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The Interpretation of Adverbial Quantifiers in Contrastive Topic in Hungarian

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1. Introduction

This paper aims to investigate the principles governing the semantics and pragmatics of contrastive topics in Hungarian, more precisely, the interpretation of sentences containing an adverb of quantification in contrastive topic position. According to Büring (1997), sentences with contrastive topics are only felicitous if the set of alternative propositions they give rise to contains at least one the truth value of which does not follow from that of the proposition expressed by the original sentence. This observation is confirmed by the Hungarian data under investigation, but the set of propositions which contains the alternatives to the original one is generated in these cases in a completely different way than it is proposed by Büring. Consequently, the data to be presented here call into question the cross-linguistic applicability of Büring's principles of generating alternatives to propositions with contrastive topics, and argues for a more general formulation of such rules. It is hoped, therefore, that the observations presented here will help identify the common cross-linguistic principles of the use and interpretation of contrastive topics, which might be obscured by concentrating only on Germanic data.

More specifically, the paper aims to challenge the cross-linguistic applicability of some of the principles proposed by Büring (1997) by comparing and contrasting two sets of data. On the one hand, Hungarian sentences containing a temporal subordinate clause and an adverb of quantification in the contrastive topic position will be contrasted with those where the adverb occupies other preverbal operator (i.e., topic and focus) positions in the main clause. On the other hand, the interpretations and implicatures associated with

Hungarian sentences with contrastive topics will be compared to those of Buring's German (and English) examples. In addition, some inconsistencies in the cross-linguistic use of the term *focus* will be pointed out and some terminological suggestions will be made to remedy it.

The structure of the paper is as follows. In Section 2 the core data to be discussed is presented, in Section 3 some facts are outlined about the syntactic structure of Hungarian sentences and the position occupied by contrastive topics, together with the rules of inter- and intra-sentential licensing of contrastive topic constituents. Section 4 deals with the semantic interpretation and implicatures of adverbial quantifiers in contrastive topic, and Section 5 contains some terminological and methodological suggestions. The paper closes with the conclusions in Section 6.

2. Data

The phenomena to be discussed in the paper can be illustrated with the following examples:

- (1) Péter [_{CT} kétszer] [_F akkor] ment moziba, [_F amikor szabadnapos volt].
 Peter twice then went movies-into when has-a-day-off was
 a. 'It was on the day he had a day off that Peter went to the movies twice.'
Implicature: On other days, he went to the movies a different number of times.
 b. 'It happened twice that Peter had a day off and went to the movies.'
Implicature: In some other circumstances, the number of times when he went to the movies was different.
- (2) Péter [_{CT} mindig] [_F akkor] ment moziba, [_F amikor szabadnapos volt].
 Peter always then went movies-into when has-a-day-off was
 'It was always when he had a day off that Peter went to the movies.'
Implicature: In some other circumstances the number of times or the frequency of Peter going to the movies was different.

Here the adverbs of quantification *kétszer* 'twice' and *mindig* 'always', respectively, are pronounced with a rising intonation pattern and are therefore assumed to occupy the contrastive topic position of the main clause, or, in the more precise syntactic terminology of Alberti and Medve (1998), they are situated in the specifier position of the Contrastive Topic Phrase. The complex sentences in (1) and (2) also involve focusing the temporal subordinate clause. This is achieved by placing the pronominal head *akkor* 'then' of the

Adverbial Phrase which the clause forms part of into the focus position of the main clause.¹ Sentence (1) above, which contains the „weak” adverb of quantification *kétszer* ‘twice’, has two equally plausible readings depending on whether the subordinate clause serves as a temporal background for possibly several eventualities, or provides the restriction of the adverb of quantification.

On both of its readings, sentence (1) gives rise to an implicature according to which in different circumstances the number (ratio) of movie-goings might have been different. (2), which contains the essentially quantificational adverbial *mindig* ‘always’, has only one interpretation, according to which all the eventualities of Peter having a day off are such that they are associated with eventualities of him going to the movies. The implicature associated with the sentence is that other types of eventualities which could be considered alternatives to having a day off are associated with a different number or different frequency of movie-goings.

Examples (3) and (4), a question and a declarative sentence, illustrate the possible contexts in which the above types of sentences can appear:

- (3) Péter [_F mikor] ment mindig/kétszer moziba?
 Peter when went always/twice movies-into
 ‘When did Peter always go to the movies?/When did Peter go to the movies twice?’
- (4) Péter mindig/kétszer moziba ment, amikor hamar végzett a munkával.
 Peter always/twice movies-into went when early finished the work-with
 ‘Always/twice when he finished work early Peter went to the movies.’

This closes the illustration of the type of examples relevant to the discussion here. The next section provides some more detailed comments on the syntax of contrastive topics and on the conditions licensing their appearance in Hungarian sentences.

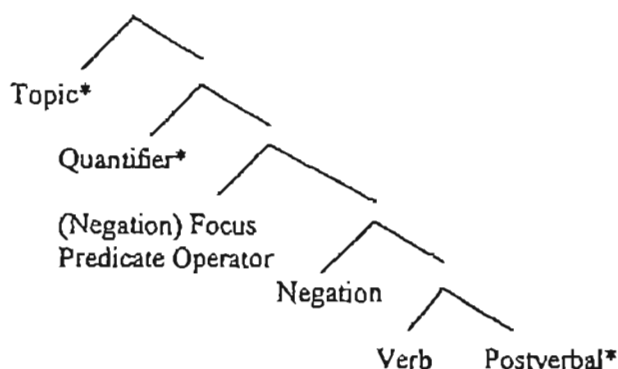
3. Remarks on the syntax and discourse-licensing of Hungarian contrastive topics

The syntactic structure of the Hungarian sentence has been claimed to contain a non-configurational verb-initial part and certain preverbal operator positions, which are illustrated in (5) below (from Szabolcsi (1997)), where the types of maximal projections

¹ The impossibility of focusing a whole clause is accounted for by É. Kiss (p. c.) by claiming that the focus cannot be a complex expression and it has to end in a head, and on the basis of phonological requirements by Kenesei (1993).

are left unspecified, and only the names associated with their specifier positions, hosting different types of operators, appear. (The asterisk indicates here that more than one constituents of the same type can appear next to each other.) The semantic properties of natural language quantifiers are characteristic of the particular positions they occupy, since, for example, constituents appearing in Topic have to be specific, while distributive universals like *minden gyerek* 'every child' cannot appear in Topic without an accompanying rising intonation pattern characterising examples (1) and (2) or in Focus, only in the Quantifier position (Szabolcsi (1997)).

(5)



The constituents pronounced with the rising contrastive topic intonation, which are the target of our investigations here, are not marked explicitly in the structure in (6), since, as shown by Alberti and Medve (1998), they are also situated among ordinary Topics. As opposed to their uninteresting syntactic behaviour, the distributional restrictions on the appearance of certain types of constituents as contrastive topics is particularly fascinating, since, instead of abstract semantic requirements, the licensing of particular expressions in this position depends on previous discourse, certain intra-sentential factors and the implicatures associated with the sentence. Discourse licensing manifests itself in the fact that sentences with adverbial quantifiers in contrastive topic always have to be preceded by an interrogative or declarative sentence in which the same adverbial appears, as it was illustrated in (3) and (4) above. This contrasts with the case of determiner quantifiers, some types of which can be preceded by a sentence with an 'alternative' determiner or the bare noun, as the exchange in (6) illustrates:

- (6) A: Megjöttek a gyerekek?
 pv-came the children
 'Have the children arrived?'

- B: [_{CT} Minden gyerek] nem jött meg.
 every child not came pv
 'Every child didn't arrive.' (= 'Not every child arrived.')

As far as the requirements on other constituents of the sentence are concerned, contrastive topics are only licensed in a Hungarian sentence if they are immediately followed by at least one (but possibly more) stressed preverbal operator or a stressed verb, which are not necessarily situated in the syntactic focus position (for some types of these constituents the focus position would not even be available, as mentioned above)².

The above observation about co-occurrence requirements could be incorporated into existing theories of contrastive topic and of Hungarian syntax in two different ways. We either have to relax the requirement of von Stechow (1994) and Büring (1997), according to which a focus has to accompany a contrastive topic in the same sentence, or, we have to distinguish between the notions of 'semantic' focus and 'syntactic' focus in the description of Hungarian.³ Here I would opt for the first option, and claim that contrastive topics are always followed by a stressed constituent later in the sentence, which in some languages is realized as the focus. In Section 5 I will propose a new term to cover the constituents compulsorily following the contrastive topic which are pronounced with heavy stress⁴ and signalled in (7), (8b) and (9b) by underlining.

- (7) [_{CT} Legalább egy könyvet] [o minden gyerek] elolvasott.
 at least one book-acc every child pv⁵-read
 'Every child read at least one book.'⁶
- (8) A: János egy diákot [_F kétszer] buktatott meg.
 John one student-acc twice failed pv
 'There is a student John failed twice.'

² Szabolcsi (1981), however, claims that contrastive topics have to be followed by a focus or negation, which the examples in (7)-(9) below contradict.

³ This move might prove problematic considering the fact that É. Kiss (1998) identifies a postverbal focus called information focus whose properties differ from those of the preverbal, identificational focus. It is not clear to me whether a preverbal, accented constituent which is situated outside the syntactic focus position could also be subsumed under information focus or would constitute a third category.

⁴ The fact that these constituents in Hungarian have to follow the contrastive topic immediately is just a language-specific requirement which does not influence their semantic interpretation.

⁵ pv = verbal prefix

⁶ Quantifiers in contrastive topic in Hungarian necessarily take narrow scope, the possible reasons for this are not going to be discussed in this paper.

B: [_{CT} János] [_O mindenkit] [_F kétszer] buktatott meg.
 John everybody-acc twice failed pv
 'As for John, he failed everybody twice.'

Implicature: Other people have failed a different number of students twice.

(9) A: János sok diákot megbuktatott kedden.
 John many student-acc pv-failed on Tuesday
 'John failed many students on Tuesday.'

B: [_{CT} János] [_O mindenkit] [_F szerdán] buktatott meg.
 John everybody-acc Wednesday-inessive failed pv
 'As for John, everybody he failed he failed on Wednesday.'

Implicature: For other people the distribution of days and failings is different.

As for the third requirement for licensing contrastive topics, namely that the sentence should give rise to alternative propositions the truth value of which does not follow from that of the original proposition, let us consider examples (10) and (11), both of which contain a stressed verb following the contrastive topic:

(10) [_{CT} János] eljött.
 John pv-came
 'As for John, he came.'

Implicature: 'There are other people who didn't come.'

(11) * [_{CT} Minden gyerek] eljött.
 every child pv-came
 'As for everybody, they came.'

As opposed to (10), and the negative counterpart of (11) in (6B), the truth value of the possible alternatives to (11) all follow from that of (11), since if all children came, there is no subset of the set of children about which an alternative statement (i.e., that they didn't come) can be made. Sentence (11), therefore, is ill-formed in Hungarian.

This ends the discussion of the syntactic properties of contrastive topics in Hungarian and of their licensing in the discourse. In the next section we attempt to account for the semantic interpretation and the implicatures associated with sentences containing contrastive topics on the basis of Büring's (1997) approach.

4. The semantics and implicatures of Hungarian contrastive topics

4.1. Buring's account of the interpretation of (contrastive) topics

In order to determine whether German sentences containing a topic constituent pronounced with a rising intonation pattern, the Hungarian counterparts of which we have referred to as contrastive topics so far, are used felicitously in a context, Buring (1997) introduces the concept of the Topic Semantic Value. This construct is defined as a set of sets of propositions, associated with sentences containing a (contrastive) topic, each member of which is a set of propositions generated from one member of the Focus Semantic Value of the sentence (in the sense of Rooth (1985)). These sets contain propositions in which the meaning of the focused constituent is replaced with one of its alternatives, and the contrastive topic meaning is replaced by all its possible alternatives. Therefore, the sets which constitute the elements of the Topic Semantic Value have as many members as the number of alternatives to the contrastive topic interpretation. According to Buring, a sentence with a contrastive topic is licensed in a context if it is uttered as an answer to one of the questions that the set of propositions in its Topic Semantic Value corresponds to. In addition, such a sentence is only felicitous if it gives rise to the implicature that there are alternative issues to be considered to the one described by the sentence, i.e., that there is a proposition in the Topic Semantic Value set the truth value of which does not follow from that of the original proposition. (This is a principle we have already made use of when explaining the ill-formedness of (11) above.) This is equivalent to saying that there is a question in the Topic Semantic Value the answer to which is not entailed by the original sentence. Examples (12)-(14) (Buring's (1997) examples (39)-(41), pp. 66-67) contain illustrations of how the above described procedure works in practice:

- (12) a. [ICH]_T würde [*Das Hotel New HAMPSHIRE*]_F kaufen.
 b. [I]_T would buy [*The Hotel New HAMPSHIRE*]_F.

- (13) Focus Semantic Value of (12):
 {I would buy *War and Peace*, I would buy *The Hotel New Hampshire*, I would buy *The World According to Garp*,...}

- (14) Topic Semantic Value of (12):
 {{I would buy *War and Peace*, I would buy *The Hotel New Hampshire*, I would buy *The World According to Garp*,...},
 {Bolle would buy *War and Peace*, Bolle would buy *The Hotel New Hampshire*, Bolle would buy *The World According to Garp*,...},
 {Fritz would buy *War and Peace*, Fritz would buy *The Hotel New Hampshire*, Fritz would buy *The World According to Garp*,...},
 {Fritz's brother would buy *War and Peace*, Fritz's brother would buy *The Hotel New Hampshire*, Fritz's brother would buy *The World According to Garp*,...}, ...}

After having illustrated Büring's method of generating Topic Semantic Values for German sentences with (contrastive) topics, the next section is going to show that an analogous procedure of generating alternative propositions does not work for at least of one sentence type in Hungarian, namely the one where the contrastive topic position is filled by adverbs of quantification.

4.2. Problems with applying Büring's analysis to Hungarian

In Hungarian complex sentences with temporal subordinate clauses whose main clause contains an adverb of quantification but no contrastive topic or focus, the eventualities satisfying the description in the subordinate clause constitute the domain of quantification, as illustrated by example (15) below:

- (15) Péter mindig moziba ment, amikor szabadnapos volt.
 Peter always movies-into went when has-a-day-off was
 'When he had a day off Peter always went to the movies.'

The meaning of (15) could formally be represented as in (16), where the arguments of the universal quantifier *always* are in parentheses, and which says that the eventualities of Peter having a day off are such that each of them is associated with (e.g., takes place on the same day as) a different eventuality of Peter going to the movies. The association of eventualities is expressed with the help of Rothstein's (1995) matching function *M*:

- (16) ALWAYS [λe (PETER HAS A DAY OFF (e))]
 [λe (PETER HAS A DAY OFF(e) \wedge $\exists e'$ (PETER GOES TO THE MOVIES(e') \wedge $M(e') = e$))]

If, however, the subordinate clause is focused by placing its pronominal head *akkor* 'then' into the focus position of the main clause, as in (17), the domain of quantification will be constituted by the eventualities satisfying the eventuality description in the main clause, as shown in the logical representation (18). The claim that this is the only possible reading

(17) can have is supported by the fact that (19) is a possible continuation of (17) (if we assume that people do not normally go to the movies and the playtheatre on the same day):

(17) Péter mindig [_Fakkor] ment moziba, [_F amikor szabadnapos volt].
Peter always then went movies-into when has-a-day-off was
'It was always when he had a day off that Peter went to the movies.'

(18) ALWAYS [λe (PETER GOES TO THE MOVIES(e))]
[λe (PETER GOES TO THE MOVIES(e) \wedge $\exists e'$ (PETER HAS A DAY OFF(e') \wedge $M(e') = e$))]

(19) És mindig [_Fakkor] ment színházba is, [_F amikor szabadnapos volt].
And always then went theatre-into too when has-a-day-off was
'And it was always when he had a day off that he went to the theatre, too.'

If, however, we take a step further and make another slight alteration to (17) by pronouncing the adverb of quantification *mindig* 'always' with the rising contrastive topic intonation, as shown in (20), then the adverb of quantification will be taken to range over eventualities of Peter going to the movies, just like in (15) above:

(20) Péter [_{CT} mindig] [_Fakkor] ment moziba, [_F amikor szabadnapos volt].
Peter always then went movies-into when has-a-day-off was
'It was when he had a day off that Peter always went to the movies.'

The claim that (20) has the same quantificational structure as (15) is supported by the fact that it can be followed by (21):

(21) De néha [_Fakkor] is elment, [_F amikor hamar végzett a munkával].
But sometimes then too pv-went when early finished the work-with
'But sometimes he also went there when he finished work early.'

As it was mentioned in Section 4.1, in Büring's (1997) theory the Topic Semantic Value of sentences with contrastive topics is derived from their Focus Semantic Value, which is identical to the Focus Semantic Value of the corresponding sentence with the same focus but no (contrastive) topic (Büring (1997:78)). In this system, the Focus Semantic Value of (20) is identical to the Focus Semantic Value of (17), which is as follows:

- (22) Focus Semantic Value of (17):
 { ALWAYS $[\lambda e (\text{PETER GOES TO THE MOVIES}(e))$
 $[\lambda e (\text{PETER GOES TO THE MOVIES}(e) \wedge \exists e' (\text{PETER HAS A DAY OFF}(e') \wedge M(e') = e))]$,
 ALWAYS $[\lambda e (\text{PETER GOES TO THE MOVIES}(e))$
 $[\lambda e (\text{PETER GOES TO THE MOVIES}(e) \wedge \exists e' (\text{PETER FINISHES EARLY}(e') \wedge M(e') = e))]$,
 ALWAYS $[\lambda e (\text{PETER GOES TO THE MOVIES}(e))$
 $[\lambda e (\text{PETER GOES TO THE MOVIES}(e) \wedge \exists e' (\text{PETER WORKS TILL LATE}(e') \wedge M(e') = e))]$,
 ... }

If the Focus Semantic Value for (20) is the one found in (22) above, the Topic Semantic Value generated according to Büring's mechanism would have to be as shown in (23):

- (23) Topic Semantic Value for (20) in Büring's theory:
 { { ALWAYS $[\lambda e (\text{PETER GOES TO THE MOVIES}(e))$
 $[\lambda e (\text{PETER GOES TO THE MOVIES}(e) \wedge \exists e' (\text{PETER HAS A DAY OFF}(e') \wedge M(e') = e))]$,
 ALWAYS $[\lambda e (\text{PETER GOES TO THE MOVIES}(e))$
 $[\lambda e (\text{PETER GOES TO THE MOVIES}(e) \wedge \exists e' (\text{PETER FINISHES EARLY}(e') \wedge M(e') = e))]$,
 ALWAYS $[\lambda e (\text{PETER GOES TO THE MOVIES}(e))$
 $[\lambda e (\text{PETER GOES TO THE MOVIES}(e) \wedge \exists e' (\text{PETER WORKS TILL LATE}(e') \wedge M(e') = e))]$,
 ... },
 { SOMETIMES $[\lambda e (\text{PETER GOES TO THE MOVIES}(e))$
 $[\lambda e (\text{PETER GOES TO THE MOVIES}(e) \wedge \exists e' (\text{PETER HAS A DAY OFF}(e') \wedge M(e') = e))]$,
 SOMETIMES $[\lambda e (\text{PETER GOES TO THE MOVIES}(e))$
 $[\lambda e (\text{PETER GOES TO THE MOVIES}(e) \wedge \exists e' (\text{PETER FINISHES EARLY}(e') \wedge M(e') = e))]$,
 SOMETIMES $[\lambda e (\text{PETER GOES TO THE MOVIES}(e))$
 $[\lambda e (\text{PETER GOES TO THE MOVIES}(e) \wedge \exists e' (\text{PETER WORKS TILL LATE}(e') \wedge M(e') = e))]$,
 ... },
 { NEVER $[\lambda e (\text{PETER GOES TO THE MOVIES}(e))$
 $[\lambda e (\text{PETER GOES TO THE MOVIES}(e) \wedge \exists e' (\text{PETER HAS A DAY OFF}(e') \wedge M(e') = e))]$,
 NEVER $[\lambda e (\text{PETER GOES TO THE MOVIES}(e))$
 $[\lambda e (\text{PETER GOES TO THE MOVIES}(e) \wedge \exists e' (\text{PETER FINISHES EARLY}(e') \wedge M(e') = e))]$,
 NEVER $[\lambda e (\text{PETER GOES TO THE MOVIES}(e))$
 $[\lambda e (\text{PETER GOES TO THE MOVIES}(e) \wedge \exists e' (\text{PETER WORKS TILL LATE}(e') \wedge M(e') = e))]$,
 ... }, ... }

The problem with the Topic Semantic Value (23), which was supposed to contain questions including the one answered by the original sentence and at least one left unanswered by the discourse so far, is that the quantificational structure of the propositions it contains does not correspond to that of the original proposition in (20), which, moreover, should also be included in one of the sets of propositions in (23). This finding

also suggests that it is not always possible to build up the Topic Semantic Value associated with sentences containing contrastive topics compositionally from the Focus Semantic Value of the same sentence.⁷ The set of sets of propositions which contains the real alternatives to the proposition expressed by (20), which include, for example, (21), is listed in (24) below:

- (24) { {ALWAYS $[\lambda e (\text{PETER HAS A DAY OFF}(e))]$
 $[\lambda e (\text{PETER HAS A DAY OFF}(e) \wedge \exists e' (\text{PETER GOES TO THE MOVIES}(e') \wedge M(e') = e))]$,
 ALWAYS $[\lambda e (\text{PETER FINISHES WORK EARLY}(e))]$
 $[\lambda e (\text{PETER FINISHES EARLY}(e) \wedge \exists e' (\text{PETER GOES TO THE MOVIES}(e') \wedge M(e') = e))]$,
 ALWAYS $[\lambda e (\text{PETER WORKS TILL LATE}(e))]$
 $[\lambda e (\text{PETER WORKS TILL LATE}(e) \wedge \exists e' (\text{PETER GOES TO THE MOVIES}(e') \wedge M(e') = e))]$,
 ... }
 {SOMETIMES $[\lambda e (\text{PETER HAS A DAY OFF}(e))]$
 $[\lambda e (\text{PETER HAS A DAY OFF}(e) \wedge \exists e' (\text{PETER GOES TO THE MOVIES}(e') \wedge M(e') = e))]$,
 SOMETIMES $[\lambda e (\text{PETER FINISHES EARLY}(e))]$
 $[\lambda e (\text{PETER FINISHES EARLY}(e) \wedge \exists e' (\text{PETER GOES TO THE MOVIES}(e') \wedge M(e') = e))]$,
 SOMETIMES $[\lambda e (\text{PETER WORKS TILL LATE}(e))]$
 $[\lambda e (\text{PETER WORKS TILL LATE}(e) \wedge \exists e' (\text{PETER GOES TO THE MOVIES}(e') \wedge M(e') = e))]$,
 ... }
 {NEVER $[\lambda e (\text{PETER HAS A DAY OFF}(e))]$
 $[\lambda e (\text{PETER HAS A DAY OFF}(e) \wedge \exists e' (\text{PETER GOES TO THE MOVIES}(e') \wedge M(e') = e))]$,
 NEVER $[\lambda e (\text{PETER FINISHES WORK EARLY}(e))]$
 $[\lambda e (\text{PETER FINISHES EARLY}(e) \wedge \exists e' (\text{PETER GOES TO THE MOVIES}(e') \wedge M(e') = e))]$,
 NEVER $[\lambda e (\text{PETER WORKS TILL LATE}(e))]$
 $[\lambda e (\text{PETER WORKS TILL LATE}(e) \wedge \exists e' (\text{PETER GOES TO THE MOVIES}(e') \wedge M(e') = e))]$,
 ... }, ... }

In the light of the above data the method of generating the Topic Semantic Value associated with sentences containing contrastive topics seems to be in need of reconsideration. In the following section some methodological and terminological changes will be proposed which ensure that the theory elaborated by Büring can be generalized enough to account for the particular cases considered here.

⁷ This is even more so if we consider sentences with a contrastive topic but no focus, like (7) above (the term *focus* used in the sense of the generative approaches to Hungarian syntax).

5. Some proposals

As it was discussed in the previous section, an approach relying on the concept 'focus', at least in the sense it is defined in the Hungarian syntactic tradition, cannot account for the requirements of the felicitous use of sentences with contrastive topics in context and for the structure and generation of alternative propositions to them. As we observed above with respect to examples (7)-(9), all Hungarian sentences with contrastive topics contain at least one stressed operator or verb immediately following the contrastive topic. Since, as (24) above demonstrated, the alternatives to the meaning of this stressed constituent take part in the procedure of generating alternative propositions, I wish to propose the use of the term 'associate of contrastive topic' to refer to these constituents, which would not conflict with existing Hungarian syntactic terminology. The associate of contrastive topic does not take over the semantic contribution of focus (like exhaustive listing), it only helps identify the locus of variation in the alternative propositions. Since focusing in Hungarian also interferes with the scopal relations in the sentence, as illustrated by (15), (17) and (20) above, claiming that the associate of contrastive topic is an ordinary, non-focal constituent would enhance the predictiveness of the theory with respect to the scopal facts as well.

The question naturally arises, however, why the semantic effect of focus in sentences with contrastive topics where a constituent in the preverbal focus position plays the role of the associate of contrastive topic is not necessarily observable, as it would be expected from a compositional semantic interpretation. For example, why is the quantificational domain-changing role of focus not visible at all in structures like (20), repeated here as (25)?

- (25) Péter [_{CT} mindig] [_F akkor] ment moziba, [_F amikor szabadnapos volt].
 Peter always then went movies-into when has-a-day-off was
 'It was when he had a day off that Peter always went to the movies.'

I believe that the question can be answered along the following lines. In order for a sentence with a contrastive topic to be well-formed it has to contain a stressed preverbal operator or a stressed verb immediately following the contrastive topic. In (25), the subordinate clause takes the role of the associate of contrastive topic (since the sentence is to be contrasted with others where the interpretation of the subordinate clause is an alternative to the interpretation of the subordinate clause in the original sentence), therefore, it has to be pronounced with a heavy stress and in a position following the contrastive topic. Since the pronominal *akkor* 'then' is not a quantifier or a verb, the only position which can host it in such circumstances is the Focus position.

The other modification I would like to suggest concerns the procedure of deriving Topic Semantic Values. As we saw with respect to the contrast between (20) and (21),

Topic Semantic Values cannot be derived compositionally from Focus Semantic Values, since the role of focusing in sentences with contrastive topics is different than in those without them. Therefore, I would propose that the Topic Semantic Value should be derived in one step, instead of two (as suggested by Büring (1997)), and illustrated in (26):

(26) Schema for deriving Topic Semantic Values:

If R is the relation between the contrastive topic constituent and the associate of contrastive topic expressed by the particular proposition in question (including scope order), the Topic Semantic Value of the sentence is the set $\{R(\alpha, \beta) \mid \alpha \in ALT(CT')$ and $\beta \in ALT(ACT')\}$.

ACT: associate of contrastive topic

CT: contrastive topic

ALT(ACT'): the set of alternatives to the interpretation of the associate of contrastive topic

ALT(CT'): the set of alternatives to the interpretation of contrastive topic

The application of the new schema for (20) would result in a Topic Semantic Value which consists of a set of propositions equivalent to the union of the set members of the set in (24) above.

A possible criticism against the method of generating the Topic Semantic Value presented here could be that although we can still account for the available alternatives to the proposition expressed in the sentence (since they will be members of the new Topic Semantic Value) we cannot predict the possible questions the sentence can serve as an answer to, as Büring's two-level Topic Value does. If, however we consider the fact that the Hungarian sentences with adverbs of quantification mostly appear only in discourses where the previous utterance, which can either be a question or a declarative sentence (illustrated in (3) and (4) above) corresponds to a proposition or a set of propositions, respectively, of the form $R(CT', \beta)$, where β is an element of the set of alternatives to ACT', the need to derive the preceding propositions from the Topic Semantic Value will be eliminated.

This new formulation of the (Contrastive) Topic Semantic value ends my discussion of the peculiarities and cross-linguistic implications of the interpretation of Hungarian sentences with adverbial quantifiers situated in the contrastive topic position. In the Conclusion the main results of the study are summarized.

6. Conclusion

In the paper some facts from Hungarian were analyzed which seem to prove that Büring's postulation of alternative propositions associated with sentences containing contrastive topics is essentially on the right track, and can account for some of the cross-linguistic restrictions on the semantic-pragmatic-contextual well-formedness of such sentences.

It was suggested, however, that in order to achieve greater cross-linguistic predictive power the claims made in Büring's theory should be generalized in the following two ways. On the one hand, a new notion of 'the associate of contrastive topic' was introduced, which covers the compulsorily stressed operator (or operators) in sentences with contrastive topics. In some languages (like German and English) this operator is always identified with the focus, while in Hungarian this role can even be filled by more than one constituent, preverbal operators or the verb itself and immediately follow the contrastive topic. In the alternative propositions generated by the original sentence the alternatives of this constituent appear together with the alternatives of the contrastive topic. On the other hand, it was suggested that since the Topic Semantic Values cannot always be built up compositionally from the Focus Semantic values, the Topic Semantic Value of sentences should be generated in one step.

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