

Gábor Alberti & Judit Farkas

Scope inversion under the fall–rise contour?¹

Abstract

In Hungarian, the scope order of preverbal (non-*in-situ*) constituents corresponds to their surface order. Quantifiers and certain other operator expressions ω under the fall–rise contour typical of contrastive topics, however, apparently violate this generalization by giving the impression of having inverse scope, relative to some kind of focus operator. The solution to this “scope inversion” puzzle in Hungarian proposed by Gyuris (2009) rests on the following, *unexplained*, observation: “only those Hungarian sentences containing a contrastive topic are well-formed that have well-formed counterparts with the contrastive topic expression in postverbal position.” We claim that the Gyuris-style “well-formed counterpart” can serve as an initial state of syntactic derivation from which the problematic word-order variant can be constructed by moving the whole “big” ω P constituent (containing the finite VP) to the left periphery but by spelling it out there only partially. The crucial point is that in this way the inverse-scope puzzle simply vanishes, because, within the “big” ω P constituent, the meaning-reflecting $\text{Foc} > \omega$ scope order does not change through the whole process of derivation, and what finally takes scope over the focus is factually a contrastively topicalized (proposition-based) property type semantic content, and not the semantic content that the sentence-initial noun phrase under the fall–rise contour suggests.

Keywords: contrastive topic, Hungarian information structure, inverse-scope puzzle, partial spell-out

1 Introduction

In Hungarian, the scope order of preverbal (non-*in-situ*) constituents corresponds to their surface order (1a); as is shown by (1b), however, quantifiers under the fall–rise contour apparently violate this generalization by giving the impression of having inverse scope (É. Kiss 2002: 25).² The meaning of (1b) does not coincide with that of (1a), *ca.* ‘all novels proved fairly unpopular,’ but is rather similar to that of (1c), ‘there are few hard-working students,’ of which (1c’) is a somewhat unusual but acceptable expression. As for this “scope

¹ We are grateful to NKFIH 120073 (*Open access book series on the syntax of Hungarian*) and NKFI FK-128518 (*The Syntax of Hybrid Categories*) for their financial support in the period of writing the paper.

² In Brody and Szabolcsi’s (2003) seminal paper on inverse-scope phenomena in Hungarian, sentences with a [FEW > EVERY] surface order of basic constituents, presented as the (1c-’) type in this paper, are discussed as having inverse scope. We will not regard this type as instances of inverse scope on the basis of É. Kiss’ (1998a, 2002: 118) approach resting on the recursion of operator projections ([...DIST* > FOC* > DIST* > FOC*...]), but concentrate on the type of Hungarian sentences showing scope inversion under the fall–rise contour; which is an issue ignored by Brody and Szabolcsi (2003: 19; “... [t]o our knowledge, no one has suggested that scope inversion under the fall–rise contour is the same as the other cases of inverse scope...”).

inversion” problem in Hungarian (referred to as SIP from now on), an important element of Gyuris’ (2009: 150) solution to it is the following, *unexplained*, observation: “only those Hungarian sentences containing a contrastive topic are well-formed that have well-formed counterparts with the contrastive topic expression in postverbal position.” If a well-formed counterpart like this is referred to as a *basic* variant, we can raise the hypothesis, for the time being in a somewhat vague fashion, that the basic variant of the construction type illustrated by (1b) is the one presented in (1c) and/or (1c’).³

- (1) a. Minden regényt \KEvés diák olvasott el. EVERY > FEW
 every novel.ACC few student read.PAST.3SG away
 ‘In the case of each of the novels, it holds for few students that they read it.’
- b. /MINden regényt \KEvés diák olvasott el. FEW > EVERY (?)
 every novel.ACC few student read.PAST.3SG away
 ‘/Every novel was read by \few students.’
- c. \KEvés diák olvasott el minden regényt. FEW > EVERY (?)
 few student read.PAST.3SG away every novel.ACC
 ‘It holds for few students that they read every novel.’
- c’. ?\KEvés diák olvasott minden regényt el. FEW > EVERY
 few student read.PAST.3SG every novel.ACC away
 ‘It holds for few students that they read every novel.’

Before entering into details, let us consider the simple prosodic notation system illustrated in (1), also applied by Gyuris (2009: 11; see also page 35). The obligatory rising pitch accent, characteristic of the contrastive topic, is marked by the symbol ‘/’, whilst the symbol ‘\’ marks the presence of an obligatory falling pitch accent on the syllable marked with capitals, referring to the stress of the narrow focus. We use this latter notation only if this is unconditionally relevant to the discussion, given the serious lack of consensus on prosodic patterns of different topic types (Gyuris 2009: 25–27). Nevertheless, we follow Gyuris (2009: 39) in assuming that a rising contrastive-topic pattern is necessarily followed by a falling accent (1b), the holder of which we also consider legitimate to regard as some kind of focus (in a sense to be specified in section 3). By this we develop É. Kiss’ (2002) seminal model of operator zones, on which Gyuris’ (2009: 29–31) syntactic model draws, making explicit what never gets detailed syntactic representations in Gyuris’ (2009) book. We mean that, in addition to the classical focus operator realizing identification-by-exclusion (É. Kiss 1998b), negation (NegP) as well as *every*- and *also*-phrases (DistP), also serve as some kind of focus in a certain “dimension” (see section 3; see also Surányi and Turi 2017).⁴

³ The relational formulas in (1) (as well as later) help the reader in associating the given examples with the meanings discussed in the main text. The question marks in brackets in (1b,c) refer to the following inaccuracies. (1b): it will be claimed in 2.2 that there *is* indeed a contrastively topicalized expression having maximal scope (though it is not the *every*-expression, in spite of all appearances): C_{TOP} > FEW > EVERY. (1c): The *every*-expression can also be intoned in a (less preferable) way resulting in the reading associated with (1a): ?EVERY > FEW (cf. É. Kiss 2002: 121).

⁴ We consider that in the context of the present paper the terminological chaos can be avoided by following É. Kiss (2002) in speaking about *predicative* function in connection with this dimension, which opposes itself to some *topic* function, since the former function is indeed a generalization of the predicative function traditionally associated with the finite verb. Laczkó (2016: 217) calls the sentence part constituted by the elements with such a function the *predicate portion* of the sentence, which is essentially the same sentence portion (or function) as the one referred to as *Comment* by Varga (2016: 46).

Our explanation for SIP was suggested by sentences containing highly complex nominal constructions headed by deverbal nominals split into two parts in the way that the right part of the given noun phrase is spelt out on the right periphery of the sentence while the complementary left part on the left periphery. The principal claim of the paper is that the noun phrases furnished with contrastive-topic prosody producing SIP are similar spelt-out representatives of bigger constituents, ones with a (proposition-based) property-type semantic value. As these property-type ilks undergo contrastive topicalization in SIP-sentences, scope relations among noun phrases are not influenced, so speaking about the “scope inversion” puzzle simply becomes devoid of purpose. Section 2 elaborates on this approach through a poster child example.

Section 3 sketches a two-dimension model of Hungarian information structure, which clarifies the function of the “focus-like” constituent in the scope of the contrastive topic. Section 4 discussess a few SIP-sentence types out of those which Gyuris (2009) have systematically overviewed. Section 5 provides comments on potential general consequences of the syntactic innovation proposed in Sections 2-4. The paper concludes with a short summary.

2 The “scope inversion” puzzle becomes devoid of purpose

2.1 Contrastively topicalized deverbal nominal constructions split into two parts

The crucial idea in the paper was prompted by sentences containing highly complex deverbal nominals split into two parts (Alberti & Farkas 2018: 883–891); such ones as the phrase in (2) headed by the deverbal noun *elküldés* ‘sending away’, derived from the verb *elküld* ‘send away’.

- (2) a. [Mindkét kollégának az elküldését] \ELlenzem. BOTH > OPPOSE > SEND
 both colleague.DAT the away.send.ÁS.POSS.ACC oppose.1SG
 ‘In the case of both collagues I am against the option acc. to which he should be sent away.’
- a’. /[MINDkét kollégának az elküldését] \ELlenzem. OPPOSE > BOTH > SEND
 both colleague.DAT the away.send.ÁS.POSS.ACC oppose.1SG
 ‘I am against the option according to which both colleagues should be sent away.’
- b. Mindkét kollégának \ELlenzem az elküldését. BOTH > OPPOSE > SEND
 both colleague.DAT oppose.1SG the away.send.ÁS.POSS.ACC
 ‘In the case of both collagues I am against the option acc. to which he should be sent away.’
- b’. /MINDkét kollégának \ELlenzem az elküldését. OPPOSE > BOTH > SEND
 both colleague.DAT oppose.1SG the away.send.ÁS.POSS.ACC
 ‘I am against the option according to which both colleagues should be sent away.’
- c. [_{OP}[mindkét kollégának az_D elküldését] [ellenzem [mindkét kollégának az_D elküldését]]]

One and the same sequence of words, with slight intonational differences, can mean both that the speaker opposes the dismissal in the case of both colleague X and colleague Y (2a) and that he is against only their joint dismissal (while one of them can be sent away) (2a’). The latter reading is more transparently associated with the syntactic form since the nominal object of *ellenez* ‘oppose’ immediately refers to the joint dismissal, similar to the subordinate clause in

the following paraphrase: “I am against that [they send away both colleagues].” The analysis of (2a), however, should capture that this reading can be simplified as follows: “I oppose both dismissals,” as if *both* belonged to the noun *elküldés* ‘dismissal’, and not to the noun *kolléga* ‘colleague’ (suggested by the straightforward syntactic structure). A plausible solution is to apply an approach based on the percolation of the quantifier feature.⁵ Farkas, Szabó and Alberti’s (2017) paper offers an elaborated description of a syntactic analysis in which the *every*-feature due to *mindkét* ‘both’ ceases to belong to the noun *kolléga* ‘colleague’ but belongs to the “superordinate” deverbal nominal (as if *both dismissals* were being talked about).

What is the consequence of the possessor’s running away from its noun phrase (Szabolcsi 1983), as presented in (2b-b’)? One might expect that the separation of the possessor implies that only the reading presented in (2a’) remains, but that is not the case. The ambiguity *does* survive in spite of the escape of the possessor (2b-b’).⁶

The simplest explanation can be based on the idea of *partial spell-out* (2c), first applied to Hungarian (in particular to virtually “split” adverbial phrases) by Surányi (2009). Note that such an approach is a preferable alternative, for those accepting multiple spell-out (e.g. Uriagereka 1999), to remnant-movement based proposals (Koopman & Szabolcsi 1998), which we have had recourse to so far (e.g. Alberti 2004, Alberti & Farkas 2017). The point can simply be elucidated by the syntactic structure given in (2c): a complex constituent is permitted to be spelt out multiply but partially in the obviously optimally economical way that the phonetically explicit parts are in complementary distribution, avoiding redundancy but revealing each part and parcel. It is also of importance that partial spell-out simultaneously makes it possible, on the one hand, to show the operator status of a constituent while, on the other hand, to avoid (the typically forbidden or at least dispreferred explicit) right branching in the operator domain on the left periphery (Alberti, Farkas & Szabó 2015), and all this without syntactically evacuating any constituent (the decision of whose syntactic position on the right sentential periphery is a difficult question). In the given case (2b-c), it is the D head of the nominal construction relative to which right branching should be considered and the target of the nominal construction is Spec, ω P with ω a universal-quantifier head in (2b) (containing an *every*-feature inherited as discussed) and a contrastive-topic head in (2b’).

All in all, as Spec, ω P is occupied by the deverbal nominal construction as a whole from the point of view of the semantic interface in (2b-b’) in the same way as in the case of (2a-a’), the fact that the two word orders considered in (2) are uniformly ambiguous has been explained by the partial-spell-out based approach.

⁵ This approach is the appropriate generalization of Horvath’s (1997: 547–557) proposal concerning interrogative-feature percolation in Hungarian subordinate constructions and Kenesei’s (1998: 223–225) one concerning focus-feature percolation.

⁶ As for the ambiguity exploited in this argumentation, it only holds for (highly verbal) complex-event denoting deverbal nominals but not for simple-event denoting ones (for their differentiation, see Laczkó 2000: 304–333).

2.2 Contrastively topicalized parts of SIP-sentences split into three parts⁷

The adaptation of the partial-spell-out based approach to the SIP-sentence in (1b), repeated here as (3a), is demonstrated in (3c), with (3b-b') presenting transitional phases of syntactic derivation. The syntactic structure in (1c)=(3b) shows the phase when the quantified accusative case-marked constituent is spelt out in its thematic position on the right periphery. This way of spelling-out explains why (1c), a basic variant of the SIP-sentence (1b)=(3a), is ambiguous: the word order does not identify the post-spell-out operator position of the object (e.g., É. Kiss 2002: 120). The syntactic structure in (1c')=(3b'), however, shows the phase when the object is spelt out in an operator position, one over which the focus takes scope. This structure explains why (1c')=(3b'), the given SIP-sentence's basic variant proposed by us, is unambiguous: both operators in question reveal their scopes in the Grohmannian (2003) operator domain ($\Omega\Delta$) of the sentence.

- (3) a. /MINden regényt \KEvés diák olvasott el.
 every novel.ACC few student read.PAST.3SG away
 'Every novel was read by \few students.'
- b. [_{FocP} kevés diák olvasott [_{AspP} el olvasott [_{9P} minden regényt]]].
 (1c): EVERY > FEW; FEW > EVERY
- b'. ?[_{FocP} kevés diák olvasott [_{DistP} minden regényt [_{AspP} el olvasott]]].
 (1c'): FEW > EVERY
- c. [_{CTopP} [_{DistP} minden regényt el olvasott] [_{FocP} kevés diák olvasott [_{DistP} minden regényt el olvasott]]].
 (1b): C_{TOP} > FEW > EVERY
 'As for the (high) level of diligence seen in the fact that a student reads every novel,
 few students proved this diligent, as few students read every novel.'

The structures presented in (3b-c) are three steps after each other in the derivation of (3a). In the final phase (3c), the VP-containing constituent (here marked by DistP), the specifier of which is occupied by the accusative case-marked quantifier expression, is shown to occupy the specifier of the projection of a contrastive topic in $\Omega\Delta$ on the left periphery of the sentence. Parts of the VP-containing constituent in question are spelt out in three positions. The leftmost part under the fall–rise contour, the content of Spec,DistP, is spelt out in the operator domain, revealing the contrastive-topic interpretation of the proposition, which the italicized part of the “extended” translation presented in (3c) refers to. The verb stem must serve in the intoned word order as an unstressed right-adjacent backup for the narrow focus construction immediately preceded by the focused constituent. Finally, the phonetic form of the preverb constitutes the part of the DistP which is not spelt out in Spec,CTop but phonetically remains on the right edge of the sentence.

The cornerstone of this analysis is as follows. Although it is true that the syntactic structure of the SIP-sentence (3a) is such that a contrastive-topic operator takes scope over the focus operator, but it is a complex, VP-containing constituent, and not a “small” noun phrase (the object), that serves as the contrastive topic in the information structure of the given sentence.

⁷ We argue in a series of papers (e.g. Alberti 2004, Alberti & Farkas 2017, Farkas & Alberti 2018) that there are several syntactic phenomena in Hungarian whose explanation *must* be based on partial spell-out (or remnant movement), due to constraints on right branching. Anyway, partial spell-out is a very powerful mechanism, which, “if it is available in an unconstrained fashion, will wreak havoc in our syntax” (according to the anonymous reviewer of an earlier version of this paper). Section 5 is devoted to the discussion of this problem.

The scope-hierarchical position of the object is lower than that of the focus, as presented in (3b'). It is the special way of topicalization (of a highly complex constituent) that obscures this relation and gives an opposite appearance.⁸

Thus, the “scope inversion” puzzle has not been solved but simply has become non-existent.

2.3 Why do VP-containing constituents undergo contrastive topicalization?

If we do not want to leave any loose ends, the pragmasemantic contribution of the contrastive-topic status of the left periphery of SIP-sentences should be discussed more thoroughly.

We follow Gyuris (2009: 59–70), whose concept concerning the pragmasemantics of contrastive topicalization (Gyuris 2009: 84) primarily rests on Büring's (1997, 2003) ideas, in regarding the following factor as the crucial element of the problem: a contrastive topic serves as the indication of the fact that, in addition to the participants referred to explicitly, their certain alternatives are also present, as a topic under discussion, in the interlocutors' current information states. In the case of a SIP-sentence, we apply this definition to a certain VP-containing part of the whole propositional content of the given sentence. The SIP-sentence in (3a), for instance, can ideally appear in a conversation with a previous turn in which someone notes that *I have heard that most students read every novel*. The addresser of (3a) can then introduce his/her speech by stating that *Well, the situation does not look that good at all...* And then can come the sentence in question: */Every novel was read by \few students*. Thus, the interlocutors are speaking about their students' level of diligence, especially in working up must-readings. Alternatives to the given (open-proposition-based) property that is [x (is so

⁸ Our point of departure is May's (1985) seminal theory on the relation between syntactic structures and scope semantics: for X to take scope over Y, X should c-command Y (a head and the corresponding specifier, for instance, have scope over the corresponding complement, including all of its parts). The crucial point of our proposal is that the relevant constituent on the left periphery of the SIP-sentence is embedded in a bigger constituent corresponding to a proposition, from which it does not c-command the focus. In particular, the quantified expression in (3c) c-commands neither the focus nor the copy/trace of the focus inside the DistP. Note, however, that the original definition of *c-command* should be considered, according to which a node in a syntactic tree c-commands its sister nodes and the nodes dominated by the sister nodes. Kayne's (1994) generalized definition, for instance, according to which a complement is defined as being c-commanded not only by the corresponding specifier but also by the specifier of (the constituent occupied by) this specifier, would spoil the cornerstone of our solution. According to the extended definition, the quantified object in (3c), being exactly the specifier of the specifier of the head whose complement is the focus, would c-command this focus, “out-c-commanding from its embedded position”. Thus we should insist on the original, restricted, definition of *c-command*. An argument in favor of this stance is that the generalized definition would give rise to the following situation unfavorable in scope semantics: both a VP-containing constituent and a quantifier would take immediate scope over the focus in question, moreover, via one and the same phonetic material; so this way the scope order between the bigger constituent and the quantifier could not be decided. According to the traditional definition, however, we obtain the unambiguous scope hierarchy presented in (3c), which plausibly corresponds to the meaning components transparently demonstrated by the given translation. One might notice that the method of feature percolation discussed in subsection 2.1 also has to do with the extension of c-command to specifiers of specifiers. From the aspect of feature percolation, the analysis of (3c) should be completed with the comment that the CTop-feature associated with the DistP is incompatible with the *every*-feature with which the quantified object in Spec,DistP would be able to donate the whole VP-containing DistP constituent. This incompatibility obviously blocks the (otherwise potential) feature percolation, which seems to be a technical alternative to licensing c-command from specifiers of specifiers.

diligent that (s)he read every must-reading] are properties such as [x read only two novels], [x read at most four novels], [x read at least three novels], for instance.

Considering the shared components of the proposition-based property-alternatives mentioned above, we can state that the pragmasemantic contribution to be identified is something similar to what has been proposed by Alberti and Medve (2000; cf. Gyuris 2009: 112–113). They attribute the magic power of contrastive topic to the following factor: in the course of interpretation, the relevant logicosemantic operations pertain to *subsets* of the set interpretable as the denotatum of the topicalized noun phrase, instead of *elements* of the given set. Let us return to the particular example, and get rid of the shared factor [x read y].⁹ What remains ([two novels], [at most four novels], and [at least three novels]) is exactly a set of subsets of novels. Thus, the real innovation of the present paper is the syntactic aspect of the treatment of SIP. Alberti and Medve (2000) could only claim that in type (3a) the underlying scope relation is not [EVERY > FEW], but [EVERY* > FEW], with the asterisk defined as a subset constructing operation. This approach itself could not produce the favorable scope relation [FEW > EVERY] as a component of the semantic contribution to be identified. As demonstrated by the scope relation [CTOP > FEW > EVERY] in (3c), however, the current proposal explicitly offers the [FEW > EVERY] subpart of the scope hierarchy, and also derives it from the syntax as a straight scope direction.

As pointed out by Gyuris (2009: 84, see (65c)), the pragmasemantic contribution of contrastive topic is more than the Büringian meaning factor according to which, in addition to what is explicitly referred to, certain alternatives are also present as a topic under discussion. She argues that a “function that is part of the presuppositions of the contrastive topic” also plays an important role. The role of this function is as follows: proper alternative states of affairs relative to the state of affairs formulated by the focus construction in the scope of the given contrastive topic should hold for the “alternatives under discussion to the participant contrastively topicalized.” In the case of (3a), for instance, there is a potential alternative: [at least three novels (as an alternative to *every novel*)] were read by every student (which is an alternative to *being read by few students*).

The series of examples in (4), a somewhat modified version of a Gyuris-example (2009: 86), presents a case when the function of alternatives makes it possible to account for the unacceptability of a type of SIP-sentence.

⁹ As for the domain of alternatives, the following question can be raised: why such potential property-variants as x (is so diligent that [(s)he] wrote two essays] or [(s)he] submitted at least three abstracts to different conferences] do not serve as alternatives to the property [x (is so diligent that (s)he) read every must-reading], mentioned explicitly in the given SIP-sentence. That is, how can we account for the fact that only reading-event-based properties come up in its meaning? Our solution is as follows. Contrastive topics require foci (Gyuris 2009: 39), and it is an integrative part of focus-semantics that what is in the scope of focus is presupposed. In (3a), this presupposed semantic content is exactly what is formulated in the text in this way: [x read y], because in Hungarian the focused element obligatorily c-commands, and hence takes in its scope, the verb (which is supposed to occupy either the F position itself or another lower head position, see Brody 1990, É. Kiss 1998a, 2002). Thus, it is of distinguished importance that the VP-containing constituent under the fall–rise contour is assumed to be spelt out in not two, but three parts (since the verb is assumed to be extracted from this VP-containing constituent, partially spelt out on the two opposite edges of the sentence).

- (4)a. */MINden regényt \MINden diák elolvasott. *CTOP > $\forall\checkmark_{\text{STUDENT}} > \forall\checkmark_{\text{NOVEL}}$
 every novel.ACC every student away.read.PAST.3SG
 A similar sentence type, which is also unacceptable in English:
 */EVery novel was read by \EVery student.
- a'. Minden diák /MINden regényt elolvasott. $\forall\checkmark_{\text{STUDENT}} > \forall\checkmark_{\text{NOVEL}}$
 every student every novel.ACC away.read.PAST.3SG
 ‘Every student read every novel.’
- b. Minden regényt /MINden diák elolvasott. $\forall\checkmark_{\text{NOVEL}} > \forall\checkmark_{\text{STUDENT}}$
 every novel.ACC every student away.read.PAST.3SG
 ‘Every novel was read by every student.’
- b'. Minden diák elolvasott minden regényt. $\forall\checkmark_{\text{STUDENT}} > \forall\checkmark_{\text{NOVEL}}; \forall\checkmark_{\text{NOVEL}} > \forall\checkmark_{\text{STUDENT}}$
 every student away.read.PAST.3SG every novel.ACC
 Meanings: ambiguous between (4a') and (4b).

The following facts should be observed. Sentence (4a) is ill-formed with the given rising-then-falling intonational pattern. However, its potential basic variant, with the object not revealing its scope overtly (4b'), is perfect. The variant with the object having an overt scope (4a') and its word-order homonym intoned with a non-contrastive topic prosody (4b) are also perfect. The explanation can be based on the fact that the property-type expression [x read every novel] partially spelt out as *minden regényt* ‘every novel. ACC’ as a contrastive topic on the left periphery (4a) does not meet the pragmasemantic criteria of this function. The problem is that the state of affairs of *having read every novel* will be true of any narrower subset of students, once it is true of every student, violating Gyuris’ constraint based on the function of alternatives.

2.4 What can be learnt from Algonquinians?

Let us return to the well-formed type of SIP-sentence presented in (3a). This subsection seeks to explain why language has recourse to the fairly intricate method of partially spelling out contrastively topicalized VP-containing constituents, which, moreover, violates (at least virtually) the principle of preverbal scope visibility, overwhelming in Hungarian (É. Kiss 2002: 25). As regards the communicative interests of addressees, this strategy may seem so catastrophically bad that it ought to disappear from the language.

Our proposal rests on the following two observations concerning the alternatives to the SIP-type (3a). First, the sentence type illustrated in (3b) is scopally ambiguous (one of the operators “takes” its scope only post-spell-out). Second, the scopally disambiguated¹⁰ (3b') type is dispreferred / fairly marked. A potential explanation for this low level of acceptability is the opposition to the following, presumably preferred (Alberti & Medve 2000, É. Kiss 2002), operator order: [Topic > Topic > ... > Quantifier > Quantifier > ... Focus].¹¹ By placing

¹⁰ Unambiguity is ensured by both scope taking operators spelt out in the Grohmannian operator domain, which is the case in the syntactic analysis presented in (3b'). In (3b), the source of ambiguity is that an operator expression is not spelt out in $\Omega\Delta$.

¹¹ An alternative explanation for the marked status of (3b'), raised by the anonymous reviewer of an earlier version of this paper, can be based on a violation of the PF constraint known as Behaghel’s Law of the growing constituents (see e.g. É. Kiss 2008: 132). This explanation can be applied to (3b') on condition that Behaghel’s Law is construed as “so phonetic” a rule that is totally insensitive to spell-out domains (but sensitive only to the surface position of the finite verb stem), since in (3b') the preverb is (in Spec,AspP) in the Grohmannian $\Phi\Delta$ while the quantifier in question is in $\Omega\Delta$ (Grohmann 2003).

the quantifier before the focus-like expression, variant (3a) gives the false impression that it fits the aforementioned natural order. Nevertheless, in spite of the falseness of the impression, constructing SIP-sentences may serve as a useful strategy of language, similar to the inverse conjugation in the Algonquian family of American Indian languages (5a-a’).

- | | |
|---|--|
| <p>(5) a. Ne-waapam-aa-wa.
1SG-see-DIR-3SG
‘I see him.’</p> | <p>a’. Ne-waapam-ek-wa. (Sauk-Fox)
1SG-see-INV-3SG
‘He sees me.’</p> |
| <p>b. A-chwad-i.
1SG-hit-2SG
‘I hit you.’</p> | <p>b’. I-chwad-a. (Luo)
2SG-hit-1SG
‘You hit me.’</p> |

In the Sauk-Fox minimal pair in (5a-a’), the conjugation of the verb shows the person and the number of the subject and the object, for which there are a morpheme position preceding the verb stem and one preceded by it at our disposal. These two positions, however, are not distributed in the straightforward way that one is responsible for subject agreement (say, the position preceding the verb stem) with the other responsible for object agreement (the one following the stem), which is the situation in the Kenyan Luo, for instance (5b-b’). In Sauk-Fox, the morpheme referring to 1SG necessarily precedes the one referring to 3SG, not depending on their association with the two grammatical functions. However, there is a morphematic element that reveals whether the association of grammatical functions with the agreement positions is direct (DIR) or inverse (INV), that is, the morphematic position preceding the position of the verb stem is associated with the subject (5a), or the object (5a’).¹²

In the light of the phenomenon discussed in the previous paragraph, the special contrastive-topic prosody can be taken as the indication of “inverse scope distribution”:¹³ while retaining the optimal [quantifier > focus] word order, we vocally indicate that in the given case this order is just the opposite relative to the factual semantic order. This way the addressee’s communicative interest is served excellently by strongly raising his/her attention to the fact that (s)he is facing an unusual scope order.

3 Towards a two-dimension model of Hungarian information structure

Before returning to SIP-sentences, there is a question concerning the relation between contrastive topics and (alleged) foci in their scopes.

As mentioned in Section 1, we basically follow Gyuris (2009: 39) in assuming that a rising contrastive-topic pattern is necessarily followed by a falling accent, the holder of which can be

¹² The Sauk-Fox phenomenon in question is not to be regarded as a kind of passivization, due to the fact that in the course of passivization the output counterpart of the input subject has such a grammatical function, if any, in which it will not show agreement with the verb.

¹³ This does not mean that the contrastive topic is claimed to be exclusively used for indicating scope inversion with partially spelt-out constituents. As shown in (6b) in Section 3, its basic logicosemantic contribution pertains to referents of DPs – with no other logicosemantic function. If, however, a DP has, say, a quantifier function (due to an appropriate determiner), the special fall-rise contour over it can only be interpreted as a logicosemantic contrastive-topic contribution pertaining to a partially spelt-out matrix constituent. Two different logicosemantic contributions (e.g. quantifier *vs.* contrastive topic) cannot pertain to the same semantic entity (see Section 3).

regarded as some kind of focus. Note that the kind of focus in question is not necessarily the narrow focus of identification by exclusion of alternatives (see also (1b)). In the syntactic literature that Gyuris considered (e.g. Szabolcsi 1997, Alberti & Medve 2000, É. Kiss 2002: 105–150), this “focus” in the scope of the contrastive topic is marked by DistP or QP, which are notations of quantifier projections. We intend to solve this notational tension by sketching a two-dimension model of information structure, essentially keeping on resting upon the basic concepts of the aforementioned works.

In one dimension we consider the four basic logico-pragmatic operator characters (e.g. É. Kiss 1998a, 2002), demonstrated in Table 1. They are defined on the basis of the set-theoretic relation between the (explicit) denotatum of the hosting syntactic constituent and the (implicit) broader set of the entities also relevant in the on-going discourse, that is, the set of the alternatives under discussion. Note that it is also in this dimension that further logico-pragmatic determiners such as *legalább öt* ‘at least five’ and *több, mint négy* ‘more than four’ should be considered.

	✓	¬
∃	OP _{∃✓} : <i>also-quantifier</i>	OP _{∃¬} : <i>contrastive topic</i>
∀	OP _{∀✓} : <i>each-quantifier</i>	OP _{∀¬} : <i>narrow/contrastive focus</i>
	¬: (non-contrastive) topic / verbal modifier	

Table 1. The relevant-set based logico-pragmatic system of operators in Hungarian

The logical symbols in Table 1 concern the (implicit) elements of the relevant set outside the explicit denotatum, that is, the alternatives which are not referred to explicitly. The contribution of the narrow focus (which is known to *identify* entities by *excluding* their alternatives), for instance, is that for *each* alternative participant (∀), what is predicated in the scope of the focused expression does *not* hold true (¬) for them (6b’). As for *is* and *nemcsak* (6a), they indicate that among the alternatives not referred to explicitly there is at least one (∃) which the relevant predication holds for (✓). Note that, in contrast to *is*, *nemcsak* implies the “reversed” [verb stem – preverb] order (compared to the neutral [preverb – verb stem] order). Determiner *mind* (6a’) indicates that the explicit set of denotata coincides with the (potentially broader) relevant set, so no restricting information is required to identify the elements belonging to the denotatum. The contrastive topic (6b), as presented in Table 1, systematically fits in the relevant-set based logico-pragmatic operator system of Hungarian, in the following way: its contribution is that there is (∃) at least one unnamed entity for which the relevant predication does not hold (¬).¹⁴

¹⁴ Gyuris’ (2009: 84) definition of contrastive topic is not the same as our “systematic” definition but is not in conflict with it. As for Büring’s (1997, 2003) corresponding definition, which Gyuris’ one rests on, it is somewhat weaker. Due to page limitation, there is no space for arguing in favor of certain elements of the compact system given in Table 1 which may seem to be oversimplified at first glance; the interested reader is referred to Farkas and Alberti (2018, 4.1), in which, for instance, Büring’s more “permissive” definition mentioned above is constructed by extending our definition via a semantic operation referred to as *epistemic lifting*.

- (6) a. LILla is ELjött. /Nemcsak LILla jött el. b. /LILla \ELjött.
 Lilla also away.come.PAST.3SG not_only Lilla come.PAST.3SG away Lilla away.come.PAST.3SG
 ‘Lilla also came here.’ / ‘Not only Lilla came here.’ b. ‘As for Lilla, she came
 here (in contrast to others).’
- a’. MINden lány ELjött. b’. \LILla jött el.
 each girl away.come.PAST.3SG Lilla come.PAST.3SG away
 ‘Each girl came here.’ ‘It was Lilla who came here.’
- a”. LILla ELjött. b”. LILlánál maradt egy KÖNYV.
 Lilla away.come.PAST.3SG Lilla.ADE stay.PAST.3SG a book
 ‘Lilla came here.’ ‘There stayed a book with Lilla.’

We call the other dimension of information structure the topic–predicate or topic–comment tier, in Brody’s (1990) spirit, to some extent. The intuition underlying the topic edge: “given in the current moment of the on-going conversation,” “which is being talked about,” “which the new piece of information is anchored to.” The new information is hosted in the predicative/comment zone. It is obviously in the the context of a discourse that the topic–predicate tier can be captured. In a discourse the unquestionable instances of topics and foci such as those italicized in (7b) and (8a-b), respectively, help in arguing, on the basis of structural analogy in Büring’s (1997, 2003) spirit, for the topic status of the *also*-quantifier in (7c) and the *each*-quantifier in (7d), and for the predicative/comment status of the *also*-quantifier in (8c) and the *each*-quantifier in (8d). It is verified in Szeteli and Alberti (2018) that there are significant differences in certain prosodic features between *also/each*-quantifiers used as topics and the corresponding *also/each*-quantifiers that belong to the predicative/comment portion of the sentence.

- (7)a. Köszönöm érdeklődő kérdéseted! Úgy jellemezném a barátaimat, hogy...
 thank.1SG inquiring question.POSS.2SG as characterize.COND.1SG the friend.POSS.1SG.ACC that
 ‘Thank you for your inquiring question. I can characterize my friends the way that...’
- b. ... *Anti* imádja a teniszt, *Béci* szeret sakkozni és pingpongozni,...
 Anti adore.3SG the tennis.ACC Béci like.3SG play_chess.INF and table_tennis.INF
 ‘... Anti likes tennis, Béci gladly plays chess and table tennis,...’
- c. ... *Csaba is* szeret pingpongozni,... Top_∃✓
 Csaba also like.3SG table_tennis.INF
 ‘...Csaba also gladly plays table tennis, ...’
- d. ... és *mindhárom barátom* odavan Scarlett Johanssonért. Top_∀✓
 and all_three friend.POSS.1SG is_crazy Scarlett Johansson.CAU
 ‘...and *all three* of my friends are crazy about Scarlett Johansson.’

Thus, the discourse presented in (7) serves the purpose of illustrating different types of topic via the italicized constituents, while in the discourse in (8) the italicized constituents belong to the predicative/comment portion of the topic–predicate tier.

- (8) a. Azt gondolod, hogy csak *Béci* szeret pingpongozni,...
 that.ACC think.2SG that only Béci like.3SG table_tennis.INF
 ‘Do you think that it is only Béci who gladly plays table tennis,...’
- b. ... és csak *Anti* van oda Scarlett Johanssonért? ...
 and only Anti is there Scarlett Johansson.CAU
 ‘...and it is only Anti who is crazy about Scarlett Johansson? ...’
- c. ... \CSaba is szeret pingpongozni,...
 Csaba also like.3SG table_tennis.INF
 ‘...Csaba also gladly plays table tennis,...’ Pred \exists ✓
- d. ... és \MINDhárom barátom odavan Scarlettért.
 and all_three friend.POSS.1SG is_crazy Scarlett.CAU
 ‘...and all three of my friends are crazy about Scarlett.’ Pred \forall ✓

We conclude the section with a table, an augmented version of Table 1. It presents (by furnishing the topic-type operators with a white background) that the two dimensions are not independent: only the quantifier types discussed above are not committed inhabitants of one or the other edge of the topic–predicate tier. As for the rubrics with a black background, the operators placed there are such that their holders are immediately left-adjacent to the verb stem, realizing this way a syntactic narrow-focus word order. The lighter rubrics show that a quantifier never triggers the syntactic narrow-focus word order. Further commenting and elaboration of the two-dimension information structure presented in Table 2 should be left to other papers.

	✓			¬
\exists	<i>is</i> ‘also’	<i>is</i> ‘also’	<i>nemcsak</i> ‘not only’	Contrastive topic
\forall	<i>mind</i> ‘each’		<i>mind</i> ‘each’	Contrastive/narrow focus (identification by exclusion)
\emptyset	Topic			Verbal prefix/modifier

Table 2. The relation between the relevant-set based logico-pragmatic functions and the topic/predicate status of operators in Hungarian

4 A brief review of Gyuris’ (2009) basic SIP-sentence types

It would require the size of a book to provide a systematic analysis in our approach of all the SIP-sentence types that Gyuris (2009) has overviewed. Farkas and Alberti’s (2018) paper is an attempt to thoroughly review at least the basic types. The size of this paper permits only a brief review of a few types that Gyuris (2009) has discussed with the purpose of showing the reader what our approach can contribute to Gyuris’ analyses.

First of all, however, it is to be emphasized that the verification of our approach does not require at all that we should systematically reanalyze all the SIP-types analyzed by Gyuris (2009), because our contribution is in no conflict with either the whole of the Gyuris-theory or any of its parts, but provides its syntactic supplement. The idea of a partially spelt out complex constituent on the left periphery of SIP-sentences simply supplies the missing link to the explanation of Gyuris’ observation that a well-formed SIP-sentence is necessarily

associated with a well-formed basic variant with no contrastive topic. Gyuris' (2009: 84, see (65c)) function of alternatives also readily fits in our approach. Moreover, its introduction does not require an independent stipulation in our system since the contrastively topicalized (partially spelt out) constituent on the left periphery of SIP-sentences is necessarily furnished with the there-exist-negative-alternatives effect defined in Table 1 in section 3.

The most systematic review of the combinations of different contrastive topics (three types) with different “foci”, as referred to by Gyuris (2009) (six predicative types, as we call them), is carried out in her book's section 3 (examples (59-76)). Two of her examples will serve as representatives of this area. Note that the translations provided in this section are not the same as hers but have been changed so that the contrastive-topic meaning factors be explicit.

Let Gyuris' example (59), referred to in (9b) as (GYIII.59), be our first SIP-sentence in this section. Note at this point that several SIP-sentences have a reading with straight scope relations but these versions will not be considered here, due to space limitation. The interesting reading of (9b) is the one in which the two narrow foci have the scope relation presented in (9a), in which the scope-revealing basic variant of the SIP-version of (9b) can be seen. As discussed, such variants should serve as the point of departure for constructing the syntactic structure of SIP-sentences.

- (9) a. $[\text{FocP} \setminus \text{MArit} \text{ látogatta } [\text{FocP} \setminus \text{ÖT} \text{ fiú} \dots [\text{AspP} \text{ meg} \dots]]]$. $\text{PRED}_{\forall-} > \text{PRED}_{\forall-}$
 Mari.ACC visit.PAST.3SG five boy perf
 ‘It is Mari who has been visited by exactly five boys.’
- b. $[\text{CTopP} / [\text{FocP} \text{ ÖT} \text{ fiú} \dots [\text{AspP} \text{ meg} \dots]] \dots [\text{FocP} \setminus \text{MArit} \text{ látogatta } [\text{FocP} \setminus \text{ÖT} \text{ fiú} \dots [\text{AspP} \text{ meg} \dots]]]]$.
 five boy Mari.ACC visit.PAST.3SG perf
 (GYIII.59): $\text{TOP}_{\exists-} > \text{PRED}_{\forall-} > \text{PRED}_{\forall-}$
ca. ‘As for the rumor that someone has been visited by exactly five boys, it is Mari that this holds for.’

As for the details, in (9a) the point of spell-out of the verb is right-adjacent to the upper focused constituent above the narrower FocP. Note that it is irrelevant to us where the verb has further copies in the structure. What is relevant is that the phonetic material of the narrower FocP consists of the subject and the preverb. This material will be partially spelt out on the left periphery of the SIP-variant in (9b), in the way that the subject is spelt out there while the preverb is spelt out on the right periphery of the sentence in its original position within the narrower FocP (presumably in Spec,AspP). The contrastively topicalized phonetic material of the subject only serves as the representative of the topicalized VP-containing constituent referred to as a rumor in the corresponding translation.

The SIP-sentence presented in (10b) is such that the phonetic material with the characteristic contrastive-topic prosody is the upward monotonic expression *more than five boys* (Gyuris 2009, see also Barwise & Cooper 1981). It has a predicative status in the topic-comment tier, which is corroborated by the word-order variant presented in (10c), in which the given expression is shown to trigger the Hungarian syntactic context of the narrow focus with the special surface position of the verb stem. Thus the earliest phase of the derivation, of the structures given in (10a-c), is the one presented in (10c) with the *more-than*-expression in focus. Then comes the structure in (10a), in which another focus takes scope over this former FocP. Finally, the structure of the SIP-sentence in (10b) can be described as follows. Even the upper FocP gets in the scope of another operator, namely, a contrastive topic. The Spec,CTop

is virtually occupied by the *more-than*-expression, but factually this phonetic material is only the representative of a property-type VP-containing constituent, referred to as a rumor in the English translation of (10b). Its entire phonetic material consists of the elements of the lower FocP in (10a), but the right branching preverb is not spelt out on the left periphery of the sentence in (10b).

- (10)a. [_{FocP} \M_{Ar}it látogatta [_{FocP} \TÖBB, mint öt fiú ... [_{AspP} meg ...]]]. PRED_{∇-1} > PRED_↑
 Mari.ACC visit.PAST.3SG more than five boy perf
 ‘It is Mari who has been visited by more than five boys.’
- b. [_{CTopP} / [_{FocP} Tm_{öf} ... [_{AspP} meg ...]] ... [_{FocP} \M_{Ar}it látogatta [_{FocP} \Tm_{öf} ... [_{AspP} meg ...]]]].
 more_than_five_boy Mari.ACC visit.PAST.3SG perf
 ‘As for the rumor that someone has been visited by more than five boys, it is Mari that this holds for.’ [Tm_{öf} = TÖBB, mint öt fiú]
- c. [_{FocP} \TÖBB, mint öt fiú látogatta [_{AspP} meg ... [_{VP} látogatta meg Tm_{öf} M_{Ar}it]]].
 more than five boy visit.PAST.3SG perf Mari.ACC
 ‘Mari has been visited by more than five boys.’

The SIP-sentence presented in (11b) contains a *falsum focus*, which also requires the right-adjacent placement of the verb stem. In the (somewhat marked) basic variant, given in (11a), the *each*-expression is in the scope of the falsum focus, in total accordance with the scope order that the corresponding translation expresses. It is shown in (11b) that a VP-containing contrastively topicalized expression can take a falsum focus in its scope, and, as in several earlier examples, its single part not spelt out on the left periphery is the preverb, which is spelt out in the lower position of the proposition, practically on the right periphery of the sentence.

- (11)a. [?]Sajnos [_{PredP} \NEM érkezett [_{eachP} \MINDenki ... [_{AspP} meg ...]]]. PRED_{FALSUM} > PRED_∇
 unfortunately not arrive.PAST.3SG everyone perf
 ‘Unfortunately, it is not true that everybody arrived.’
- b. [_{CTopP} / [_{eachP} MINDenki ... [_{AspP} meg ...]] sajnos [_{PredP} \NEM érkezett [_{eachP} \MINDenki ... [_{AspP} meg ...]]]].
 everyone unfortunately not arrive.PAST.3SG perf
 (GYI.54a): TOP_{∇-1} > PRED_{∇-1} > PRED_{∇-1}
 ‘As for the optimistic assumption that everybody arrived, unfortunately, that is not true.’

In (12b), a SIP-sentence originally discussed by Alberti and Medve (2000) and then by Gyuris (2009, (II.32)), the *each*-expression is combined with the type of focus identifying participants by excluding their alternatives. The scope relation is explicit in the basic variant presented in (12a): it is the focus that has the broader scope. The SIP-variant seems to show the usual order with the quantifier preceding the focus (cf. 2.4), but spuriously. The broadest scope belongs to a proposition-based expression referred to as an assumption in the translation given in (12b), whose left periphery is spelt out on the left periphery of the sentence. It is a preverb, again, which is spelt out in its original Spec,AspP position, practically on the right periphery of the sentence.

- (12)a. [_{FocP} \M_{Ar}it mutattam [_{eachP} \MINDhárom fiúnak ... [_{AspP} be ...]]]. PRED_{∇_¬} > PRED_{∇_✓}
 Mari.ACC show.PAST.1SG all_three boy.DAT into
 ‘It is Mari that I introduced to all the three boys.’
- b. [_{CTopP} / [_{eachP} MINDhárom fiúnak ... [_{AspP} be ...]] ... [_{FocP} \M_{Ar}it mutattam
 all_three boy.DAT Mari.ACC show.PAST.1SG
 [_{eachP} \MINDhárom fiúnak ... [_{AspP} be ...]]]. (GYII.32): TOP_{∃_¬} > PRED_{∇_¬} > PRED_{∇_✓}
 into
 ‘As for the assumption that I introduced someone to all the three boys, it is Mari that this holds for.’

The SIP-sentence in (13b) is similar to the one given in (10b) in containing two narrow foci. The novelty is that, in the lack of any preverb or other phonetic material in the contrastively topicalized VP-containing constituent, no part of it is spelt out on the right periphery of the sentence.

- (13)a. [_{FocP} \János eszik [_{FocP} \CSAK rizst ...]]. PRED_{∇_¬} > PRED_{∇_¬}
 János eat.3SG only rice.ACC
 ‘It is János who eats only rice.’
- b. [_{CTopP} / [_{FocP} CSAK rizst ...] [_{FocP} \János eszik [_{FocP} \CSAK rizst ...]]].
 only rice.ACC János eat.3SG
 (GYI.54d): TOP_{∃_¬} > PRED_{∇_¬} > PRED_{∇_¬}
 ‘As for the rumor that someone eats only rice, it is János that this holds for.’

The section concludes with another example containing two foci if (i) we follow the usual treatment of Hungarian *wh*-constituents as narrow foci (14b), and (ii) the subject is analyzed as a narrow focus, which can be argued for on the basis of the conceptualization presented in the translation in (14b). The further details are then the same as in several earlier analyses we provided: the lower FocP in the basic variant in (14a) should be lifted to a Spec,CTop position on the left periphery of the sentence, where it is spelt out partially.

- (14)a. [_{FocP} \KIT csókolt [_{FocP} \PEti ... [_{AspP} meg ...]]]? PRED_{∇_¬} > PRED_{∇_¬}
 who.ACC kiss.PAST.3SG Peti perf
 ‘Who was kissed just by Peti?’
- b. [_{CTopP} / [_{FocP} PEti ... [_{AspP} meg ...]] [_{FocP} \KIT csókolt [_{FocP} \PEti ... [_{AspP} meg ...]]]]?
 Peti who.ACC kiss.PAST.3SG perf
 (GYII.23): TOP_{∃_¬} > PRED_{∇_¬} > PRED_{∇_¬}
 ‘It is Peti that I would like to ask a question about, namely: who did he kiss?’

5 Towards constraints on partial spell-out

After overviewing how the intricate word orders, and the underlying scope relations, of SIP-sentences can be accounted for by means of partial spell-out, appropriate constraints should be applied on this powerful technique in order to avoid the danger of overgeneration.

First of all, in our approach, only XPs are spelt out partially, similar to Surányi (2009). This way our method can be regarded as a “technical reincarnation” of Koopman and Szabolcsi’s (1998) remnant movement approach, also applied only to phrases (see also Szabolcsi 2018).

Suppose then that the general build-up of the VP-containing constituent that plays a crucial role in our proposal is $[X_1P X_2P \dots X_nP \text{ (preverb) } V\dots]$ where each X_iP c-commands and takes scope over the corresponding right periphery $[X_{i+1}P \dots]$ of the expression. We claim that the principle of preverbal scope visibility, overwhelming in Hungarian (É. Kiss 2002: 25), manifests itself as follows: it is excluded that $[X_{i+1}P \dots]$ is spelt out on the left periphery of the matrix sentence with the segment $[X_1P X_2P \dots X_iP]$ spelt out on the right periphery. In order to avoid confusion, only this natural split is permitted: $[X_1P X_2P \dots X_iP]$ is spelt out on the left periphery while the right segment $[X_{i+1}P \dots]$ on the right. We also propose an even stricter restriction, one of a phonetic nature: only one XP can appear under the fall–rise contour. Therefore, only the segment $[X_1P]$ can be spelt out on the left periphery, implying that the right segment, spelt out on the right periphery, will be $[X_2P \dots]$. Remember that the phonetic material of neither segment contains the finite verb since it is extracted in order to take part in the construction of the focus (which has been claimed to be an inevitable part of SIP-sentences due to the presence of a contrastive topic).

A further constraint can be formulated with reference to the two-dimension model of the information structure of the Hungarian sentence, sketched in Section 3.

As a point of departure, remember that splitting does not influence scopal ambiguity. In the case of the deverbal nominal constructions in (2a-b') in 2.1, two word orders were considered, but both could be associated with both readings (depending on intonational differences). That is, the fact that in the word order in (2b-b') the quantifier appears separately does not imply scopal disambiguation. Instead, independently of word order, the external scope taking of the quantifier could be attributed to “invisible” feature percolation.

The word-order alternatives in (15a-a'') also illustrate that splitting does not influence scopes. In the present case, a non-deverbal nominal construction is considered, which, as discussed in Farkas, Szabó and Alberti (2017), cannot be associated with a reading with the quantifier having a noun-phrase-internal scope (see the ‘unavailable reading’ below). The quantifier possessor in question can be interpreted only with external scope, either split from its possessee (15a'') or not (15a-a'), either placed preverbally (15a'-a'') or not (15a) (NB: the external scope in every case can be accounted for by the same, aforementioned, “invisible” feature percolation). This shows that the word-order position of the given quantifier is not determined in the relevant-set based logico-pragmatic dimension but in the (partly independent) topic–comment dimension. What makes things even more complicated is that the reference to the two boys in (15a'') can either belong to the topic zone, or to the comment zone, as in (7) and (8) in Section 3. What is relevant here is that sentences (15a), (15a') and (15a'') are not different in the relevant-set based logico-pragmatic dimension but different in respect of topic–comment distribution, and it is this latter dimension whose elaboration partial or non-partial spell-out is responsible for, as shown in (15c-c''). This approach can be regarded as a constraint on partial spell out due to the fact that the output of the spell-out mechanism should produce segments which can be interpreted as “sensible” units within topic–comment tiers (Varga 2016).

- (15) a. Ellopták mindkét fiam(nak a) kocsiját.
 steal.PAST.3PL both son.POSS.1SG.(DAT) the car.POSS.ACC
 (a-a’): ‘It holds for each of my two sons that the car owned by him has been stolen.’
 unavailable reading in (a-a’): ‘The car owned by my two sons has been stolen.’
- a’. Mindkét fiam(nak a) kocsiját ellopták.
 both son.POSS.1SG.(DAT) the car.POSS.ACC steal.PAST.3PL
- a’’. Mindkét fiamnak ellopták a kocsiját.
 both son.POSS.1SG.DAT steal.PAST.3PL the car.POSS.ACC
- b. Ellopták Gizi(nak a) kocsiját.
 steal.PAST.3PL Gizi.POSS.1SG.(DAT) the car.POSS.ACC
 (b-b’): ‘Gizi’s car has been stolen.’
- b’. Gizi(nak a) kocsiját ellopták.
 Gizi.POSS.1SG.(DAT) the car.POSS.ACC steal.PAST.3PL
- b’’. Gizinek ellopták a kocsiját.
 Gizi.POSS.1SG.DAT steal.PAST.3PL the car.POSS.ACC
- c. [_{ωP} [ellopták [X-nek a_D kocsiját]]] → (15a,b)
- c’. [_{ωP}[X-nek a_D kocsiját] [ellopták [~~X-nek a_D kocsiját~~]]] → (15a’,b’)
- c’’. [_{ωP}[X-nek a_D kocsiját] [ellopták [~~X-nek a_D kocsiját~~]]] → (15a’’,b’’)

 X-DAT the car.POSS.ACC steal.PAST.3PL X-DAT the car.POSS.ACC

It is a consequence of this approach that a possessive construction can undergo partial spell-out even if the possessor is (no “more” than) a (non-contrastive) topic, see (15b-b’). The analysis in (15c-c’’) pertains to this case, too. The difference between the three versions, again, cannot be captured in models of logics, but can be interpreted in the topic–comment dimension. In (15b), the topic zone is empty, in (15b’), reference to the specific car appears there (the speaker wants to say something about a car), while in (15b’), Gizi is referred to in the topic zone (the speaker wants to speak about Gizi).

We have thus got a partial spell-out based alternative to Szabolcsi’s (1983) proposal which can explain the same grammatical observations; whose general consequences should be overviewed in the future.¹⁵ It also belongs to future tasks to collect, beyond the syntactic and pragma-semantic constraints raised in this section, further (language-specific and/or universal) constraints on partial spell-out (and/or remnant movement). This task is of distinguished importance as it is the cost to be payed for eliminating the scope-inversion puzzle.

¹⁵ The word-order variant in (i) illustrates an alternative whose analysis can also be based upon partial spell-out. As argued for in Alberti, Farkas and Szabó (2015), the possessor is base-generated after the possessee, which is the head of the possessive construction. The given word order can be accounted for by assuming that what is partially spelt out is this word-order variant of the possessive construction, see (ii). If the possessor–possessee order is construed as the consequence of a DP-internal topicalization, the analysis in (15c) should be replaced with the more complex one presented in (iii).

- i. Mindkét kocsiját ellopták Gizinek.
 both car.POSS.ACC steal.PAST.3PL Gizi.DAT
 ‘Gizi’s both cars have been stolen.’
- ii. [_{ωP}[a_D kocsiját X-nek] [ellopták [a_D kocsiját X-nek]]]
 the car.POSS.ACC X-DAT steal.PAST.3PL the car.POSS.ACC X-DAT
- iii. [_{ωP}[X-nek a_D kocsiját X-nek] [ellopták [X-nek a_D kocsiját X-nek]]]

6 Conclusion

Our point of departure was that Gyuris' (2009) solution to the “scope inversion” puzzle in Hungarian rests on the following, *unexplained*, observation: “only those Hungarian sentences containing a contrastive topic are well-formed that have well-formed counterparts with the contrastive topic expression in postverbal position.” We claimed that the Gyuris-style “well-formed counterpart” can serve as an initial state of derivation from which the problematic word-order variant can be constructed by moving a VP-containing constituent, which then should be spelt out on the left periphery by partial spell-out. The crucial point is that in this way the inverse-scope puzzle simply vanishes, because, within the VP-containing constituent, the scope order between noun phrases does not change through the whole process of derivation, and what takes the broader sentential scope is factually a contrastively topicalized proposition-based property-type semantic content, and not a noun-phrase-like one.

After a short introduction (Section 1), it was as early as in Section 2 that our partial-spell-out based proposal was thoroughly described and argued for. Section 3 was devoted to the question whether there must necessarily be a focus projection in the scope of a contrastive topic. We claimed that this generalization can be retained but at the cost of considering a two-dimension model of Hungarian information structure. We returned to the “scope inversion” puzzle in Section 4, which provided a brief review of Gyuris' (2009) basic SIP-sentence types. In Section 5 we take the first steps towards constraining the otherwise overgenerating *partial spell-out* mechanism.

References

- Alberti, G. (2004): Climbing for Aspect – with no Rucksack. In: É. Kiss, K & van Riemsdijk, H. (eds.): *Verb Clusters: A study of Hungarian, German and Dutch. Linguistics Today 69*. Amsterdam/Philadelphia: John Benjamins, 253–289.
- Alberti, G. & Farkas, J. (2017): Right Branching in Hungarian: Moving Remnants. In: Emonds, J. & Janebová, M. (eds.): *Language Use and Linguistic Structure, Proceedings of the Olomouc Linguistics Colloquium 2016*. Olomouc: Palacký University, 209–224.
- Alberti, G. & Farkas, J. (2018): Modification. In: Alberti, G. & Laczkó, T. (eds.): *Syntax of Hungarian. Nouns and noun phrases*. Amsterdam: Amsterdam University Press, 775–895.
- Alberti, G., Farkas, J. & Szabó, V. (2015): Arguments for Arguments in the Complement Zone of the Hungarian Nominal Head. In: É. Kiss, K., Surányi, B. & Dékány, É. (eds.): *Approaches to Hungarian 14*. Amsterdam: John Benjamins, 3–36.
- Alberti, G. & Medve, A. (2000): Focus Constructions and the “Scope-inversion Puzzle” in Hungarian. In: Alberti, G. & Kenesei, I. (eds.): *Approaches to Hungarian 7*. Szeged: JATEPress, 93–117.
- Barwise, J. & Cooper, R. (1981): Generalized Quantifiers and Natural Language. *Linguistics and Philosophy 4*, 159–219.
- Bródy, M. (1990): Remarks on the Order of Elements in the Hungarian Focus Field. In: Kenesei, I. (ed.): *Approaches to Hungarian 3*. Szeged: JATEPress, 95–121.
- Brody, M. & Szabolcsi, A. (2003): Overt Scope in Hungarian. *Syntax 6.1*, 19–51.
- Büring, D. (1997): *The Meaning of Topic and Focus. The 59th Street Bridge Accent*. London & New York: Routledge.
- Büring, D. (2003): On D-Trees, Beans, and B-Accents. *Linguistics and Philosophy 26*, 511–545.

- É. Kiss, K. (1998a): Multiple topic, one focus? *Acta Linguistica Hungarica* 45, 3–30.
- É. Kiss, K. (1998b): Identificational focus versus information focus. *Language* 74, 245–273.
- É. Kiss, K. (2002): *The Syntax of Hungarian*. Cambridge: Cambridge University Press.
- É. Kiss, K. (2008): Tagadás vagy egyeztetés? A senki, semmi típusú névmások szórendi helye, jelentése és hangsúlyozása. *Magyar Nyelv* 104.2, 129–143.
- Farkas, J. & Alberti, G. (2018): A kontrasztív topik inverzhatókori rejtélye – ami nincs is. In: *Jelentés és nyelvhasználat* 5, 65–92.
- Farkas, J., Szabó, V. & Alberti, G. (2017): Information-Structurally (Un)Ambiguous Nominal Constructions in Hungarian. *Finno-Ugric Languages and Linguistics* 6.2, 38–88.
- Grohmann, K.K. (2003): *Prolific Domains: On the Anti-Locality of Movement Dependencies*. Linguistik Aktuell 66. Amsterdam: John Benjamins.
- Gyuris, B. (2009): *The Semantics and Pragmatics of the Contrastive Topic in Hungarian*. Budapest: Lexica.
- Horvath, J. (1997): The status of ‘wh-expletives’ and the partial wh-movement construction of Hungarian. *Natural Language and Linguistic Theory* 15, 509–572.
- Kayne, R. (1994): *The antisymmetry of syntax*. Cambridge, MA.: MIT Press.
- Kenesei, I. (1998): Adjuncts and arguments in VP-focus. In: *Acta Linguistica Hungarica* 45, 61–88.
- Koopman, H. & Szabolcsi, A. (1998): *Verbal complexes*. Cambridge, MA.: MIT Press.
- Laczkó, T. (2000): Az ige argumentumszerkezetét megőrző főnévképzés. In: Kiefer, F. (ed.): *Strukturális magyar nyelvtan 3*. Budapest: Akadémiai Kiadó. 293–407.
- Laczkó, T. (2016): *Aspects of Hungarian Syntax from a Lexicalist Perspective*. Akadémiai doktori értekezés. Debreceni Egyetem.
- May, R. (1985): *Logical Form: Its Structure and Derivation*. Cambridge: MIT Press.
- Surányi, B. (2009): “Incorporated” locative adverbials in Hungarian. In: É. Kiss, K. (ed.): *Adverbs and Adverbial Adjuncts at the Interfaces*. Berlin: Mouton de Gruyter, 39–74.
- Surányi, B. & Turi, G. (2017): Focus and Quantifier Scope. In: van der Hulst, H. & Lipták, A. (eds.): *Approaches to Hungarian* 15. Amsterdam: John Benjamins, 209–238.
- Szabolcsi, A. (1983): The possessor that ran away from home. *The Linguistic Review* 3, 89–102.
- Szabolcsi, A. (1997): Strategies for Scope Taking. In: Szabolcsi, A. (ed.): *Ways of Scope Taking*. Dordrecht: Kluwer, 109–154.
- Szabolcsi, A. (2018): Strict and Non-strict Negative Concord in Hungarian: A Unified Analysis. In: Bartos, H. (et al.) (eds.): *Boundaries Crossed, at the Interfaces of Morphosyntax, Phonology, Pragmatics and Semantics*. Cham: Springer.
- Szeteli, A. & Alberti, G. (2018): The interaction between relevant-set based operators and a topic–predicate dimension. *LingBaW* 4, 161–172.
- Uriagereka, J. (1999): Multiple Spell-Out. In: Epstein, S. D. & Hornstein, N. (eds.): *Working Minimalism*. Cambridge, MA.: MIT Press, 251–282.
- Varga, L. (2016): The Intonation of Topic and Comment in the Hungarian Declarative Sentence. *Finno-Ugric Languages and Linguistics* 5.2, 46–77.