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An LF-driven Theory of Scrambling in Hungarian Infinitival Constructions

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Introduction: the main claims of the dissertation

My dissertation presents a study of word order patterns in Hungarian infinitival constructions with special emphasis on the phenomenon of restructuring making the scrambling of the constituents of the main clause and the infinitival clause possible. The phenomenon is well-known from other languages as well, such as German, Italian, Basque or Swedish. In the analysis of Hungarian I derive seemingly unrelated phenomena from a common source and claim that definiteness agreement between the finite verb and the object of the infinitive, the movement of the verbal modifier, optional preverb-verb order in structures containing focus, even infinitival clauses with a nominative subject come about as the result of restructuring followed by LF-driven scrambling of sentence constituents. The different realizations of the same process are the result of the different properties and requirements of both the finite and the infinitival clause and the verbs they contain.

The dissertation presents an LF-driven approach to scrambling. One of the central problems of approaches to scrambling is that it seems impossible to identify whether scrambling is the result of A-movement or A'-movement (or whether it is the result of movement at all (Corver and Riemsdijk 1994)). The emergence of the problem itself might suggest that the attempt to account for scrambling in terms of these familiar mechanisms is simply misguided. It is impossible to make a difference because this is not the relevant difference, but a completely different mechanism is responsible for free word order phenomena. Following Bobaljik and Wurmbrand (to appear) I also claim that an account that takes LF first and derives PF from LF can give a more straightforward account of the data both in Hungarian and cross-linguistically. Mechanisms responsible for structure building and scrambling mechanisms operate based on different principles. Scrambling mechanisms are either supported by particular

morphological properties of a given language (which, then, is going to be a language allowing scrambling) or not. In the latter case, the result is a language with rigid word order disallowing scrambling like English.

The approach is completely in line with general properties of the Hungarian language and other languages that are claimed to “wear their LFs on their sleeves”. However, even in these languages, the surface order of constituents does not always reflect scopal order. To explain this it will be proposed, again following mainly Bobaljik and Wurmbrand (to appear) that different constraints can block the scope-based ordering of constituents. The study includes an extensive discussion of what these constraints can be in Hungarian and how exactly they work, where information structure considerations also play a central role.

The main questions that have to be answered for a successful account of restructuring are the following:

- (1) 1. Which of the verbs can take infinitival complements?
2. Which of the verbs taking infinitival complements undergo restructuring?
3. What are the effects of restructuring?
4. What is the structure of restructuring infinitives?
5. What is the motivation for restructuring?

The phenomena that the dissertation argues to be accounted for by assuming the existence of a scrambling field (presumably) in the left periphery of the clause are the following:

(2) – *constituents of the infinitival clause can appear in the finite clause and vice versa:*

TEGNAP akart (Péter) minden könyvet (Péter) Marinak (Péter) oda-adni (Péter).

yesterday wanted every book-ACC Peter Mary-DAT PV-give-INF

‘It was yesterday that Peter wanted to give every book to Mary.’

– *freer word order (FP – QP – V_{inf} also allowed) in the seemingly left periphery of the infinitival clause:*

Jobb lenne CSAK KEDDEN minden előadásra be-menni.

better would-be only Tuesday-on every lecture PV-attend-INF

‘It would be better to attend every lecture only on Tuesday.’

Jobb lenne minden előadásra CSAK KEDDEN bemenni.

better would-be every lecture only Tuesday-on PV-attend-INF

*CSAK KEDDEN minden előadást meg-néztem.

only Tuesday-on every performance-ACC PV-watched-1SG

– *preverb/Verb Modifier climbing, the formation of verbal complexes:*

János szét fogja akarni kezdeni szedni a rádiót.

John apart will want-INF begin-INF take-INF the radio-ACC

‘John will want to begin to take apart the radio.’

*János fogja akarni kezdeni szét-szedni a rádiót.

John will want-INF begin-INF apart-take-INF the radio-ACC

– *the optionality of the Focus – Verb – Preverb/VM order in focussed infinitival constructions:*

Jobb lenne CSAK KEDD-EN haza menni.
better would-be only Tuesday-on home-go-INF
'It would be better to go home only on TUESDAY.'

Jobb lenne CSAK KEDD-EN menni haza.
better would-be only Tuesday-on go-INF home
(same)

*CSAK KEDD-EN haza men-t-ünk.
Only Tuesday-on home go-PAST-1PL

– *embedded infinitival clauses apparently containing a nominative subject:*

Nem akarok csak én menni busszal.
not want-1SG only I-NOM go-INF bus-with
'I don't want to be the only one to take the bus.'

– *agreement between the finite verb and the object of the infinitive:*

Szeretnék meg-venni egy könyvet.
would-like-1SG-INDEF PV-buy-INF a book-ACC
'I would like to buy a book.'

Szeretném meg-venni a könyvet.
would-like-1SG-DEF PV-buy-INF the book-ACC
'I would like to buy the book.'

– *properties of constructions containing auxiliaries;*

– *properties of constructions containing the verb látszik 'seem'*

The structure of the dissertation

The study is divided into two main parts. The first part presents the constructions relevant for my discussion from Hungarian, Italian, Basque, German and Swedish. A number of Hungarian structures containing infinitival embedding are introduced and described for which I offer an account in the second part of the dissertation. Besides offering an empirically rich discussion, this part also presents different approaches to restructuring, since the data attested often call for a clause union analysis in spite of the claim that infinitival clauses have their own independent (potentially as big as a CP) structure, which I am not going to refute in the present study either.

Chapter 1, where I present the relevant properties of Hungarian infinitival constructions, is dominantly descriptive in nature. Since I claim that the underlying structure of infinitival clauses is actually the structure that underlies finite clauses as well, a short account of the structure of finite clauses initiates the discussion. The claim that the underlying structure of finite and infinitival clauses is the same, does not mean that the constructions themselves behave the same way. However, the expectation is that even the differences can be derived from a common base. In this study I propose that differences between finite and infinitival clauses are the result of the obligatorily embedded nature of infinitival constructions. A comparative line of thought is maintained throughout the dissertation, and some novel differences are also pointed out and discussed. Special emphasis is laid on the left periphery of finite and infinitival clauses in which I follow the strict structural restriction on topic(s), quantified element(s), focussed constituent order (e.g. Rizzi 1997, Beghelli and Stowell 1997).

The chapter presents data that constitute the subject matter of the present study and points out the central problems the dissertation aims to solve in later chapters. One of the core questions hinges on the mono-clausal–bi-clausal

dichotomy in accounts of restructuring, so a substantial portion of the chapter is devoted to constructions that support either a mono-clausal or a bi-clausal account of sentences containing embedded infinitives and points out potential problems either of them face.

The discussion includes problems related to word order, constructions containing a focussed constituent either in the finite or the infinitival clause, agreement between the finite verb and the object of its infinitival complement, and a peculiar construction to my knowledge first discussed in Szabolcsi (2005) where an infinitival clause seemingly contains a nominative subject of its own, which is rather unexpected under general accounts of Case assignment.

I also define how restructuring is understood in the present work. I claim that restructuring results in a number of processes, what unifies them being that they are all the results of clause union having taken place. Restructuring itself then is supposed to make all those processes possible and is understood as clause union, the movement of the infinitival T-head to the TP of the finite clause (Roberts 1997, Hinterhölzl 1999) opening the way for the scrambling of constituents. The resulting structure is defined by properties and requirements of both the finite and infinitival clause interacting in complex ways. Under the assumptions of the present dissertation more constructions are claimed to undergo restructuring than previously assumed. The main effects of restructuring are claimed to be the following:

- (1) a. the formation of verbal complexes;
- b. relatively “free” word order based on É. Kiss (2003);
- c. agreement between the finite verb and the object of the infinitive.

Chapter 2 discusses major aspects of restructuring. After a short introduction to approaches to restructuring I turn to German and Hungarian, first presenting previous mono-clausal accounts. One of the aims of this dissertation

is a cross-linguistic outlook, among others to justify the claims made in the present study. Before a detailed account of the German and Hungarian data, this time from a bi-clausal perspective, I also discuss Swedish, Basque and Italian restructuring constructions, some of which turn out to be relevant for Hungarian restructuring as well. The second part of the chapter argues that restructuring can be best explained starting from a bi-clausal account and presents evidence in favour of the bi-clausal analysis. At this point of the discussion I rely heavily on both data and analyses provided in Hinterhölzl (1999, 2006). Taking the ideas of Hinterhölzl (1999, 2006) as a starting point and contrasting previous accounts of Hungarian restructuring I claim that infinitival clauses all undergo restructuring. I point out that a much broader class of verbs than previously assumed portray restructuring properties. It is especially interesting in this respect how to account for the four verbs (*fog* ‘will’, *szokott* ‘usually does’, *talál* ‘happen to’, *látszik* ‘seem’) defined as the restructuring verbs of Hungarian by Tóth (2000), which includes the three verbs (*fog* ‘will’, *szokott* ‘usually does’, *talál* ‘happen to’) defined as the auxiliaries of the Hungarian language in Kenesei (2000, 2001).

Having introduced the data and the problems we face when trying to account for them, in Part II an attempt is made to explain the empirical facts. I propose that much of the word order variation observed is driven by requirements of scrambling mechanisms, where scrambling is understood not to be an optional operation but motivated by scope and information structure considerations. Since these clearly have an effect on word order in Hungarian, following Bobaljik and Wurmbrand (to appear) I show that an account where LF precedes and defines PF has several advantages over the standard minimalist model, especially for the analysis of languages where scope and information structure can be expressed overtly. In the case of languages not allowing scrambling it simply has to be stated what constraints disallow scrambling, something that is independently necessary anyway, since even within

scrambling languages there are always constructions where e.g. scope ambiguities can arise.

In Chapter 3, sketches of the bi-clausal analysis are outlined and it also focuses on how to account for some of the word order facts attested in restructuring constructions. It is argued that infinitival clauses do have the same left peripheral structure as finite clauses in spite of apparent counter-examples where focussed constituents appear in a position preceding quantified expressions. To account for this I propose that in infinitival clauses, as opposed to finite ones, checking of Q can be overt as well, besides the checking of the F feature. Infinitival clauses are Tense-deficient, which triggers clause-union (T-to-T movement first proposed in Roberts (1997)). Clause union opens the way for the scrambling of specific constituents. Since scrambling is an overt phenomenon, whatever precedes it must also be overt. This is what not simply explains overt checking of Q but makes it necessary as well. To account for the focus-quantified expression order I follow Bouma (2003), who proposes that operators are ordered with the help of partial ordering restrictions sensitive only to scope properties. This explains why topics and other constituents without scope features can appear in different parts of the sentence. I claim that scope-driven reordering takes place in the scrambling field, this is what the actual purpose of scrambling is, which then is argued not to be optional in nature.

Chapter 4 is devoted to making an attempt to answer at least some of the questions the scrambling analysis proposed in chapter 3 raises. The central problem of scrambling, the main reason why the phenomenon has still not found a straightforward way of treatment within the Minimalist Program lies in the very specific nature of the features that are claimed to drive scrambling operations cross-linguistically. If there is an identifiable trigger at all, it is to do with considerations of scope, information structure or both. Scope features and

information structure features can hardly be claimed to be lexical, they have to be defined somehow during the derivation. Thinking in terms of the interfaces of the Minimalist Program this leads to the following paradoxical situation: scope features are handled by the LF part of the derivation, but must be known in advance to be able to come up with the appropriate phonological representation, at least in the languages that allow this kind of scrambling operations. Chapter 4 discusses a number of approaches to scrambling, and discards a potential account for Hungarian, connecting the phenomenon of scrambling with OV word order. Out of the approaches to scrambling, two are considered in detail: Gelderen's (2003) PF-driven and Bobaljik and Wurmbrand's LF-driven accounts. Besides claiming that LF has priority over PF, Bobaljik and Wurmbrand also argue that the Information Structure component should also be dealt with at LF. This is an issue where their approach conflicts with Gelderen's (2003). With the help of Hungarian data, where information structure considerations very often have an effect on scope interpretation on the one hand and structure on the other, I show that Bobaljik and Wurmbrand's account can describe the data very straightforwardly and also make the right predictions. Arguing against Reinhart (1995, 2005) the advantages of the LF-first approach are also pointed out. The overall conclusion of the chapter is that an LF-driven account fares better in describing the Hungarian data as well, including the Szabolcsi (2005) type sentences containing seemingly nominative subjects of infinitives. This construction-type can also be traced back to be motivated by LF considerations, where the nominative subject only apparently functions as the subject of an infinitive, it actually is in the scrambling field preceded by constituents with wider scope.

Bobaljik and Wurmbrand's (to appear) analysis is an essentially representational approach, however, there are hints at the necessity of a derivational component. Chapter 5 aims at showing that structure is indeed

necessary for the approach to make the right predictions, actually, a number of constraints turn out to refer to structural considerations. This is the chapter where everything is supposed to fall in place and previously unexplained phenomena are also accounted for. There are far fewer novel ideas presented here, rather, the aim of the chapter is to show that the proposals of the study are reconcilable with already existing proposals, hence the title “Putting pieces of the puzzle together”. This is the chapter that provides the missing structure-building component and offers an account of preverb climbing, verb-object agreement, the behaviour of Hungarian auxiliaries and the verb *látszik* ‘seem’, the only verb which is classified as a restructuring verb by Tóth (2000) besides the auxiliaries of Kenesei (2001). According to my proposal, the semantic difference between the raising verb *látszik* ‘seem’ and other, ordinary restructuring verbs on the one hand can be explained by the very simple event structure of the verb *látszik* ‘seem’, following É. Kiss (2004a, 2005). Differences between *látszik* ‘seem’ and the auxiliaries, on the other hand, can be explained by claiming that while auxiliaries inherit the event structure of their verbal complements, the structure of *látszik* ‘seem’ is not affected by the type of the verb it takes. Moreover, auxiliaries themselves always introduce a further aspect of the event (accidental, habitual, future), so the construction containing them will always contain an event with a complex event structure. The event structure of *látszik* ‘seem’ is always simple. The presence/absence of a PredP and/or AspP projection on top of the VP can account for why we find differences between how preverbs can move in these constructions. Preverb climbing in verbal complexes is motivated by the phonological requirement of stress-avoiding verbs. This part of the analysis also discusses a problem with dominant approaches that either separate PF and LF, or claim that PF defines LF. Based on the problems identified and following Horvath (2005) I further argue for an LF-driven approach.

In discussing verb-object agreement I point out an alternative analysis to that of moving the object of the infinitive to the AgrOP or vP of the finite clause as proposed by den Dikken (2004).

Chapter 6 offers a number of sample derivations that follow from the proposals made in the previous chapters and finally chapter 7 briefly summarises the dissertation.

Conclusion, the results of the dissertation

The results presented in the dissertation show that the word order in restructuring constructions is not defined simply by the requirements of the finite verb selecting an infinitival complement. Rather, word order is the result of an intricate interaction between properties of both the finite and the infinitival clause. Restructuring always takes place when a verb takes an infinitival complement. Whether it has visible consequences as well depends on the individual properties of the elements making up the sentence.

Concerning the role of the scrambling field as proposed in this dissertation there seems to be a pattern emerging: those properties of infinitival clauses that apparently deviate from the structure proposed for finite clauses can be related to mechanisms operating within the scrambling field. If the assumptions presented in the dissertation are correct, the scrambling field turns out to have a much more important role in the syntax of Hungarian (and presumably other languages) than previously assumed.

The introduction of the scrambling field serves the purpose of delimiting the workings of the partial ordering rules and separating it from the structure-building component. Once we have introduced it, the scrambling analysis of preverb climbing and the optional preverb-infinitive order in focus constructions has fallen out of the analysis almost for free, together with a potential alternative

proposal for how to account for the movement of the infinitival focus to a position preceding the finite verb.

New directions for research can also be pointed out: the positioning of the preverb is especially problematic and calls for further clarification. Refinement of which other properties may be involved and what their contribution to the resulting order is seems a promising research programme. The dissertation focussed on left peripheral constituents but the role of constituents appearing after the infinitival verb could also be considered. Naturally, the research could also be further completed by a broader cross-linguistic comparison.

From a broader theoretical perspective this approach to LF has further welcome consequences as well: the problem concerning the double-faced property of LF disappears, which has been with us since the advent of the Minimalist Program, which did away with D-structure and together with it the level of representation that handled thematic relations between predicates and arguments. In this account, where LF is argued to precede and define PF, semantic properties of lexical items do not have to be assumed to belong to different components of the grammar, contrary to classic MP where LF should be the sole representation encoding the semantic properties of lexical items, but that raises questions whether there is a component of the grammar that specialises in lexico-conceptual notions – such as those related to determining of theta-roles – that are not expressible in terms of scope and related notions (Lasnik and Uriagereka 2005, Ch. 7). This problem does not arise in an LF-first framework, such as the one presented in this dissertation.

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