An LF-driven account of infinitival clauses with a nominative subject*

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Infinitival clauses contain a nominative DP in their subject positions in a number of languages. This fact raises an obvious question with regard to Case assignment and the UG claim that nominative Case can only be assigned by finite Inflection. The present study argues that the nominative subjects seemingly appearing in infinitival clauses are not the subjects of the infinitive itself but result from a process of restructuring, and the nominative DP comes from the subject position of the finite clause. This approach contradicts Szabolcsi (2007, 2009a, 2009b), where it is argued that the nominative subject is the subject of the infinitive. Placing emphasis on the scope differences between minimal pairs containing the nominative subject in either the finite or the infinitival clause I propose an analysis following the hybrid approach of Broekhuis’s (2008) Derivations and Evaluations framework that completes core assumptions of MP with an OT-like evaluation component. I argue that the evaluation mechanism is sensitive to LF in the Bobaljik & Wurmbrand (2012) sense including information related to both scope and information structure. The nominative subject seemingly appearing within the infinitival clause is argued to be the result of general mechanisms not applicable to unpronounced constituents.

1 The data: two types of Hungarian infinitival constructions with a nominative subject

Szabolcsi (2005, 2007, 2009a, 2009b) discusses an unexpected pattern found in infinitival constructions in a number of languages. As attested in the

* This work was partly supported by grant no. 84217 of the Hungarian Scientific Research Fund.
Hungarian sentence in (1), infinitival clauses can appear with what seems to be a nominative subject related to the infinitive itself.

(1) Nem szeretném [én is elcsúszni].
   not would.like-1SG I-NOM too slip-INF
   ‘I wouldn’t like for it to be the case that I, too, slip.’

This is highly problematic from the perspective of Universal Grammar, since, according to traditional analyses, nominative Case can only be assigned by finite Inflection, which is not supposed to be present in an infinitival clause. As discussed in Szabolcsi’s studies, the construction has the properties in (2).

(2) Properties of constructions (seemingly?) containing nominative infinitival subjects
   a. the subject of the infinitive has to be a pronoun (abandoned in later works);
   b. the matrix clause cannot have a subject of its own;
   c. the subject of the infinitive agrees with the finite verb in person and number;
   d. the matrix verb has to be a subject control verb or fog ‘will do’.

Considering these properties, we can make the following observations: (2b) and (2c) would make it possible for us to claim that the nominative subject is actually the subject of the finite verb, but that leaves (2a) to account for. However, as indicated by (3) is not necessarily true.¹

(3) Nem akartak csak a fiúk busszal menni/menni busszal.
   not wanted-3PL only the boys bus-with go-INF
   ‘The boys did not want it to be the case that only they go by bus.’

Further data seem to provide argument against a proposal deriving the infinitival subject from the finite clause as we find very similar patterns in a different type of sentence containing a subject in the finite clause as well, as illustrated by (4), where what is generally called a finite control

¹ The lack of restriction on the order of the verb and the verbal modifier following a focussed constituent is a general property of infinitival clauses as opposed to finite clauses (where the order is restricted to FP–verb–verbal modifier). Crucially, it does not indicate that what we are attesting is something independent of focussing.
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The predicate has its own subject, the negative quantified expression *senki* ‘nobody’.

(4) Senki nem akart csak ő letűlni.
Nobody not wanted only he/she down-sit-INF
‘Nobody wanted it to be the case that only he/she takes a seat.’

Data like this seem to be incompatible with the claim that the nominative subject belongs to the finite clause. However, there are data indicating that it is possible to have both a negative expression and a quantified subject in one and the same clause. Such a pattern can be found in the simple sentence in (5):

(5) *Senki sem csak ő (maga/egyedül) oldotta meg a feladatot.*
Nobody not only he/she (him/herself) solved PV the task
‘Nobody solved the task on his/her own.’

The fact that this pattern, very similar to the one in (4), is not identified as ungrammatical by native speakers of Hungarian in a simple sentence leads to the conclusion that the presence of the quantified expression does not exclude an analysis where the nominative subject is the subject of the finite clause. For this reason I am not going to treat the two constructions as different from the perspective of infinitival nominative subjects, and the proposal of the paper is expected to account for both of the constructions in a parallel fashion. Whatever accounts for the presence of both constituents in the simple sentence in (5) is assumed to explain it in (4) as well, completely independently from the Case assignment mechanism.

2 Earlier proposals


The Hungarian constructions presented above and similar structures cross-linguistically have been approached in a number of ways. The most straightforward ways to explain the phenomenon have been refuted on different grounds. Szabolcsi’s works (2009a, 2009b) discuss three of the most plausible analyses and present arguments against them.

1. The clause union analysis, though admittedly having a lot of potential, is excluded, since not only restructuring verbs (like *want* and *seem*) but also non-restructuring ones (like *hate* and *begin*) can participate in the construction in question. In her 2007 analysis it is the
pro-drop property of Hungarian and other languages allowing similar patterns that accounts for the structure, in the 2009a paper it is Long Distance Agreement, neither of them depending on clause union taking place first.²

2. Backward control (Polinsky & Potsdam 2002, Bartos 2006 for the Hungarian data with nominative infinitival clauses) is another potential way to account for the data, according to which, under the copy theory of movement, the infinitival PRO subject can be considered as a lower copy that could be pronounced. Szabolcsi (2009a) excludes this account based on the observation that the overt controllee can be a full DP of a number of types, it is not restricted to being a pronoun. Another observation that could be added at his point is that there are restrictions at work in the constructions in question, but these are different from the restrictions operative in backward control in general. In the sentences discussed in the present paper the nominative subjects are always quantified.

3. The pronominal double-analysis is also excluded by Szabolcsi with the help of arguments coming from complemented pronoun examples (like we linguists). They do not pattern with pronominal doubles, but are grammatical in the construction in question. The fact that the nominative subject appearing in the infinitival clause is not restricted to being a pronoun is, of course, a further argument against such an analysis.

(6) Szeretné-nk csak mi nyelvészek kapni magasabb fizetés-t. would.like-1PL only we linguists get-INF higher salary-ACC

‘We would like it to be the case that only we linguists get a higher salary.’

2.1.1 The role of scope

Szabolcsi (2007, 2009a, 2009b) points out an additional property of the constructions in question, namely considerable differences in interpretation depending on whether the nominative subject appears in a position preceding the finite verb or the infinitive, as in (7). This is going to play a central role in the analysis proposed in the present study.

² For a cross-linguistic comparison see Szabolcsi (2009b).
(7) a. Nem akar csak ő menni busszal.
   not want-3SG only he/she-NOM go-INF bus-with
   'He/She doesn’t want to be the only one to take the bus.'

   b. Csak ő nem akar busszal menni.
      only he/she not want-3SG bus-with go-INF
      'It is only him who does not want to go by bus.'

Szabolcsi (2007) draws the conclusion that the constituent nem én ‘not me’ belongs to the infinitival clause. She argues that the constituents that appear in different positions depending on interpretation cannot appear in a post-verbal position since in a simple sentence it leads to ungrammaticality, as in (8b).

(8) a. Nem én kapok szereket.
   not I-NOM get-1SG roles-ACC
   'It is not me who gets roles.'

   b. Szereket kapok nem én.
      roles-ACC get-1SG not I-NOM

There is an important aspect of the constructions that Szabolcsi’s accounts fail to capture: the constituents that show this behaviour (appearing in the finite or the infinitival clause depending on interpretation) are all constituents that target the left-peripheral positions of the clause. This seems to be the relevant property that connects these constructions, and, since left peripheral positions have an obvious connection to the interpretation of the sentence, it should not be left an unexplained, accidental property of the constructions in question. In the ideal case the analysis of these constructions should also account for why this should be so. Actually, Szabolcsi herself raises similar questions in footnote 5 of the 2009a paper:

An important question that I am not able to answer is whether overt nominative infinitival subjects must be scope-bearing operators or can be, say, plain unfocussed proper names. It is difficult if not impossible to find syntactic or semantic tests that tell apart a name that is postverbal in the matrix clause and one that is in the initial neutral position in the infinitival complement. If one believes that spelling out the infinitival subject may only happen if this is necessary to express a particular truth-conditional content, then probably such subjects must be operators.

While I completely agree with the claim that it is not possible to distinguish a postverbal unfocussed name from one in initial neutral position in
the infinitival complement clause, the present study is built on the assumption that spelling out the infinitival subject is driven by truth-conditional motivations. If such an approach turns out to be on the right track, the analysis proposed in the present paper may be superior to previous accounts by identifying LF as the trigger for the phenomenon.

In the next section a broader account of restructuring is argued for. The resulting analysis creates a domain made up of the finite clause together with its infinitival complement, within which scope-driven scrambling can take place.

2.1.2 Restructuring

One of the reasons why it is problematic to account for the data above is to do with restructuring. In Szécsényi (2009a, 2009b), however, based on Hinterhölzl (2006), it is argued that restructuring is not restricted to the verbs that have been assumed to undergo restructuring so far (stress-avoiding verbs in É. Kiss 1999, or the four verbs szokott ‘usually does’, fog ‘will (do)’, talál ‘happen to (do something)’ and látszik ‘seem’ in Tóth 2000). In Hinterhölzl’s theory of sentential complementation restructuring is claimed to take place every time a predicate takes an infinitival complement due to the deficient nature of the embedded infinitival clause. The main verb takes a (sometimes deficient) CP complement irrespective of whether it is finite or infinitival. Following this I propose that the Hungarian data can also be accounted for under a broader construal of restructuring. In my proposal restructuring takes place every time a predicate takes an infinitival complement due to the deficient nature of either the embedded infinitival clause or the main verb selecting it (or both). Depending on the properties of the two clauses, restructuring is argued to have one or more of the following visible reflexes:

(9) 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.

The sentences in (10) illustrate this claim: the movement of the preverb szét ‘apart’ in (10a) is motivated by the stress avoiding property of the verb and is identified as a diagnostic for restructuring (É. Kiss 1999). However, as shown by (10), the lack of preverb movement\(^3\) does not mean that

\(^3\) Preverb movement is not necessary when a focussed constituent saves the stress avoiding verb from being assigned stress.
no restructuring takes place: in (10b) the preverb does not have to move due to the presence of a focussed constituent before the stress-avoiding verb, but the subject of the finite clause can still appear in different positions, moreover, the finite verb is marked for definite agreement triggered by the object of the infinitive.\footnote{Indefinite agreement is either the default pattern with an infinitival complement or the result of definiteness agreement with an indefinite object.} In (10c) the finite verb is used in its definite agreement form motivated by the definite object of the infinitive, apart from this nothing indicates that restructuring has taken place. In (10d) preverb climbing is not necessary due to the presence of the focussed constituent, there is no object in the infinitival clause, so the default indefinite agreement form is used. However, it does not indicate that no restructuring has taken place, simply that the relevant properties that can result in visible reflexes of restructuring are absent.

(10) a. Pál szét fogja akarni kezdeni szedni a rádiót.
   Paul apart will want-INF begin-INF take-INF the radio
   ‘Paul will want to take the radio apart.’

b. HOLNAP fogja (Pál) akarni kezdeni (Pál) szét-szedni (Pál) a rádiót (Pál).
   tomorrow will-DEF Paul want-INF begin-INF apart-take-INF the radio
   ‘Paul will want to begin to take apart the radio TOMORROW.’

c. HOLNAP fogja (Pál) akarni kezdeni (Pál) szét-szedni (Pál) a rádiót (Pál).
   tomorrow will-DEF Paul want-INF begin-INF apart-take-INF the radio
   ‘Paul will want to begin to take apart the radio TOMORROW.’

d. Pál HOLNAP fog (Pál) akarni (Pál) kezdeni (Pál) meg-komolyodni (Pál).
   Paul tomorrow will-DEF want-INF begin-INF get.serious-INF
   ‘Paul will want to begin to get serious TOMORROW.’

In this approach, therefore, the problematic sentences above can (actually must) be claimed to undergo restructuring resulting in clause union. This solves the restructuring problem, and with the help of an LF-based approach to scrambling following Bobaljik & Wurmbrand (2012), making it possible to claim that the nominative subject actually originates in the finite clause, we can also account for the word order facts observed in §1 and the differences in the interpretation of the sentences as well. This is what we are turning to now.

2.2 Bobaljik & Wurmbrand (2012)

The LF-to-PF approach of Bobaljik & Wurmbrand (2012, henceforth B&W) can be summarised in three interrelated conclusions:
a. There exist ‘soft’ constraints (economy conditions) that value a particular type of correspondence between LF and PF representations (for example, scope at LF matched by precedence at PF).
b. These constraints are uni-directional: LF (broadly construed) is calculated first, and determines PF.
c. Scope rigidity (the apparent absence of QR) is not a property of languages, but of specific configurations, and the distribution of rigidity effects is (largely) predictable from independent variation in the syntactic resources of various languages (eg possibilities for scrambling). There is no QR-parameter.

These conclusions are drawn from what they call the $3/4$ signature, a pattern found too often in languages to be accidental, defined as follows:

(12) *The $3/4$ signature*
Taking one LF property (A scopes over or under B) and one PF property (A precedes or follows B), what we frequently find is that three of the four logical combinations are grammatical, as in (15).

The pattern seems to contradict the so called Scope Transparency Principle (ScoT) worded a number of times in different frameworks in different ways, one of them being the definition in (13), predicting a pattern (see (14)). B&W argue that it can be explained under the assumption that ScoT interacts with other constraints resulting in the pattern actually observed, shown in (15).

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5 English-type languages actually do show a $2/4$ pattern, but, crucially, not the pattern predicted by ScoT, see table below. Since English lacks scrambling, there is no neutral way for PF to provide the B$\gg$A order overtly, in PF only the A$\gg$B order is allowed. Line 2: the QR derivation violates ScoT, but this derivation is the only means (all else being equal) of representing the B$\gg$A scope, and for this reason the violation of ScoT is forced. The $3/4$ signature is expected to be present only in (scope/LF-driven) scrambling languages.

<table>
<thead>
<tr>
<th>LF</th>
<th>PF</th>
<th>ScoT</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>A$\gg$B</td>
<td>✓</td>
</tr>
<tr>
<td>✓</td>
<td>B$\gg$A</td>
<td>✓</td>
</tr>
<tr>
<td>not possible</td>
<td>B$\gg$A</td>
<td>✓</td>
</tr>
<tr>
<td>not possible</td>
<td>A$\gg$B</td>
<td>✓</td>
</tr>
</tbody>
</table>
(13) **Scope Transparency Principle (universal, violable)**
If the order of two elements at LF is \( A \gg B \) (\( A \) scopes over \( B \)), the order at PF is \( A \gg B \) (\( A \) precedes \( B \)).

(14) **ScoT and the \( 3/4 \) signature: a mismatch**

<table>
<thead>
<tr>
<th>LF</th>
<th>PF</th>
<th>ScoT</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>✓</td>
<td>A ( \gg ) B</td>
</tr>
<tr>
<td>b.</td>
<td>*</td>
<td>A ( \gg ) B</td>
</tr>
<tr>
<td>c.</td>
<td>✓</td>
<td>B ( \gg ) A</td>
</tr>
<tr>
<td>d.</td>
<td>✓</td>
<td>B ( \gg ) A</td>
</tr>
</tbody>
</table>

The table in (15) shows how the \( 3/4 \) signature comes about: given two LF choices and two PF choices, three of the four logical combinations can be judged acceptable only if ScoT is a soft constraint and interacts with other economy conditions, one of them being the ban on movement.\(^6\) The Japanese data in (16) illustrate ScoT and *Move at work, where the \( 3/4 \) pattern is the result of (i) two pairwise competitions starting from the same LFs and (ii) the constraints not being ordered with respect to each other unlike in OT-type analyses. Once at least one of the constraints is satisfied the result is a grammatical sentence. The outcome is ungrammatical only if neither of the constraints is met.

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\(^6\) Competing derivations are defined differently from the PF-first approach. In the PF-first approach the two English sentences in (i) are minimal pairs, which is not the case in the LF-first approach. These two sentences will be as different from each other as the sentences *A dog chased the cat* vs *A cat chased the dog*, since both theta-relations and information structure considerations are encoded in this broadened conception of LF (Wurmbrand, p.c.). To put it differently, we can say that the competing derivations are the ones that have the same LF, derivations with different LFs cannot be compared.

(i) a. Everyone saw someone.
   b. Someone saw everyone.
(15) **Scope-rigid (scrambling) languages**

<table>
<thead>
<tr>
<th></th>
<th>LF</th>
<th>PF</th>
<th>ScoT</th>
<th>*Move</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>✓</td>
<td>A⇒B</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>b.</td>
<td>*</td>
<td>A⇒B</td>
<td>B⇒A</td>
<td>*</td>
</tr>
<tr>
<td>c.</td>
<td>✓</td>
<td>B⇒A</td>
<td>✓</td>
<td>*</td>
</tr>
<tr>
<td>d.</td>
<td>✓</td>
<td>A⇒B</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

(16) a. Some toddler read every book.

b. dareka-ga subete-no hon-o yonda (Kuroda 1970)

   someone-NOM all-GEN book-ACC read

   ‘Someone read all the books.’

c. subete-no hon-o dareka-ga yonda

   all-GEN book-ACC someone-NOM read

   ‘Someone read all the books.’

2.3 **Back to Hungarian: Szécsényi (2009a, 2009b)**

Putting the further details of B&W’s proposal aside let us now get back to Hungarian and identify those constructions where ScoT and the 3/4 signature can be detected to be at work. Hungarian as a discourse configurational language allows scope and information structure driven reorganization of word order. One of the most well-known facts about Hungarian, completely in line with (11c), is that in a simple sentence inverse scope readings are possible in the post-verbal field as opposed to the pre-verbal field, as in (17), thus, only the preverbal part of the Hungarian clause has the property of scope-rigidity.

As (17b, c) show, in the preverbal field quantifiers appear in the order defined by the scope properties of the sentence. In light of the discussion above it is relatively easy to identify the interacting constraints as ScoT and *Move: though mindenkit ‘everyone’ moves to the preverbal position in

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7 As discussed in Gyuris (2006), these are rather tendencies and can be overridden by prosodic factors: sentence initial quantified expressions pronounced with a contrastive topic intonation can have narrow scope, and postverbal quantified expressions can have wide scope when bearing primary stress.
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(17b, c) this way violating the ban on movement, the result is unambiguous scope interpretation satisfying ScoT.

(17) a. Többször is meghívta mindenki-t.
    several-times also invited-1SG everyone-ACC
    ‘I invited everyone several times.’
    √ several times ≫ everyone
    √ everyone ≫ several times

b. Többször is mindenki-t meghívta.
    several-times also everyone-ACC invited-1SG
    ‘I invited everyone several times.’
    √ several times ≫ everyone
    *everyone ≫ several times

c. Mindenki-t többször is meghívta.
    everyone-ACC several-times also invited-1SG
    ‘I invited everyone several times.’
    √ everyone ≫ several times
    *several times ≫ everyone

Returning to the topic of the present study, we are now in the position to reconsider the properties of sentences containing infinitival embedded clauses with a nominative subject. In §2.1.1 we pointed out that we were looking for an account that can directly capture the observation that these constructions without exception contain left peripheral constituents as nominative subjects of infinitival clauses. The LF-first approach of B&W seems to be promising in this respect. The sentence pair in (7), repeated here as (18), shows obvious differences in interpretation. The reason why the $3/4$ signature does not arise in this case is that the two sentences have different LFs, that is, they do not constitute minimal pairs within the system. In (18a) the constituent csak δ ‘only he’ appears in a position preceding the finite verb, having undergone movement from within the verb phrase, so no ambiguity is expected in this case. In (18b) the focussed constituent is in postverbal position with respect to the finite verb, but it can also be argued to appear in a preverbal domain of the infinitival clause. It is more straightforward to explain the lack of ambiguity of the sentence under the assumption that the constituent is in the preverbal domain of the infinitival clause.
(18) a. Csak ō nem akar busszal menni.
   only he/she not wants bus-with go-INF
   ‘He/She’s the only one who does not want to go by bus.’
   FP ⇒ neg
b. Nem akar csak ō menni busszal.
   not wants only he/she go-INF bus-with
   ‘He doesn’t want to be the only one to go by bus.’
   neg ⇒ FP

To account for nominative infinitival subjects and further data related to infinitival constructions Szécsényi (2009b) works with the following assumptions:

- a scrambling field is available somewhere in the derivation;
- this scrambling field operates with the help of partial ordering restrictions\(^8\) (Bouma 2003, applied for Hungarian in Szécsényi T. 2009);
- these partial ordering restrictions are sensitive to LF features;
- these LF features include features related to both scope and information structure\(^9\) (Bobaljik & Wurmbrand, 2011);
- for this reason a derivation that proceeds from LF to PF gives a more satisfactory account of the data.

The way it relates to the derivation of constructions involving infinitival clauses with nominative subjects is the following: the subject of the infinitive is a PRO, as expected, but at the same time an only-DP, which moves to the [Spec, FP] position of the infinitival CP. This is what makes such constructions problematic: there are different ways to express Focus in Hungarian (movement to a designated Focus position or stress assignment), but neither of them is applicable to an unpronounced constituent.

Szécsényi (2009b) proposes the following analysis for the construction, leading to the structural representation in (19): the nominative con-

\(^8\) The reordering mechanism of B&W is argued to be completed by Bouma’s proposal containing partial ordering restrictions. Their importance lies in explaining the fact that certain constituents can appear in different positions within the sentence (10). They turn out to be those that are not specified for LF features, hence the ordering rule does not determine a fixed position for them. It does not directly bear on the issue of nominative DPs in the infinitival clause, since they are always scope bearing constituents.

\(^9\) Though the same approach is assumed for Hungarian, due to the complexities of interaction between scope and information structure, the present paper only focuses on scope.
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The scrambling field, defined as above, makes scope-driven reordering possible after restructuring. This way the overt DP ends up in the same domain as the infinitival PRO it is coindexed with, and we have two DPs in the scrambling field with the same reference. The covert nature of PRO is not problematic for LF, but a “substitution” takes place at the PF part of the derivation motivated by requirements of the PF interface driven by the need for, e.g., focussed constituents to be pronounced. Though the exact mechanisms of this substitution procedure are still to be worked out, the account may also have important implications for Long Distance Agreement. This substitution, as shown in (19), takes place within one domain, the scrambling field, that is, under these assumptions Long Distance Agreement is not so long distance after all. Investigating whether Long Distance Agreement can be traced back to similar patterns in all the other cases where it is argued to arise seems to be a promising research project.

One disturbing aspect of the analysis proposed is the implicit claim that the structure building process contains a field operating on the basis of mechanisms different from the general structure building mechanisms of generative grammar. A further problem is that this field is sandwiched between structures conforming to these general, traditional ways of structure building:

(19)
Another, related problem arises from Szécsényi (2009b) assuming a theory of negation following Puskás (1998), where the negation element is a head filling Neg. Treating negation differently from other scope bearing elements and excluding it from the scrambling field results in missing an almost straightforward generalization. Negation is a scope bearing constituent, so it actually follows from the logic of the proposal that it should also be part of the scrambling field, more so because it interacts with the constituents appearing there. Surányi (2002) presents an alternative approach to negation completely in line with the proposal presented above. According to this analysis, negation is understood to be the part of a multiple specifier configuration resulting from the co-projection of focus and negation. The order of the two constituents within this multiple specifier configuration is not restricted but depends on their relative scope with respect to each other. Different orderings lead to different interpretations very similarly to the data in (18). The scope differences result from the different orderings of negation and focus, where the outer specifier position is argued to be reserved for the constituent with wide scope.

The assumption shared by these two approaches concerns the presence of a field where constituents are ordered based on their scope properties. In a sense Szécsényi (2009b) can be regarded to be an extended version of Surányi (2002): the constituents with a scope-driven ordering are not restricted to negation and focussing. The present paper aims at extending my earlier proposal in this direction: the whole left periphery is actually a scrambling field in the B&W sense, where constituents are ordered based on LF considerations. Worded differently, the structure building component of grammar is followed by a reordering process in the languages making it possible. This reordering is different from the structure building procedure and operates with the help of different constraints. It uses already existing structure, but does not operate with the help of external or internal merge. It is no more than linear reordering sensitive to LF features. The hybrid approach of Broekhuis (2008), discussed in the next section, argues for an a model of grammar that provides us with tools for the claims worded here.

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10 Whether a language allows LF-driven scrambling or not probably depends on the morphological properties of the language in question. Defining the nature of these properties is not the purpose of the present paper. For different approaches to the question see van Gelderen (2003).
2.4 Broekhuis (2008): Derivations and Evaluations

The proposal introduced in the previous section finds a very natural translation into the Derivations and Evaluations framework of Broekhuis (2008). He proposes the following architecture of grammar:

(20) Derivations and Evaluations
Input → $C_{HL}$ → Output representation → OT Evaluator → Optimal output

Comparing this with the architectures of grammar deducible from different stages of the Minimalist Program, Broekhuis observes that the two frameworks are actually very similar in nature:

(21) Chomsky (2000) and subsequent work: the Minimalist Inquiry framework with the introduction of Agree (feature checking at a distance)
Input → Generator $C_{HL}$ → Output PF/LF representations (satisfying FI) → PF/LF Filters → Optimal output

Based on this, he argues that MP and OT are not incompatible but complementary frameworks, they assume the same kind of architecture of grammar, but focus only on one of two components: MP on properties of $C_{HL}$ (containing a small set of operations subject to inviolable conditions defining a limited candidate set), OT on the evaluator (a universal set of violable constraints with a language-specific ranking):

Representations created by some version of the computational system of human language $C_{HL}$ from MP are evaluated in an optimality-theoretic fashion [...] whereas MP has been especially successful in formulating a restrictive theory of core grammar, that is, the universal properties of grammar are encoded in $C_{HL}$. OT has been very successful in describing the more peripheral, language-specific properties of languages and the variation between languages. (Broekhuis 2008: 1)

The fact that there are entirely different explanations for similar phenomena in MP and OT is argued to be immaterial, since it is not a priori given whether a certain phenomenon belongs to core syntax or the periphery. Different approaches to rearrangement phenomena and headmovement are well-known examples showing that it is not obvious what belongs to core syntax and what does not.
The constraints Broekhuis identifies to be at work in his Derivations and Evaluations framework belong to two basic classes of syntactic constraints: CHL (EPP and Economy constraints) and interface (PF and LF) constraints. One of the LF constraints, as expected, defines scope interpretation:

(22) **SCOPE**

relative scope of quantifiers corresponds to the hierarchical order of their topmost A-positions.

This in a sense is similar to B&W’s Scope Transparency Principle with the difference that the approach of B&W does not raise the question of whether the relevant types of movement belong to the A- or the A'-movement type. In connection with scrambling phenomena in general there is a controversy about this issue, and arguments are available for both of the movement types. Szécsényi (2009a, 2009b) argues that the reason why it is not easy to come to terms with regard to this question is that scrambling is not the result of movement, but a different process taking place in the scrambling field of the derivation, that of linear reorganisation sensitive to LF-features. The Derivations and Evaluations framework offers a natural way to complete the earlier analysis presented above in (19) as follows: the scrambling field actually belongs to the evaluation part of the grammar, and not the structure building one, operating based on B&W’s LF-driven scrambling mechanisms.

In light of this the Hungarian word order pattern where nominative subjects precede an infinitive result from the following:
- first, a biclausal structure is projected in the derivational component of grammar using the usual mechanisms of Merge where the nominative subject is the subject of the finite clause and the subject of the infinitival clause is a PRO;
- the biclausal structure is restructured as a monoclausal one as argued in §2.1.2 based on the data in (10);
- restructuring is followed by scope-driven scrambling in the evaluation component of the grammar relinearizing constituents based on their scope properties. Here the nominative subject and PRO end up in the same domain and PF considerations (focussing, transparent scope expressable with the help of visible constituents, etc) may place the visible nominal expression in different positions within the sentence.
3 Conclusion

The present study has presented a Derivations and Evaluations-based account of word order in Hungarian sentences with the help of which it is possible to describe structures seemingly containing a nominative subject in infinitival clauses. The framework is a hybrid system where the structure building mechanism is completed by an evaluation component. Scope features, and thus scope-driven scrambling belongs to this evaluation component where the structure building component of grammar is followed by a relinearization of constituents based on their scope properties. There are a number of questions that remain to be answered: exactly what defines whether a language has resort to scope-driven operations within this evaluation component or not; identifying whether different phenomena belong to derivations or evaluations and, more specifically, investigating the details of the correlation between Long Distance Agreement and scrambling. Further research is expected to be able to provide satisfactory answers to these questions.

REFERENCES


