent to carry the main stress. (9) illustrates the word order of verb clusters in a neutral sentence: the particle, which is semantically related to the verb ‘go’ appears before the finite verb of the construction. This phenomenon has been described as particle climbing, whereby the particle (or rather, any VM) semantically related to the most embedded verb appears in front of the finite verb.

- (9) János fel fog menni a tető-re.  
 John up will go the roof-SUB  
 ‘John will go up to the roof.’

Szendrői (2004) is one of the advocates of a stress-based approach to the syntax of verb clusters, and claims that particle-climbing takes place in order to avoid the main stress of the clause falling on a verb that cannot bear stress. Broekhuis and Hegedűs (2009) takes this as a starting point of the proposal that NO-STRESS- $V_{Fin}$  is a violable constraint on all finite verbs.

This analysis can derive all predicate movement based on its general assumptions about feature checking, and it also handles the (limited) variation

<sup>1</sup>The fact that the sentence in (8) can be negated in two ways also shows that it can be either a VM or a focus (cf. Chapter 3). Negation appears before focus, but it is in complementary distribution with VMs preverbally, that is, when the DP is a VM, it is postverbal in the negative sentence. If the predicative DP had to be focused necessarily, the second order would not be predicted to be possible.

- (i) János nem A BARÁTOM volt.  
 John not the friend.1SG was  
 ‘John was not my friend.’
- (ii) János nem volt a barátom.  
 John not was the friend.1SG  
 ‘John was not my friend.’

we find in the movement of the subject or the predicate of the SC. Furthermore, it does so without taking resort to a separate functional projection in the structure, and takes predicate movement as a case of A-movement triggered by a property of the verb and not of the moving constituent.

### 5.2.3 Evaluation

Complex predicate formation in the Stowellian sense (as discussed in Chapter 2) has to be an absolute requirement, that is, the verb and the secondary predicate are always reanalyzed as a complex predicate at LF. Whether predicate movement, which is the overt syntactic manifestation of this complex predicate formation in Hungarian, is also an absolute requirement is a different, empirical issue. This issue brings us to non-neutral sentences, where the predicate-V order is missing, the verb immediately follows the focus or negation. The question is whether predicate movement takes place in these sentences as well, or not.

First of all, we have the non-neutral counterpart of the sentence in (9) given in (10), where the matrix verb is preceded by a focused constituent *János*.

- (10) JÁNOS fog fel-menni a tető-re.  
 John will up-go.INF the roof-SUB  
 ‘It is John that will go up to the roof.’

Broekhuis and Hegedűs (2009) claim that predicate movement is triggered by the stress-avoidance of finite verbs, so we do not expect predicate movement at all in this sentence, because focus takes the main stress that would fall on the finite verb in a neutral sentence. However, even in these sentences, the VM is not postverbal, it appears in front of the lexically selecting (infinitival) verb *menni*. The fact that there is no particle movement to the matrix, finite verb but the particle *fel* ‘up’ still precedes the most embedded verb *menni* ‘to go’ shows that while particle climbing may be due to the deficiency of the finite verb, stress avoidance of this verb cannot be all there is behind predicate movement. One could hypothesize that stress avoidance does not only apply to the finite verb in verb clusters but to the infinitival one(s) as well. The fact that (11) is grammatical contradicts this, however.

- (11) JÁNOS fog akarni fel-menni a tető-re.  
 John will want.INF up-go.INF the roof-SUB  
 ‘It is John that will want to go up to the roof.’

The middle infinitival verb *akarni* ‘to want’ is not preceded by a VM but this does not make the sentence ungrammatical. If stress avoidance applied to all verbs in a verb cluster, this sentence should be ungrammatical; if it only applies to the finite verb and it is only this property that triggers predicate movement, the particle should be able to follow the most embedded verb.

That the VM can precede the most embedded verb is not surprising since they agree in  $\phi$ -features so the verb can attract it. Therefore, (11) is not entirely unexpected, it is only so if one assumes that stress avoidance of the verb alone motivates the movement. Similarly, movement up to the matrix verb can be motivated by the shared  $\phi$ -features of the auxiliary and the embedded infinitives, which allow for movement of the infinitive or its VM.

On the other hand, the PredP approach needs additional assumptions to account for (9), since it is not obvious why the VM has to move all the way up to the matrix verb and why it cannot stop at the lexically selecting verb (as in (11)) and form a complex predicate there.<sup>2</sup>

There is another set of data suggesting that predicate movement does not only depend on the verb, and these data also involve infinitival clauses. These data show that extending the no-stress requirement to infinitives would not solve all our problems regardless of verb clusters. In infinitival clauses that contain a focus, both the order FOC- $V_{inf}$ -VM and FOC-VM- $V_{inf}$  are acceptable, showing again that in these cases predicate movement is independent of stress. Brody (1995) relates the variation to the properties of Tense in infinitives, which are different from finite tense in that they only optionally attract the verb while finite Tense does so obligatorily, hence the lack of variation in finite clauses.

- (12) a. Jobb lenne PÉTERT fel-hívni.  
 better would.be Peter.ACC up-call.INF  
 ‘It would be better to call up PETER.’  
 b. Jobb lenne PÉTERT hívni fel.  
 better would.be Peter.ACC call.INF up  
 ‘It would be better to call up PETER.’  
 (Brody (1995), exx. (19)-(20), glosses slightly modified - VH)

These data suggest that predicates need to move to the preverbal position independently of the stress-properties of the verb, their movement is triggered by a property of their own. An approach which takes the movement to be caused by a feature on the predicate itself can handle this part of the data, but it does have difficulties with the optionality of the movement here so the (b) example remains unexplained. This set of data shows us that there is something more going on than only the stress properties of the verb. It also highlights, however, that the PredP approach needs additional assumptions, and under a V-to-Foc analysis of sentences including focus movement, the optionality of V-movement has to be addressed as well.

Let us turn our attention back to simple sentences now and take a look at the word order of non-neutral clauses. For Hungarian non-neutral sentences, there have been analyses claiming that the verb moves higher up in the struc-

<sup>2</sup>The additional assumption motivating movement of the VM to the matrix verb can be along the lines of stress avoidance of a certain group of verbs (auxiliary-like verbs; cf. Szendrői 2004 a.o.) or clause union in verb clusters (e.g. den Dikken 2004a).

ture, to Focus or Negation, thus obscuring the original VM-V word order we see in neutral sentences (cf. Brody 1990, 1995 for the feature-driven proposal for movement). The structure of a non-neutral sentence under a PredP analysis of predicate movement and V-movement to  $\text{Foc}^0$  via  $\text{Pred}^0$  is schematized in (13).

- (13) [ ... [ $\text{FocP}$  XP  $\text{Foc}+\text{Pred}+\text{V}$  [ $\text{PredP}$  VM  $t_{\text{Pred}+\text{V}}$  [ ...  $t_V$  ...  $t_{VM}$  ... ]]]]

At the same time, it has always seemed attractive to take the complementary distribution of VMs on the one hand and Focus/Negation on the other hand at face value and try to derive the order of non-neutral sentences with as few movements as possible. The predicate movement approach as formulated by both É. Kiss (2006b) and Broekhuis and Hegedűs (2009) also favored this latter line of thinking. É. Kiss (2006b) suggests that VM-V order is only derived when it is the main statement or main information in the clause. In non-neutral clauses, the main predication is a different one, negation or focus becomes the main information of the sentence. Broekhuis and Hegedűs (2009) do not assume predicate movement in non-neutral sentences since the finite verb does not carry the main stress in such sentences even with the predicate staying postverbally.

If one assumes, however, that predicate movement is triggered by a (semantic) feature on the predicate, we expect that movement to be obligatory, that is, to take place in non-neutral sentences as well. We find that the surface order of non-neutral sentences does not help us settle the issue of the obligatoriness of predicate movement comfortably. As was shown in Chapter 2, the word order in the postverbal field of non-neutral sentences exhibits a lot of variation, almost all orders are perfectly grammatical with no semantic difference. It does not matter whether there is a predicative element or not.

- (14) a. PÉTER adta vissza a könyvet Jánosnak tegnap.  
Peter gave back the book.ACC John.DAT yesterday  
'It was Peter that gave the book back to John yesterday.'
- b. PÉTER adta a könyvet vissza Jánosnak tegnap.  
c. PÉTER adta tegnap vissza Jánosnak a könyvet.
- (15) a. IDÉN volt János elégedett az eredménnyel minden  
this.year was John satisfied the result.INS every  
versenyen.  
competition.SUP  
'It was this year that John was satisfied with the result at every  
competition.'
- b. IDÉN volt elégedett János minden versenyen az eredménnyel.  
c. JÁNOS volt az eredménnyel minden versenyen elégedett.

The word order variation in these sentences shows that arguments, adjunct and predicates can appear in various orders postverbally. The particle *vissza* 'back'

or the predicative adjective *elégedett* ‘satisfied’ mingle with the other arguments and adjunct as well. We have to assume that the postverbal field obeys different rules than the preverbal one, where topics and operator positions appear in a strict linear order. Surányi (2006) suggests that there is scrambling in the postverbal field resulting in word-order variation. É. Kiss (2010) argues that the free word order is due to free PF linearization (it affects adverbials and quantifiers, as well as arguments) and that the postverbal order is determined by phonological weight.

The approach to predicate movement which only predicts it to take place in neutral sentences does not have any expectations with respect to the postverbal position of predicates in non-neutral sentences. The PredP approach seems to predict that predicate movement always takes place and the VM is strictly postverbal (in Sepc, Pred) in non-neutral sentences, but the above discussed facts concerning free word order in the postverbal field make this prediction difficult to test. Thus, the fact that the predicate does not have to be immediately postverbal in these sentences is not a conclusive argument against overt complex predicate formation followed by movement of the verb across the predicate to Foc or Neg, although this word order seems to be the only deciding factor empirically.

A potential argument for predicate movement is that constituency tests on SCs often fail to show their constituency. The fact that the predicate can be separated from its subject and also from its complement in non-neutral sentences as well – as evidenced by the variation in (14) and (15) above – may be due to predicate movement (later concealed by further V-movements). However, Van Riemsdijk (1997) showed that in Dutch, extraction of the particle out of its PP is independent of particle movement to the preverbal position, and this may well be the case in Hungarian predicates as well, which means that non-constituency of the subject and predicate of the SC or even of parts of the predicate of the SC are again not decisive when considering non-neutral sentences. Furthermore, Svenonius (1994) argued that the constituency of dependent predications is more difficult to test exactly because of their dependent nature. This indirect evidence is, again, inconclusive.

### 5.3 Outlook

One of the crucial differences between the two proposals discussed here concerns the issue whether predicate movement is obligatory or not, which is related to the question of whether it is the verb or the moving predicate which is ultimately responsible for the movement taking place. It seems to be the case that non-neutral sentences are as important in deciding this as neutral ones, but the free word order of the postverbal field (where we find the predicate in non-neutral sentences) makes it hard to draw conclusions with respect to orderings. Those analyses that assume verb movement in sentences containing a focus or negation into a higher functional head Foc or Neg, can claim that the VM is

preverbal at one point of the derivation but is then stranded by the verb when it moves. However, analyses that derive the complementary distribution of VMs and focus by movement in complementary contexts (VM moves in neutral ones, focus in non-neutral ones) say that predicate movement is not obligatory. The two approaches can cover almost the same range of data, and it seems that future research on non-neutral sentences can also make assumptions about the derivation of the word order of neutral ones more precise.

Under Stowell's (1991b) assumptions, complex predicate formation takes place at LF independent of the fact whether it manifests in complex predicate formation in overt syntax. So, from a semantic point of view, there is no need to assume such movement. Broekhuis and Hegedűs (2009) assumes that the the movement of predicates is actually always triggered by a property of the verb, and this property is in fact a PF-restriction. I believe that the data discussed here has shown that apart from auxiliary-like verbs with infinitival complements, it is also a property of the predicate – or, possibly, of the verb and the non-verbal predicate together – that triggers the movement; and this property is more likely to be an LF-related property.<sup>3</sup> This does not mean, however, that movement has to be into a designated predicative position (such as PredP), as long as the predicate ends up in the vicinity of the verb. The argument position as the landing site proposed by Broekhuis and Hegedűs (2009) can serve as the place of complex predicate formation. The requirement to *Form Complex Predicates* seems not only an LF phenomenon in Hungarian but also a syntactic restriction, similarly to Italian as described by Stowell (1991b).

Besides the issue of the mechanism of the movement, there are also some further open issues with respect to the moving constituent. It seems that there is a restriction on the size of the preverbal predicate, but it actually means that the predicate cannot pied pipe its complement, while it must take its modifiers, which makes it obvious that we are not dealing with head movement. When it comes to particle movement, however, the preverbal element most of the time is just the head of the Small Clause (unless it has a modifier) since it does not seem to be an option to move its complement with the particle or to move the complement but not the head. The latter would end up as a non-neutral sentence with focus on the PP.

I have only discussed one case when the predicate of a SC-complement is not preverbal in a neutral sentence, and in that case it is the subject of the SC which is preverbal. These were the locative sentences in Chapter 3, which had the indefinite subject preverbally. I have not found any other instances of such sentence types, but there may be more if one finds complement SCs not examined here.

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<sup>3</sup>Stress-avoidance is the relevant property of this class of verbs. I think analyses of verb clusters that take the finite, modal verbs to be such stress-avoiding verbs (cf. Szendrői 2004) could be on the right track, and this would only mean for the analysis of Broekhuis and Hegedűs (2009) that the constraint is limited to a subset of verbs.



# Conclusions

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This thesis investigated the syntactic properties of non-verbal predicates and their interaction with the verbal predicate in Hungarian neutral clauses. In Chapter 2, we saw that the so-called Verbal Modifiers, that is, those elements that appear right in front of the verb in neutral sentences are predicative, and I therefore focused on non-verbal predicative elements in Chapter 3 and Chapter 4. I proposed analyses for nominal, adjectival and adpositional predicates in terms of Small Clause structures, which include the (secondary) predicate and its subject, and which are integrated into the matrix (verbal) predication via complex predicate formation in overt syntax in Hungarian.

Chapter 3 has shown that Hungarian copular clauses have a uniform base-generated structure, where the copula has a Small Clause complement and the predicate of this SC forms a complex predicate with the copula in overt syntax. I discussed the presence and absence of the copula in present tense 3rd person indicative, and hypothesized that there is a covert copula in seemingly verbless sentences as well.

Based on distinctions made in the literature, Hungarian copular clauses can be classified as predicational, specificational, and equative sentences. Predicational sentences are the neutral variant of copular clauses, with nominal, adjectival or adpositional predicates preverbally. Specificational sentences are those DP-*be*-DP clauses where the subject of predication is in the structural focus position. This is in line with what has been proposed for the information structure of English specificational sentences as well. It was also shown that equative copular clauses have one of the DPs focused obligatorily. Both specificational and equative sentences have been argued to have a subject-predicate structure, unifying them underlyingly with regular predicational copular clauses. Adjectival predicates were shown to strand their complements, as there seems to be a requirement that the preverbal predicate be small. However, since modifiers cannot be extracted out of the AP, they are pied piped with

the predicative adjective. Predicative PPs were shown to behave differently in copular sentences and existential/locative constructions.

While existential and locative sentences were also argued to have the same underlying predicational content, we saw that their surface word order differs from copular clauses in that there is no complex predicate formation. The proposed SC-predicate does not appear preverbally in neutral existential and locative constructions. Existential sentences are verb initial, the copula bears focus accent and the subject follows it. Locative sentences have the subject of the SC in preverbal position, presumably to avoid stress on the copula (since stress on BE would make it an existential clause). These two sentence types arethetic sentences – as opposed to copular clauses, which are categorical – they do not make a statement about individuals, but rather describe situations.

Chapter 4 provided an analysis of the structure of PPs and their role as predicates in non-copular environments. I argued that Hungarian adpositions fit into the cross-linguistically proposed extended PP-structure that contains separate projections for Place and Path denoting adpositions. Particles were also shown to be part of the extended PP; they are either base-generated in a functional p head or move into p in overt syntax. Therefore, particle movement to the preverbal position is one of the instances of a predicative PP forming a complex predicate with the verb. Particles have to strand their complements before they undergo predicate movement, but they pied pipe their modifiers, similarly to predicative adjectives. With certain verbs, we find a variation between moving a PP to the preverbal position when there is no overt particle in the clause, or having a particle preverbally, while the PP is stranded.

I also discussed resultative and depictive secondary predicates and predicative complements of *consider*-type verbs. All these secondary predication structures involve a SC, and the predicates are case-marked in Hungarian. Since we are dealing with adpositional case suffixes, these secondary predicates were classified as PP-predicates. They also have in common with the other adpositional predicates that they are preverbal but depictive predicates were shown to be in focus, and therefore, not to exhibit predicate movement in the way other predicates discussed here do. The other types of secondary predicates, however, are preverbal in neutral clauses, thus providing a further case of predicate movement to the preverbal position.

Chapter 5 discussed the nature of the movement by which the non-verbal predicates and other predicative elements classified in Chapter 2 end up in the preverbal position, which I took to be Spec,VP following previous analysis. I suggested that it is a property of the moving element and possibly of the verb as well that complex predicates have to be formed in overt syntax, but further research on non-neutral sentences could be used to determine the obligatoriness or optionality of the movement itself.

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# Abbreviations

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ABL = ablative 'from'  
ACC = accusative  
ALL = allative 'to'  
DAT = dative, lative 'to'  
DEL = delative 'off'  
ELA = elative 'out of'  
ILL = illative 'into'  
INE = inessive 'in'  
INF = infinitive  
INS = instrumental, comitative  
NOM = nominative  
PL = plural  
POSS = possessive  
PRED = predicate  
PRT = particle  
SBJV = subjunctive  
SG = singular  
SUB = sublative 'onto'  
SUBJ = subject  
SUP = superessive 'on'  
TRA = translative



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