Spelling out of scope taking arguments in (de-)verbal constructions in Hungarian

Judit Farkas and Gábor Alberti

University of Pécs, Hungary

Abstract

The paper systematically investigates operators in post-head positions within the three constructions referring to states of affairs in Hungarian, that is, within verbal, deverbal nominal and infinitival phrases. Hungarian is well-known to be a language in which all types of operator can be, and are usually, spelt out in the pre-head zone. However, it has not been discussed in a systematic and comprehensive way earlier whether operators can appear in post-head positions. The paper points out that this is partially possible via a systematic overview of six basic operator types. It also illustrates that while spelling out operators in the pre-head zone results in unambiguous constructions, placing them in post-head positions yields different types of ambiguity. As for the acceptability of scope taking arguments, finite verbal constructions show a black-and-white picture while infinitival and deverbal nominal constructions can be characterized by gray zones in respect of the readiness of arguments to take scope from post-head position. In these “gray zones”, a somewhat speaker-dependent variation can be observed, presumably with underlying microvariation. To represent and interpret our findings, we use Grohmann’s (2000, 2003) phase-theoretic approach with its pragmasemantics-based three Spell-Out domains per cycle.

Keywords: (de-)verbal phrases, Hungarian, operators, Spell-Out positions

1. Introduction

The paper investigates operators in post-head positions in different verb-based cycles in Hungarian. Hungarian is a language in which all types of operator can be, and are usually, spelt out in the pre-head zone of corresponding cycles, that is, in a Grohmann-style Operator Domain, Ω∆ (Grohmann 2000, 2003, 2009, Farkas and Alberti 2017). As pointed out by É. Kiss (2002: 113–115), the order of operators in the pre-head zone corresponds to scope hierarchy, which guarantees unambiguity in the case of finite verbs (1).

1 The following abbreviations are used in the glosses:
(i) case suffixes: ACC(USATIVE), DAT(IVE), ILL(ATIVE);
(ii) other suffixes on nouns: POSS (possessedness suffix), POSS.1SG... (possessive agreement suffixes);
(iii) affixes on verbs and infinitives: 1SG... (agreement suffix);
(iv) derivational suffixes: ADJ(EVTIVALIZER), INF(INITIVE), NOM(INALIZER);
Thus, if the order of the two quantifiers in (1a) is reversed, the meaning changes parallel to the change in scope hierarchy (1b). In (1a), “I could invite my colleagues separately,” while in (1b), there had to be more than one occasion when “my colleagues were in my house together.”

The same holds for infinitives (2a+b-b’\(^2\)) and deverbal nominals (2a+c-c’: operators can appear in the pre-head zone, with word order corresponding to scope hierarchy.\(^3\)

\(^2\) For the sake of brevity, we often use a shared finite sentential context with several different filler constructions. In formula ‘(2a+b-b’)\(^2\), for instance, (2a) provides the shared sentential context, in which (2b) and then (2b’) should be inserted.

\(^3\) There are two exceptions: wh-words can only appear in finite verbal constructions and also-quantifiers (containing the particle is ‘also’) cannot appear between D and N heads (for independent reasons), see ex. (766) in Alberti and Farkas (2018: 810).
If the operators appear postverbally, however, the sentence becomes ambiguous. Sentence (3) can be associated with both meanings presented in (1a) and (1b), that is, it is possible in this case that “I invited my colleagues separately or together.”

(3)  *Meghívtam [minden kollégámát]Quantifier [többször (is)]Quantifier.*

invited.1SG every colleague.POSS.1SG.ACC several_times also available meanings: both (1a) and (1b)

In the case of infinitives and deverbal nominals, another kind of ambiguity emerges. These constructions are ambiguous even in the case of a single post-head operator, due to the fact that their scope can be interpreted relative to either the embedded verb (referred to as ISR, ‘internal-scope reading’) or the finite verb (ESR: ‘external-scope reading’). It must be noted that the stress patterns of the two variants are not the same (cf. Varga 2016).

(4)

a.  *Hiba volt el-bocsát-ani / el-bocsát-an-od*4 [mindkét informatikust].

mistake was away-allow-INF / away-allow-INF-2SG both IT_specialist.ACC

(ISR: ‘It was a mistake (for you) to (simultaneously) dismiss [both IT specialists].’

‘ESR: ‘In the case of [both IT specialists], it was a mistake (for you) to dismiss each of them.’

b.  *Hiba volt az el-bocsát-ás-a [mindkét informatikusnak].*

mistake was the away-allow-NOM-POSS.3SG both IT_specialist.DAT

(ISR: ‘Dismissing (simultaneously) [both IT specialists] was a mistake.’

‘ESR: ‘In the case of [both IT specialists], dismissing each of them was a mistake.’

It is also possible to combine the two kinds of ambiguity, resulting in multiple ambiguous constructions (with some of the interpretations undoubtedly being more difficult to retrieve than others), as illustrated in (5). The constructions in question have six different readings due to the fact that both quantifiers can be interpreted internally (“only an ambitious amount of participation in different conferences is contraindicated”) as well as externally (“numerous variants of participation in conferences are contraindicated”).

(5)

a.  *Ellenjavalt el-küld-eni / el-küld-en-ed [mindkét kollégát]*

contraindicated away-send-INF / away-send-INF-2SG both colleague.ACC

[Lublinba is].

Lublin.ILL also

‘It is contraindicated (for you) to send [both colleagues] [also to Lublin],’

b.  *Ellenjavalt az el-küld-és-e [mindkét kollégának]*

contraindicated the away-send-NOM-POSS.3SG both colleague.DAT

[Lublinba is].

Lublin.ILL also

‘Sending [both colleagues] [also to Lublin] is contraindicated.’

(ISR1: [CONTRAINDIATURE > BOTH COLLEAGUES > ALSO TO LUBLIN]

(ISR1: [CONTRAINDIATURE > ALSO TO LUBLIN > BOTH COLLEAGUES]

4 Note that in Hungarian infinitives can bear agreement suffixes: the infinitival head agrees with its subject-like argument in number and person in certain cases. Hence, both types will be tested in each construction throughout the whole article.
In the following, the paper concentrates on the mere post-head appearance of different types of operator (without considering constructions containing two or more operators). It has not been systematically investigated in the Hungarian literature whether the different types of operator can appear in a post-head position. In Section 1, it is systematically overviewed in the case of finite verbs, infinitives and deverbal nominals (cf. Alberti and Laczkó 2018) which of the following six basic operator types can appear in a post-head position: each-quantifiers, also-quantifiers, only-focus, negative focus, negative universal quantifier, wh-words. Section 2 is devoted to the generalizations of the findings and their interpretation in the Grohmannian (2000, 2003, 2009) phase-theoretical minimalist framework.

2. Operators in post-head positions in Hungarian

This section provides an overview of which operator types can appear in post-verbal, post-nominal and post-infinitival positions in Hungarian; see the (a’)-, (b)- and (c)-examples throughout the whole section, respectively. In each series of examples, a finite sentence containing the given operator in question in a pre-verbal position is also provided to present the default position of the operator, see the (a)-examples. If a post-head operator is embedded in a ‘for instance’-construction, as in the (b’)- and (c’)-examples, it tends to become more acceptable. This can be due to the fact that, in this “isolated” situation, the borders of the deverbal construction (i.e., the formula na például from left and the resumptive pronoun az from right) are clearer, and the scope of the given operator can only be interpreted relative to the embedded verb (Farkas and Alberti 2018: 668–669).

The first operator type to examine is that of each-quantifiers. As illustrated in (6a-a’), universal quantifiers can readily appear both in a pre-verbal and in a post-verbal position. The deverbal nominal and infinitival constructions containing a universal quantifier in a post-head position are also highly acceptable (6b-c’), but, in these cases, the sentences are ambiguous due to the fact discussed in the comments concerning (4) above: the scope of the quantifier can be interpreted relative to either the embedded verb or the finite verb.

(6)

a. [Mindkét informatikust] el-bocsátották.
   both IT_specialist.ACC away-allowed.3PL.
   ‘[Both IT specialists] were dismissed.’

a’. El-bocsátották [mindkét informatikust].
   away-allowed.3PL. both IT_specialist.ACC
   ‘[Both IT specialists] were dismissed.’

b. Hiba volt az el-bocsátás-ás-a [mindkét informatikusnak].
   mistake was the away-allow-NOM-POS.3SG both IT_specialist.DAT
   ISR: ‘Dismissing (simultaneously) [both IT specialists] was a mistake.’
   ESR: ‘In the case of [both IT specialists], dismissing each of them was a mistake.’
b’. Na példaúl az el-bocsát-ás-a [mindkét informatikusnak] well for_instance the away-allow-NOM-POS.3SG both IT_specialist.DAT az hiba volt. that mistake was
ISR: ‘Well for instance, dismissing (simultaneously) [both IT specialists], that was a mistake.’

c. Hiba volt el-bocsát-ani / el-bocsát-an-od [mindkét informatikust].

mistake was away-allow-INF / away-allow-INF-2SG both IT_specialist.ACC

ISR: It was a mistake (for you) to (simultaneously) dismiss [both IT specialists].

‘ESR: ‘In the case of [both IT specialists], it was a mistake (for you) to dismiss each of them.’

c’. Na példaúl el-bocsát-ani / el-bocsát-an-od [mindkét informatikust]
well for_instance away-allow-INF / away-allow-INF-2SG both IT_specialist.ACC
az hiba volt.
that mistake was
‘ISR: ‘Well for instance, for you to dismiss (simultaneously) [both IT specialists] was a mistake.’

The same holds for quantifiers with also: they can appear both in a pre-verbal and in a post-
verbal position (7a-a’), and they can appear in the postnominal and in the postinfinital zone
as well; in the latter cases the constructions are ambiguous again in the same way as in the case
of universal quantifiers. As illustrated by the comparison between (7b) and (7b’), embedding
the also-quantifier in a ‘for instance’-construction renders the internal-scope reading radically
more acceptable.

(7)

a. [Petit is] el-bocsátották.
Peti.ACC also away-allowed.3PL
‘[Peti] was dismissed, [too].’

a’. El-bocsátották [Petit is].
away-allowed.3PL Peti.ACC also
‘[Peti] was dismissed, [too].’

b. (O)Hiba volt az el-bocsát-ás-a [Petinek is].
mistake was the away-allow-NOM-POS.3SG Peti.DAT also
ISR: ‘Dismissing [Peti, too], was a mistake.’

(ESR: ‘In the case of [Peti, too], dismissing him was a mistake.’

b’. (O)Na példaúl az el-bocsát-ás-a [Petinek is], az hiba volt.
well for_instance the away-allow-NOM-POS.3SG Peti.DAT also that mistake was
ISR: ‘Well for instance, dismissing [Peti, too], that was a mistake.’

c. Hiba volt el-bocsát-ani / el-bocsát-an-od [Petit is].
mistake was away-allow-INF / away-allow-INF-2SG Peti.ACC also
ISR: ‘It was a mistake (for you) to dismiss [also Peti].’

(ESR: ‘In the case of [Peti, too], it was a mistake (for you) to dismiss him.’

c’. Na példaúl el-bocsát-ani / el-bocsát-an-od [Petit is], az hiba volt.
well for_instance away-allow-INF / away-allow-INF-2SG Peti.ACC also that mistake was
ISR: ‘Well for instance, (for you) to dismiss [also Peti], that was a mistake.’

In the series of examples in (8) focus constructions with the particle csak meaning ‘only’ are
investigated. Focus constructions can readily appear preverbally (8a). The presence of focus
obligatorily triggers inverse word order in Hungarian, that is, the finite verb stem must
precede the preverb. In contrast to the two quantifier types tested so far, focus constructions
cannot appear postverbally, neither with a [verb stem + preverb], nor with a [preverb + verb stem] word order, as shown in (8a').

(8)
a. [Csak Petit] [bocsátották el] / *el-bocsátották.
   only Peti.ACC allowed.3PL away / away-allowed.3PL
   ‘[Only Peti] was dismissed.’
a'. *El-bocsátották / *[Bocsátották el] [csak Petit].
   away-allowed.3PL / allowed.3PL away only Peti.ACC
   Intended meaning: ‘[Only Peti] was dismissed.’
b. "Hiba volt az el-bocsát-ás-a [csak Petinek].
   mistake was the away-allow-NOM-POSS.3SG only Peti.DAT
   ’ISR: ‘Dismissing [only Peti] was a mistake.’
   ‘Intended ESR: ‘It is [only Peti] whose dismissal was a mistake.’
b'. 'Na például az el-bocsát-ás-a [csak Petinek], az hiba volt.
    well for instance the away-allow-NOM-POSS.3SG only Peti.DAT that mistake was
    ’ISR: ‘Well for instance, dismissing [only Peti], that was a mistake.’
c. "Hiba volt el-bocsát-ani / el-bocsát-an-od [csak Petit].
   mistake was away-allow-INF / away-allow-INF-2SG only Peti.ACC
   ’ISR: ‘It was a mistake (for you) to dismiss [only Peti].’
   ‘Intended ESR: ‘It is in the case of [only Peti] that it was a mistake (for you) to dismiss him.’
c'. Na például 'el-bocsát-ani / "el-bocsát-an-od [csak Petit], az hiba volt
    well for instance away-allow-INF / away-allow-INF-2SG only Peti.ACC that mistake was
    ’ISR: ‘Well for instance, to dismiss [only Peti], that was a mistake.’

Deverbal nominal constructions are somewhat more permissive with a postnominal only-focus (8b). Note, however, that external-scope reading cannot be associated with constructions like this, that is, the scope of the focus must be interpreted relative to the embedded verb in cases like this. If a postnominal only-focus is embedded in a 'for instance'-construction, as in (8b'), it becomes more acceptable. This can be due to the fact that, in this case, the borders of the deverbal nominal construction are clearer, and the scope of the focus can only be interpreted relative to the embedded verb. As illustrated in (8c-c'), the same holds for infinitival constructions as well.

Negative focus constructions are similar to only-focus constructions: they can only appear preverbally (compare (9a) and (9a')) and they also trigger inverse word order in Hungarian. What makes negative focus constructions different from only-focus constructions is that they are also unacceptable in postnominal and postinfinitival constructions, as shown in (9b-b',c-c'). They are somewhat more acceptable embedded in a 'for instance'-construction, but those constructions do not reach a convincingly acceptable level, either.

(9)
a. [Nem Petit] [bocsátották el] / *el-bocsátották.
   not Peti.ACC allowed.3PL away / away-allowed.3PL
   ‘[Not Peti] was dismissed.’
a'. *El-bocsátották / *[Bocsátották el] [nem Petit].
   away-allowed.3PL / allowed.3PL away not Peti.ACC
   Intended meaning: ‘It was [not Peti] who was dismissed.’
In echo-questions, interrogatives can appear postverbally with a special intonation. Due to the fact that such questions have a semantic/pragmatic status different from that of the ones considered in (10), we postpone their investigation to future research.

A wh-word can only appear in a preverbal position in Hungarian triggering inverse word order (10a), but it cannot appear in any post-head positions (10a’,b–c’). The only exceptions are the cases in which a wh-word also appears in a preverbal position (10a”).

\[(10)\]

\[b. \quad \text{"Hiba volt az el-bocsátás-a [nem Petinek].} \]
\[\text{mistake was the away-allow-NOM-POSS.3SG not Peti.DAT} \]
\[\text{"Intended ISR: ‘It was a mistake to dismiss [not Peti but someone else].’} \]
\[\text{*Intended ISR: ‘It is [not Peti] whose dismissal was a mistake.’} \]
\[b’. \quad \text{"Na például az el-bocsátás-a [nem Petinek], az hiba volt.} \]
\[\text{well for instance the away-allow-NOM-POSS.3SG not Peti.DAT that mistake was} \]
\[\text{"ISR: ‘Well for instance, dismissing [not Peti but someone else], that was a mistake.’} \]
\[b. \quad \text{‘Hiba volt el-bocsát-an-ani / el-bocsát-an-od [nem Petít].} \]
\[\text{mistake was away-allow-INF / away-allow-INF-2SG not Peti.ACC} \]
\[\text{‘Intended ISR: ‘It was a mistake (for you) to dismiss [anyone else than Peti].’} \]
\[\text{*Intended ISR: ‘It is in the case of [anyone else than Peti] that it was a mistake (for you) to dismiss him or her.’} \]
\[c. \quad \text{Na például ‘el-bocsát-ani / *el-bocsát-an-od [nem Petít],} \]
\[\text{well for instance away-allow-INF / away-allow-INF-2SG not Peti.ACC} \]
\[\text{az hiba volt.} \]
\[\text{that mistake was} \]
\[\text{*ISR: ‘Well for instance, (for you) to dismiss [anyone else than Peti], that was a mistake.’} \]

---

5 In echo-questions, interrogatives can appear postverbally with a special intonation. Due to the fact that such questions have a semantic/pragmatic status different from that of the ones considered in (10), we postpone their investigation to future research.
The last operator type to test is the group of negative universal quantifiers. It is exemplified in (11) that negative universal quantifiers can readily appear in post-head positions. As can be seen in (11a’), if a quantifier like this appears postverbally, the negative particle nem ‘not’ must appear before the finite verb stem (triggering an inverse word order), while another negative particle can also appear in the construction. The appearance of sem ‘also not’, however, is optional in this case (NB: the last consonant ‘m’ in the particle sem is always optional; its appearance depends on the register used by the speaker). If the negative universal quantifier appears preverbally (11a), both sem and nem can be used, but not simultaneously.

\[(11)\]
\[\text{a. } \text{[Senkit] se(m) / nem bocsátottak el.} \]
\[\text{no-one.ACC not / not allowed.3PL away} \]
\[\text{‘[No-one] was dismissed.’} \]
\[\text{a’. Nem bocsátottak el [senkit (se(m)].} \]
\[\text{not allowed.3PL away no-one.ACC not} \]
\[\text{‘[No-one] was dismissed.’} \]
\[\text{b. } \text{(*)Nem volt hiba az el-bocsát-ás-a [senkinek (se(m)).} \]
\[\text{not was mistake the away-allow-NOM-POSS.3SG no-one.DAT not} \]
\[\text{(*)ESR: ‘It holds for [everyone] that dismissing him/her was not a mistake.’} \]
\[\text{b’. Na például az el ‘(*)nem bocsát-ás-a [senkinek (se(m)).,} \]
\[\text{well for instance the away not allow-NOM-POSS.3SG no-one.DAT not} \]
\[\text{az hiba volt.} \]
\[\text{that mistake was} \]
\[\text{(*)ISR: ‘Well for instance, dismissing [no-one], that was a mistake.’} \]

Let us consider the corresponding deverbal nominal constructions in (11b-b’). They are acceptable but note that (11b) is not ambiguous: it can only be associated with external-scope reading. It is illustrated in (11b’), which is restricted to the internal-scope reading due to the test construction, that this reading is available only if the negative particle nem appears before the deverbal nominal (NB: the word-order alternatives among the preverb, the deverbal nominal and the negative particle, the order given here is the most acceptable one).

As shown in (12), there are many word-order variants in the case of infinitives. This is due to the fact that the negative particle nem, the preverb el and the infinitival head bocsátani can appear in three different orders: [Neg(ative)P(ar)t(i)c(le)+Inf+PreV], [NegPtc+PreV+Inf] or [PreV+NegPtc+Inf].

\[(12)\]
\[\text{a. } \text{Hiba volt [...].} \]
\[\text{mistake was} \]
\[\text{‘It was a mistake [...].’} \]
\[\text{b. nem bocsát-ani el [senkit (se(m)]} \]
\[\text{not send-INF away no-one.ACC not} \]
\[\text{b’. nem el-bocsát-ani [senkit (se(m)]} \]
\[\text{not away-send-INF no-one.ACC not} \]
\[\text{b”. el nem bocsát-ani [senkit (se(m)]} \]
\[\text{away not send-INF no-one.ACC not} \]
\[\text{‘to dismiss [no-one]’} \]
In Table 1 below, the x/y pairs of grammaticality judgments belong to the variants without and with *sem* ‘not’ in (12), respectively. The table clearly shows that the grammaticality judgments associated with the constructions are not the same even in the case of the two authors (both native speakers of Hungarian). For instance, some Hungarians (like speaker1) tolerate the [NegPtc+Inf+PreV] order well also in inflected infinitival constructions, while others (like speaker2) do not (see also Farkas 2020). However, in uninflected infinitival expressions, both speakers tolerate the ‘preverb last’ order well. The underlying microvariations behind this whole phenomenon are worth future research. Our analysis can be regarded as a point of departure which can serve as the “null hypothesis” for would-be statistical tests whose aims should be decided on the basis of theory-internal purposes. Note that the constructions in question can only be associated with internal-scope reading (that is, the scope of the negative universal quantifier can only be interpreted relative to the embedded infinitive).

Table 1: Grammaticality judgments from two speakers pertaining to the test construction given in (12)

<table>
<thead>
<tr>
<th>(12)</th>
<th>b.</th>
<th>b'.</th>
<th>b''</th>
<th>c.</th>
<th>c'.</th>
<th>c''.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP1</td>
<td>??/(?)</td>
<td>?/*?</td>
<td>?/*?</td>
<td>??</td>
<td>?/*?</td>
<td>?/*?</td>
</tr>
<tr>
<td>SP2</td>
<td>??</td>
<td>??</td>
<td><em>/</em></td>
<td><em>?/</em></td>
<td>??</td>
<td><em>?/</em></td>
</tr>
</tbody>
</table>

There is another series of examples in (13) concerning the same negative universal quantifiers in the postinfinitival complement zone. In this case, however, the negative particle *nem* precedes the finite verb stem, triggering the external scope reading (NB: the two authors’ grammaticality judgments are now similar).

(13)

a. *Nem volt hiba* [..].
not was mistake
‘It was not a mistake [..].’

b. *el-bocsát-an* [senkit *(0)*(se(m))]  
away-send-INF no-one.ACC not
‘to dismiss [anyone]’

c. *el-bocsát-an* [senkit *(0)*(se(m))]  
away-send-INF-2SG no-one.ACC not
‘to dismiss [anyone]’

In (14), the same six constructions presented in (12) are tested, but now embedded in a ‘for instance’-construction. That is, only the internal scope reading was available in these cases.
As can be seen in Table 2, the grammaticality judgments of the two authors are different again. Very similar tendencies can be observed as in the case of Table 1. First, it is only the construction of the uninflected infinitival form in which both speakers tolerate the [NegPtc+Inf+PreV] order well. Second, in inflected infinitival constructions, this ‘preverb-last’ order is unacceptable to speaker2 while acceptable to speaker1.

Table 2: Grammaticality judgments from two speakers pertaining to the test construction given in (14)

<table>
<thead>
<tr>
<th>(14)</th>
<th>b.</th>
<th>b'.</th>
<th>b''.</th>
<th>c.</th>
<th>c'</th>
<th>c''.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP1</td>
<td>?/ ✓</td>
<td>??/*</td>
<td>?/??</td>
<td>?/??</td>
<td>?/??</td>
<td>?/??</td>
</tr>
<tr>
<td>SP2</td>
<td>?/ ✓</td>
<td>?/??</td>
<td>?/??</td>
<td><em>/</em></td>
<td>?/??</td>
<td><em>/</em></td>
</tr>
</tbody>
</table>

In the case of negative universals, instead of two scope hierarchies (the internal and the external one), altogether six scope hierarchies are to be considered. This is due to the fact that negative universals consist of two logical elements: negation and universal quantification, and hence three logical components (mistake in the finite predicative construction is the third one) should be arranged in different orders.

Let us consider the best variant in (12a-b), repeated here as (15):

(15) *Hiba volt nem bocsát-ani el* [senkit (se(m))].

‘It was a mistake to dismiss [no-one].’

The series of examples in (16) present the potential six scope hierarchies. The best Hungarian variants with the logical forms are also provided for all scope orders. As demonstrated, the word-order variant presented in (15) can only be associated with the meaning in (16a). (16a’) has the same meaning expressed via an unambiguous construction. Note that the negative universal in (16a’) is placed in the preinfinitival zone and, in harmony with its pre-head position, it can only be associated with the intended meaning.
(16) Potential scope hierarchies in the case of negative universal quantifiers in InfPs

a. mistake > ∀ > ¬
   ‘It was a mistake that in the case of each person it had been decided that they would not been dismissed.’

a’. Hiba volt senkit sem el-bocsát-ani.
   mistake was no-one.ACC not away-send-INF

b. mistake > ¬ > ∀
   ‘It was a mistake that it had not be the case that each person would be dismissed.’

b’. Hiba volt nem mindenkit el-bocsát-ani.
   mistake was not everyone.ACC away-send-INF

c. ∀ > mistake > ¬
   ‘In the case of each person it was a mistake that they had not been dismissed.’

c’. Mindenkit hiba volt nem el-bocsát-ani.
   everyone.ACC mistake was not away-send-INF

d. ∀ > ¬ > mistake
   ‘In the case of each person it was not a mistake that he had been dismissed.’

d’. Senkit sem volt hiba el-bocsát-ani.
   no-one.ACC not was mistake away-send-INF

e. ¬ > ∀ > mistake
   ‘It is not the case that in the case of each person it was a mistake that they had been dismissed.’

e’. Nem mindenkit volt hiba el-bocsát-ani.
   not everyone.ACC was mistake away-send-INF

f. ¬ > mistake > ∀
   ‘It is not the case that it was a mistake that each person had been dismissed.’

f’. Nem volt hiba mindenkit el-bocsát-ani.
   not was mistake everyone.ACC away-send-INF

The puzzle is that we have six potential variants with different scope hierarchies but the meaning of the construction in (15) with a negative universal in the postinfinitival complement zone can only be associated with the internal meaning, presented in (16a-a’).

We offer the following solution to the puzzle.

First of all, the position of the negative particle nem ‘not’ disambiguates between internal/external readings in the following way. If it is adjoined to the finite verbal construction hiba volt ‘was a mistake’, it is only the external scope reading that is available, as in (16d-d’); but if it is adjoined to the embedded (infinitival) verb elbocsátani ‘dismiss’, only the internal scope reading is available, as in (15) and (16a-a’).

Second, senki ‘no-one’ determines the scope order between negation and universal quantification: universal quantification always has an immediate scope over negation (17a-a’). In this way, only two of the six variants remain: the first one when the finite verb has a scope over these two, resulting in the internal scope reading (17b), and the second one when universal quantification has a scope over negation, which has a scope over the finite verb, resulting in the external scope reading (17b’). And (again) the position of the negative particle tells us which is the case.

(17)

a. ... ∀ > ¬ ...

a’. *[... ∀ > X > ¬ ...]

b. mistake > ∀ > ¬  →  internal scope

b’. ∀ > ¬ > mistake  →  external scope
c. nem ... s-en-ki ... s-e(m)  
not  also-not-who  also-not

There are further factors to mention. The first one is that the optimal word order variant containing a negative universal quantifier in the postinfinitival zone is realized by a “triple negation”, schematized in (17c). This variant contains the negative particle nem ‘not’, the negative universal quantifier senki ‘no-one’, and another negative particle sem ‘also not’. The variant with explicit sem is better than the variant without it; compare the grammaticality judgments associated with (12b) in Table 1.

The second factor to mention is that the negative particle nem ‘not’ can appear in the infinitival construction in three ways: [NegPtc+Inf+PreV], [NegPtc+PreV+Inf] or [PreV+NegPtc+Inf]. It is the [NegPtc+Inf+PreV] order (with the same build-up as the finite verbal constructions) that seems to be the best solution (at least in constructions containing non-agreeing infinitives).

To sum up, Table 3 and 4 below present the grammaticality judgments associated with the constructions containing the six operator types tested in post-head zones.

Table 3: Readiness of arguments of finite verbs, infinitives and deverbal nominals to take internal scope in the post-head zone

<table>
<thead>
<tr>
<th>Argument type</th>
<th>mind</th>
<th>is</th>
<th>se-</th>
<th>csak</th>
<th>nem</th>
<th>wh</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finite verb</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>subject</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>non-subject</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>non-subject-like</td>
<td>✓✓</td>
<td>✓✓</td>
<td>✓?</td>
<td>??</td>
<td>?/?</td>
<td><em>/</em></td>
</tr>
<tr>
<td>InfinitiveAgr</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>non-subject-like</td>
<td>✓✓</td>
<td>✓✓</td>
<td>✓?</td>
<td>??</td>
<td>?/?</td>
<td><em>/</em></td>
</tr>
<tr>
<td>subject-like</td>
<td>✓✓</td>
<td>✓✓</td>
<td>✓?</td>
<td>??</td>
<td>?/?</td>
<td><em>/</em></td>
</tr>
<tr>
<td>Infinitive</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>non-subject</td>
<td>✓✓</td>
<td>✓✓</td>
<td>✓?</td>
<td>??</td>
<td>?/?</td>
<td><em>/</em></td>
</tr>
<tr>
<td>Possessor: Theme</td>
<td>✓✓</td>
<td>✓✓</td>
<td>✓?</td>
<td>??</td>
<td>?/?</td>
<td><em>/</em></td>
</tr>
<tr>
<td>Non-possessor</td>
<td>✓✓</td>
<td>✓✓</td>
<td>✓?</td>
<td>??</td>
<td>?/?</td>
<td><em>/</em></td>
</tr>
</tbody>
</table>

In the case of external scope, presented in Table 4, the picture is black and white again in the case of finite verbs: quantifiers are fully acceptable in this zone, while the different types of focus can never appear postverbally.

Infinitives and deverbal nominals are similar to finite verbs in that the three types of focus expression cannot appear in the post-head zone, but they also differ from the finite verbs: the
three types of quantifier are somewhat less acceptable in post-head zones of deverbal constructions than they are in the case of finite verbs.

Table 4: Readiness of arguments of finite verbs, infinitives and deverbal nominals to take external scope in the post-head zone

<table>
<thead>
<tr>
<th>Argument type</th>
<th>Argument type</th>
<th>mind</th>
<th>is</th>
<th>se-</th>
<th>csak</th>
<th>nem</th>
<th>wh</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finite verb</td>
<td>subject</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finite verb</td>
<td>non-subject</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infinitive</td>
<td>non-subject-like</td>
<td>(?)</td>
<td>(?)</td>
<td>(?)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>InfinitiveAgr</td>
<td>non-subject-like</td>
<td>(?)</td>
<td>(?)</td>
<td>(?)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>InfinitiveAgr</td>
<td>subject-like</td>
<td></td>
<td></td>
<td>??</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ás-N</td>
<td>possessor: Theme</td>
<td>✓</td>
<td>(?)</td>
<td>(?)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ás-N</td>
<td>non-possessor</td>
<td></td>
<td>??</td>
<td>??</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. Generalizations of the findings and their interpretation in a phase-theoretic model

Following Farkas and Alberti’s (2017) paper on a special Hungarian deverbal nominal construction, we use Grohmann’s phase-theoretic approach with its pragmasemantics-based three Spell-Out domains per cycle (Grohmann 2000, 2003, 2009), presented in Figure 1 (“fine-tuned” by Sigurðsson’s (2009) context-sensitive Syntax–Phonology interface). The importance of the “pragmasemantic basis” lies in the fact that, for each argument of a head and for each Spell-Out domain of the cycle of the given head, it can be investigated what semantic or pragmatic aspect of the given argument is exhibited in the given domain encoded by the domain-internal position of the copy of the argument (Alberti and Farkas 2021, Farkas and Szabó and Alberti 2021).

In the thematic domain (Θ∆) of a verbal cycle, the positions in the syntactic hierarchy encode thematic roles in a traditional approach, or event-structural characters. Domain Φ∆, at first glance, seems to be responsible for case and agreement morphology, and not for pragmasemantic factors, but there are crucial factors in the background, such as linkedness to discourse participants (persons, objects, temporal and local entities) (Doner 2018). In Ω∆, operator functions assigned to arguments are expressed. The word order of a particular sentence is accounted for in Grohmann’s model (similar to other minimalist models) via deciding which argument or adjunct is spelt out in which domain and which verb (or other cycle center) is spelt out in which functional head in the course of its typically long route from head to head upwards in its cycle.

The schematic syntactic tree in Figure 2 of the InfP of sentence (18) illustrates the possibility of spelling out arguments in Ω∆, due to their operator character: the object and the dative case-marked argument are exhibited as the topic (Top) and the identificational (narrow) focus (Foc) of the given sentence, respectively.
The six sentence variants presented in (19) below with their slightly different grammaticality judgments are devoted to illustrate instances of spelling out arguments in the lower two domains. Variants (19a) and (19a’) show that it is preferred for a Theme to precede the Beneficiary. A phonetically heavy Theme, however, preferably follows the Beneficiary (19b-b’), a phenomenon attributed to Behaghel’s Law by É. Kiss (2009). The (c)-examples corroborate these observations: the less acceptable variant is (19c’) in which both the preferred thematic order and the Behaghel-based order are violated.
(19) • Argument ordering on the basis of thematic character or phonetic weight
   mistake would_be towards.give-INF Bogáncs.ACC Marcsi.DAT
   ‘It would be a mistake to give Bogáncs to Marcsi.’

   mistake would_be towards.give-INF Marcsi.DAT Bogáncs.ACC
   ‘It would be a mistake to give Marcsi Bogáncs.’

b. *Hiba lenne odaadni azt a kis foltos kutyust [Marcsinak].*
   mistake would_be towards.give-INF that.ACC the small spotty puppy.ACC Marcsi.DAT
   ‘It would be a mistake to give that small spotty puppy to Marcsi.’

b’. Hiba lenne odaadni [Marcsinak]
   mistake would_be towards.give-INF Marcsi.DAT
   [azt a kis foltos kutyust] that.ACC the small spotty puppy.ACC
   ‘It would be a mistake to give that small spotty puppy to Marcsi.’

c. *Hiba lenne odaadni [Bogáncsot]*
   mistake would_be towards.give-INF Bogáncs.ACC
   [annak a megbízhatatlan elefántcsontparti lánynak].
   that.DAT the unreliable Ivorian girl.DAT
   ‘It would be a mistake to give Bogáncs to that unreliable Ivorian girl.’

c’. *Hiba lenne odaadni*
   mistake would_be towards.give-INF
   [annak a megbízhatatlan elefántcsontparti lánynak] Bogáncs.DAT.
   that.DAT the unreliable Ivorian girl.DAT Bogáncs.ACC
   ‘It would be a mistake to give that unreliable Ivorian girl Bogáncs.’

The three primeless and the three primed word-order variants can be analyzed as having syntactic structures with arguments spelt out in ΘΔ and in ΦΔ, respectively. The detailed syntactic analysis presented in Figure 3 below illustrates the case of Spell Out in ΦΔ. In this domain, arguments and adjuncts are assumed to be ordered according to Behaghel’s Law only to account for the fact that in Hungarian post-head phrases are preferably ordered this way.7 One might ask what is the aforementioned “pragmasemantic background” behind Behaghel’s Law. A plausible answer can be based on the procedure of anchoring referents and can be exemplified as follows: In the case of the perfect sentence (19b’), during reading the sentence from left to right, all but one participants could be anchored as soon as at the 11th syllable. In the case of the less acceptable word-order variant given in (19b), however, all but one participant could be anchored only at the 15th syllable.

7 In the complement of the Asp(ectual) head, the order of the functional heads (Cn ’central’ for „distinguished” arguments and Nc ’non-central’ for other arguments and adjuncts) whose specifiers host the arguments and adjuncts belonging to the given cycle is taken to be free; Behaghel’s Law, hence, works as a filter on the set of potential orderings. This means that the statement according to which the three sentences with [Theme, Beneficiary] order and the three with the reversed order can be analyzed as having syntactic structures with arguments spelt out in ΘΔ and in ΦΔ, respectively, is somewhat simplified. Any argument order can be “arranged” and spelt out in ΦΔ; in ΘΔ, however, only a single ”thematic order” can be spelt out.
Due to space limitations, we cannot elaborate on further details of the syntactic tree that represents the given infinitival phrase. What is relevant here is that the verbal root *ad* 'give' is climbing upwards from head to head, in the course of which it reaches the N head with the derivative morpheme *-ni* 'to' therein. Their merger produces the infinitival form *adni* ‘to give’. Regarding the N head as the center of the InfP, we can say that its complement is the embedded verb’s cycle with two domains (ΘΔ, ΦΔ; now there is no ΩΔ) and its immediate projection NP is accommodated in a nominal cycle with one domain (ΦΔ) (Fu et al. 2001). As all word-order variants listed in (19) are such that the infinitival head precedes the two arguments, they are spelt out in one of the two verbal domains. In the case of sentence (18), however, the given word order can be accounted for by analyzing the two arguments as spelt out in ΩΔ of the nominal cycle.

If an operator *could* have been spelt out in ΩΔ of the nominal cycle but is actually spelt out after the infinitival/deverbal nominal head, as in (20a-b) and in several examples in Section 1, the corresponding syntactic structure should contain a covert movement from ΦΔ to ΩΔ, as illustrated in Figure 4.
In Figure 4, a quantifier expression is spelt out in $\Phi\Delta$, where arguments are ordered according to Behaghel’s Law (independent of their +/- scope-taking character), instead of being spelt out in $\Omega\Delta$. It thus does not make its scope explicit. Its scope is still decided in $\Omega\Delta$; however, not overtly but after the point of spelling out.

In (20a), the scope in question is necessarily an internal one. If the same expression were interpreted externally, which is an option in (20b), its syntactic positions in the tree (and their visibility) should be the same, according to Farkas, Szabó and Alberti (2021), see Figures 1 and 3. In that paper (as well as in the 2017 paper of the same three authors), the external interpretation of the given scope is attributed to a kind of feature percolation, proposed in the
Hungarian literature by Horvath (1997: 547–557) and Kenesei (1998: 223–225) in the case of other phenomena. Thus the syntactic difference between the two interpretations simply lies in the position of the operator feature. If the feature remains with the highest copy of DP_k, the interpretation is internal. If, however, it leaves DP_k and percolates up to the node that represents the whole infinitival expression, the interpretation is external. In the given case, both instances of donation are claimed to be a mistake (where one donating event is the donation of one of the puppies, and the other donating event is the donation of the other puppy; NB: on the internal reading, there is a single donating event, in the course of which two puppies are given to someone).

In this light, the observations collected in Tables 3 and 4 in Section 1 can be understood as follows: scope taking operators of different types in Hungarian differ in tolerating being spelt out in $\Phi\Delta$ and moved up to $\Omega\Delta$ only covertly, which seems to be the basic fate of operators in the configurational English language (É. Kiss 1987). Operator types also differ in the toleration of the kind of feature percolation discussed above (claimed to produce external readings).

4. Summary

What character of an argument can be exhibited via the domain where it is spelt out? – it is in this way that one of the central questions of the paper can be formulated in our Grohmannian approach. Being spelt out in any of the three domains can reveal some valuable information on a constituent. However,

- it differs from language to language,
- and even from cycle to cycle within a language,
- and from operator type to operator type in the case of scope taking expressions,

whether the given expression can be spelt out in one or two or all three Grohmannian domains. Or even more precisely, it differs from language to language, cycle to cycle, and operator to operator in what domain the spelling out of the given expression is tolerated to what extent.

As a point of departure, it has been declared as a basic property of Hungarian that all six operator types considered in the paper can be spelt out in $\Omega\Delta$ of their cycles. The advantage of spelling out scope taking arguments in $\Omega\Delta$ is that hearers obtain disambiguated scope relations, relative to both co-arguments and the finite verb (if the cycle considered does not happen to be that of the finite verb).

Three operators, the three quantifier types and only they, can basically be spelt out in a post-head position, too, that is, spelt out in $\Phi\Delta$ or $\Theta\Delta$ (appearing in $\Omega\Delta$ only covertly). ‘Basically’ is inserted in this generalization for the following reason. Of the three constructions referring to states of affairs, ones with finite V heads show the generalization as a black-and-white picture. Infinitival and deverbal nominal constructions, as shown in Tables 3 and 4, can be characterized by “gray zones” in respect of the readiness of arguments to take scope covertly. If one makes a comparison between the corresponding rubrics of the two tables, they
can formulate the hypothesis that the mechanism of feature percolation producing external reading is further “cost” somewhat decreasing the acceptability of the syntactic structure. As illustrated in Tables 1 and 2, in these gray zones, there is also a somewhat speaker-dependent variation, presumably with underlying microvariation. We have also pointed out that word order typically does not disambiguate between internal and external readings. The case of negative universal quantifiers is an exception, essentially due to what can be regarded in Hungarian as not only double but triple negation.

Post-head arguments (independent of their +/- scope taking character) are preferably ordered according to Behaghel’s Law, which can be attributed to their spelling out in $\Phi\Delta$.

References


Grohmann, K. K. 2000. Prolific Peripheries: A Radical View from the Left. Dissertation at University of Maryland, USA.


