Exhaustive focus is an answer

Michael Brody and Kriszta Szendrői

Institute of Linguistics, Hungarian Academy of Sciences and University College London

Abstract

We propose that certain question-answer pairs involve a pair of exhaustive operators, the second of which gives rise to the exhaustive interpretation of answers. Some foci are interpreted exhaustively. These are answers to corresponding (implicit) questions and have the same syntax. The fact that exhaustivity is related to question-answer pairs can be seen clearly in constructions like English cleft questions and their answers, or in languages like Hungarian where the designated surface position of *wh*-words, answers and exhaustive foci (in our approach, answers to implicit questions) is the same preverbal slot. Other types of foci, even moved ones, must be interpreted non-exhaustively, typically contrastively. These focus constructions, like the English focus movement, usually referred to as topicalisation, are not appropriate answers and do not share the syntax of question-answer pairs.

1 Different types of focus constructions – focus as an answer

Many languages have focussing constructions involving movement of the focal element to a peripheral position. Hungarian appears to be special among these in that the interpretation of the focus construction is exhaustive. In other languages, such as Italian, English or Finnish, moved foci are interpreted contrastively. We propose that the exhaustivity of the Hungarian focus construction comes from the fact that it shares syntactic and semantic properties with the corresponding *wh*-question. More specifically, we propose that certain question-answer pairs involve a pair of exhaustive operators, the second of which gives rise to the exhaustive interpretation of answers. We do not take this to be a language-particular phenomenon: English clefts exhibit the same properties.

Consider the question-answer pair in (1). (1b) is a full answer, while (1c) is a partial one. Only an exhaustive answer answers the question felicitously. We assume that both the clefted question and the corresponding full answer involve an exhaustive operator, henceforth EXH (see also Groenendijk and Stokhof 1984). This exhaustive operator is responsible for the interpretation of answers as exhaustive. In addition, questions in general, also have the Q operator, hence clefted questions are a subtype of the exhaustive construction.

(1)   a.   Q: What was it that you brought to the party?
          b.   A: It was wine and cheese that I brought.
          c.   A':   #It was cheese that I brought. (*in the same situation as 1b*)

As (2) shows, the answer to the clefted question remains exhaustive even when it is not itself a cleft as long as it bears focal stress.

(2)   a.   Q: What was it that you brought to the party?
          b.   A":   I brought WINE AND CHEESE.
          c.   A"':   #I brought CHEESE.   (*in the same situation as 1b*)

We cannot attribute the exhaustivity in (2b) to clefting, as it does not contain a cleft. Neither can we attribute the exhaustivity effect to focusing, as we will see at the end of this section (see examples 6-8). This strongly suggests that the exhaustivity we observe here is a property of the question-answer pair.

In Hungarian, the same situation obtains more generally. In both clefted and non-clefted *wh*-questions, an exhaustive answer is required. Again, in the cleft case, the answer need not itself be a cleft.

(3) a. Q: Mi volt az amit hoztál a buliba?
          What was that that-acc brought-you the party-to
          'What was it that you brought to the party?'
     b. A: #(Bor és) sajt volt amit hoztam.
          Wine and cheese was that-acc brought-I
          'It was wine and cheese that I brought.'
     c. A': #(BORT ÉS) SAJTOT hoztam.
          Wine-acc and cheese-acc brought-I
          'I brought WINE AND CHEESE.'

(4) a. Q: Mit hoztál a buliba?
          What-acc brought-you the party-to
          'What did you bring to the party?'
     b. A: #(BORT ÉS) SAJTOT hoztam.
          Wine-acc and cheese-acc brought-I
          'I brought WINE AND CHEESE.'

We propose that English clefted question-answer pairs and all Hungarian question-answer pairs involve a semantic operator EXH, which is responsible for the strict exhaustive interpretation. In Hungarian, both questions and full answers must involve overt fronting to the preverbal position:

(5) a. Q: Mit hoztál a buliba?
          What-acc brought-you the party-to
          'What did you bring to the party?'
     b. A: BORT ÉS SAJTOT hoztam.
          Wine-acc cheese-acc brought-I
          'I brought WINE AND CHEESE.'
     c. A': #Hoztam bort és sajtot.
          brought-I wine-acc and cheese-acc
          'I brought wine and cheese.'

So, EXH appears to trigger overt movement in Hungarian (see Horvath 2000). In English, only Q, but not EXH alone triggers overt movement. As we will discuss in the next section, the preverbal movement target position in (2) is the canonical focus position in Hungarian (Horvath 1986, Brody 1995a), also suggesting a close connection between question-answer pairs and focus. A natural way to capture this is to assume that EXH is focus-sensitive in the same sense that Q is *wh*-sensitive.

However, we cannot simply say that all foci are answers. While this is true for exhaustive foci, there are various other types of focus constructions. For instance, even though the examples in (6-8) involve movement, they are interpreted contrastively and not exhaustively. So, they cannot involve an exhaustive operator. (The fronted constituent is a contrastive focus: it bears the sole contrastive accent of the utterance.)

(6) A: I thought you liked beans.
     B: No. BROCCOLI I like.

(7) A: Gianni ma dice che hai letto il suo libro. Italian
          John to-me said that have-2sg read the his book
          'John told me that you read his book.'
     B: Il TUO libro ho letto (, non il suo)
          the his book have-I read not the his
          'I read your book, not his.'

(8) a. Pekka lensi Tukholmaan. Finnish (Molnár and Winkler 2010: 1399 ex 15)
          Pekka flew to Stockholm
          'Pekka flew to Stockholm.'
     b. (Eihän, vaan . . . REYKJAVIKIIN Pekka lensi.
          no, but to Reykjavik Pekka flew
          'That's not true, Pekka flew to Reykjavik.'

2

As the discourse contexts in (9-11) show, such constructions do not give felicitous answers to corresponding *wh*-questions. This type of focus movement also does not have the same syntax as *wh*-questions. Questions require (pragmatically, or in Hungarian, semantically) exhaustive answers (Groenendijk and Stokhof 1984). Contrastive foci, however, are only felicitous when an established contrast set is available in the discourse, which is not the case in (9-11). Hence the infelicity of the question-answer pairs in (9-11).

(9)   A: I am thinking of dinner on Thursday evening. What kind of greens do you like?
        B: #BROCCOLI I like.

(10)   A: Che   cosa   hai   letto?   Rizzi (1997: 5), Italian
                What   thing   have-2sg   read
                'What did you read?'
        B: #Il tuo libro   ho   letto.
                the his book   have-I   read
                'I read your book.'

(11)   A: Mitä   Mikko   näki?   Newson & Maunula (2006: 12, ex 24), Finnish
                what   Mikko   saw
                'What did Mikko see?'
        B: #Liisan Mikko   näki.
                Liisa   Mikko   saw
                'Mikko saw LIISA.'

Equally, we are not claiming that all question-answer pairs involve semantic exhaustivity. While there is a pragmatic implicature of exhaustivity in ordinary English question-answer pairs, this is only 'semanticised' in this language, in the form of an EXH operator, in clefts. The difference is that in an ordinary English question-answer pair the pragmatic implicature of exhaustivity can be cancelled implicitly and it does not have an effect on truth-conditional meaning (Groendijk and Stokhof 1984) while semantic exhaustivity can only be cancelled explicitly and has an effect on the utterance's truth-conditions (See next section).

To sum up, we propose that certain question-answer pairs involve a pair of exhaustive operators, the second of which gives rise to the exhaustive interpretation of answers. Some foci are interpreted exhaustively. These are answers to corresponding (implicit) questions and have the same syntax. The fact that exhaustivity is related to question-answer pairs can be seen clearly in constructions like English cleft questions and corresponding answers, or languages like Hungarian where the designated surface position of *wh*-words, answers and exhaustive foci (in our approach, answers to implicit questions) is the same preverbal slot. Other types of foci, even moved ones, e.g. English topicalisation, are not appropriate answers and do not share the syntax of questions.

2 Hungarian focus is exhaustive

As the example in (12) shows, Hungarian focus (capitalised) occupies the immediately preverbal position. Any preverbs that normally appear in this position appear postverbally. (Horváth 1986)

(12)   a.   Péter meghívta Marit a buliba.
                Peter PRT-*invited Mary*-ACC *the party-to*
                'Peter invited Mary to the party.'
        b.   Péter MARIT hívta meg a buliba.
                Peter Mary-ACC *invited* PRT *the party-to*
                'Peter invited MARY to the party.'

Focus movement can cross clause-boundaries, observes complex NP-islands and adjunct islands (but not *wh*-islands and sentential subject-islands). It applies successive cyclically and it licences parasitic gaps. (Horváth 1986, É.Kiss 1987 and many others). So, focus movement is A-bar movement.

The standard account of the construction assumes a designated functional head, Focus, projected at the left-periphery of the clause attracting the focal constituent into its specifier and the V into its head (Brody 1995a, see also Rizzi 1997 and many subsequent proposals for various languages).

Szabolcsi (1981) noticed that Hungarian focus is interpreted exhaustively, as shown by its effects on the entailments of the sentence:[1]

(13)   a.   Balázs és Péter eljött tegnap. → Balázs eljött tegnap.
                Balázs and Peter came here yesterday. Balázs came here yesterday.
        b.   [Balázs és Péter]$_{FOC}$ jött el tegnap. −/→ [Balázs]$_{FOC}$ jött el tegnap.
                BALÁZS AND PÉTER came here yesterday. BALÁZS came here yesterday.

In fact, as Szabolcsi (1981: 519-520) pointed out, the above entailments show that the exhaustivity is a semantic effect, part of the truth-conditional meaning.[2] She assumed (in 1981) that this is a language-specific property on the grounds that the corresponding English examples do not seem to exhibit this behaviour, as shown in (14). However, as she also pointed out, in English clefts the interpretation is parallel to the Hungarian case, as was shown above in (1) and (2). Our interpretation of these facts is different from Szabolcsi's in that we tie the presence of semantic exhaustivity to (particular types of) question-answer pairs.

(14)   BALÁZS AND PÉTER came here yesterday. → BALÁZS came here yesterday.

(15)   a.   Who was it that came? It was BALÁZS AND PÉTER who came. —/→
                It was BALÁZS who came.
        b.   Who came here yesterday? BALÁZS AND PÉTER came here yesterday. →
                BALÁZS came here yesterday.

Our proposal differs from the standard view on the relation between the syntax and semantics of Hungarian focus. The standard view is that the Hungarian focus construction involves A-bar movement to a designated functional position, Focus. Brody's (1995a) primarily syntactic proposal remained agnostic as to the origin of the exhaustive semantics. Others ((see e.g. Horváth 2000, É.Kiss 1998 (but not É.Kiss 2006, 2010), Surányi 2003, 2007), assumed that one way or another the syntax of the focus construction is responsible for its semantic interpretation.

However, it seems to us that neither the focused element nor the landing site can be directly responsible for the exhaustive interpretation. As shown by the English example in (14), the focused element itself is not necessarily exhaustive. Furthermore, as we discussed in the previous section (examples 6-8) the movement of the focal element need not involve exhaustivity either, so it cannot be the Focus head (i.e. the landing site) itself that is responsible for this interpretation.

---

[1] To be more precise, Kálmán and Leusen (1993) and Szabolcsi (1994), following Kenesei (1986), proposed that focal utterances come with an existential presupposition and the focus identifies the maximal set for which the proposition holds.

(i)   Péter és Balázs jött el.
        [*Peter and Balázs*]$_{FOC}$ *came.*
        Presupposition: There is a unique maximal set A such that every member of A came.
        Assertion: A is {Peter, Balázs}

[2] This goes against Beaver and Onea's (2009) pragmatic approach to the exhaustivity effects found with Hungarian focus. They do not discuss this kind of examples, but they present several arguments against a semantic solution. Most of these have been convincingly refuted by É.Kiss (2010), where further arguments are enumerated in favour of the semantic exhaustivity of the Hungarian pre-verbal focus (see also arguments in Horvath (2000, 2005)). Nevertheless, our proposal and theirs shares the intuition that the source of exhaustivity is the question-answer pair.

As far as their relevant experiment is concerned, we agree with the authors that the fact that in the focus condition, more than 70% of the participants gave a response that suggests an exhaustive interpretation on their part, while in the parallel German experiment the corresponding number is only 50%, leaves no doubt that exhaustivity is grammaticalised in Hungarian. Moreover, 25% of the participants gave a response that Beaver and Onea themselves consider suggestive of a semantic exhaustive interpretation. In the case of the German participants, only 3% gave such a response. We think that the reason for this discrepancy is exactly that in Hungarian, unlike in German, exhaustivity is part of the semantic meaning. There are specific methodological reasons for the fact that Hungarian participants did not always give such a response. As the experimental task involved judging whether a particular utterance is true in the situation depicted in a picture, participants were a priori motivated to accommodate a discourse context where the utterance is true. This is because at least in situations of uncertainty, it is a cooperative and efficient discourse strategy to assume that an utterance is true unless proven otherwise (Lewis 1983, Szendrői et al 2010).

At least, a general Focus-head cannot be responsible. Suppose, we tried to defend the proposal that it is the targeted functional head that is responsible for the exhaustive interpretation in such a way that we would claim that the functional position targeted by *non*-exhaustive foci is systematically different from that of exhaustive foci. But this proposal would remain tautological (moved exhaustive foci move to the exhaustive focus position), unless we can give an independent justification for distinguishing two different target positions. This would amount to, at best, a useless restatement of the original problem, namely, the problem of determining the source of the exhaustive interpretation. This, however, does not mean that our proposal cannot be (re-)couched in a cartographic framework. The question is whether such a step would add anything to the explanatory power of the current proposal.

We should note that it is always possible to react to a *wh*-question by a statement that provides a non-exhaustive enumeration indicating that the speaker is unable or unwilling to give a (full) answer. In Hungarian, the construction where the focused element remains in situ in a postverbal position is used for this purpose. It is a terminological question if we consider such a reaction an answer. (Szendrői (2003) argued that such cases involve VP-focus and thus do not provide an answer with a focused constituent matching the *wh*-constituent of the question.)

(16) Q: Mit adott Mari Jeremiásnak?
          'What did Mary give to Jeremiah?'
      A: Mari adott Jeremiásnak (például) egy tollat és egy borítékot. ⟶
          'Mari gave Jeremiah (for instance) a pen and an envelope.'
          Mari adott Jeremiásnak (például) egy borítékot.
          'Mary gave Jeremiah (for instance) an envelope.'

In English, as we have seen in example (2), with a clefted question, the answer is exhaustive whether it is itself clefted or not, as long as the constituents answering the *wh*-question bear focal stress. So, the English cases corresponding to the Hungarian (16) also involve neutral stress (and presumably VP-focus):

(17) Q: What was it that Mary gave to Jeremiah?
      A: Mary gave a pen and an envelope to Jeremiah. ⟶ Mary gave a pen to Jeremiah.

Before closing this section, let us point to another important observation about Hungarian: not only foci, but also *wh*-phrases in questions occupy the immediately preverbal position, see (18). Any preverbs or foci that normally appear in this position appear postverbally. In the preverbal position, there is a complementary distribution between *wh*-phrases and foci.

(18) Kit hívott meg PÉTER a buliba?
      Who-ACC invited PRT Peter the party-to
      'Who did PETER invite to the party?'

According to Lipták (2001), the fact that both focus and *wh* appear in the same preverbal position is due to the fact that *wh*-elements are endowed with a focus feature (see also Haida 2007, but cf. Cable 2008). As a result, *wh*-phrases target the designated Focus position. However, such a stipulative link between focus and *wh* leaves their relationship unexplained.

In contrast, the present proposal means to explain both the exhaustive interpretation of the Hungarian fronted focus and its shared landing site with *wh*-elements. Recall example (2) above, which showed that answers in Hungarian involve fronted foci. We assume that such examples show overtly the nature of the connection between focus and question-answer pairs. Thus, our basic proposal is that exhaustive focus is semantically and syntactically related to the question-answer construction. This relation is realised by the presence of the exhaustive operator, EXH, in both constructions. Since we take exhaustive focus to always be an answer to an implicit or explicit *wh*-question, it must also involve an EXH operator. The necessary presence of EXH in the Hungarian focus construction then gives rise to the exhaustive reading. We thus explain Horvath's (2000) proposal, according to which Hungarian focus movement involves a designated position for Exhaustive Identification. As we have already discussed earlier in this section, given the existence of fronted non-exhaustive foci, an approach that assumes the existence of a designated Exhaustive Interpretation position, at least in itself, is either factually wrong, or lacks explanatory power.

To sum up, so far our proposal has the following consequences: (i) a general link between certain question-answer constructions and certain focus constructions is established; (ii) the exhaustive interpretation of Hungarian focus movement and English clefts is accounted for (by the assumption of the presence of EXH, which triggers movement); (iii) unmarked answers in Hungarian but not in languages like English are predicted (correctly) to involve focus movement; (iv) the syntactic parallel

between Hungarian focus movement and *wh* movement and the lack of parallelism between English focus movement and *wh*-movement is expected.

3 A solution to an old puzzle

Recall that our approach is that certain questions and corresponding answers share a crucial semantic property, which triggers syntactic chain formation. A surprising discrepancy was already noted by Varga (1982). As we shall see, not only does this intriguing puzzle have a natural solution in our framework, but the solution seems to apply to quantifiers more generally.

The problem is why (19), where the embedded clause contains both a moved focus and a *wh*-phrase in preverbal position is well-formed, when the same sentence without the matrix clause is ungrammatical, (20). Note that (20) is in fact the expected case; as noted above in section 2 (example (18)), there is normally a complementary distribution between *wh*-phrases and non-*wh* foci in the preverbal position.

(19) AZT   szeretném tudni,   hogy   MARIT   ki   hívta fel.
      dem-acc *would.like.I know*.inf   *that*   *Mary*-acc   *who*   *called* prt
      'I would like to know who called MARY.'

(20) *MARIT   ki   hívta fel?
      Mary-ACC   *who*   *called* PRT
      'Who called MARY?'

We observe a discrepancy here between the behaviour of *wh*-elements and non-*wh* foci. As (21-22) show, the same phenomenon is not exhibited by the latter:

(21) *AZT   mondtam,   hogy   MARIT   PÉTER   hívta fel.
      dem-acc said   that   Mary-acc   Peter- acc   called prt
      'I said that PETER called MARY.'

(22) *MARIT   PÉTER hívta fel.
      Mary-ACC   Peter   called PRT
      'PETER called MARY.'

Lipták (2001) noticed a further discrepancy between *wh* and focus, namely that universals can only precede the latter:

(23) a.   *Minden   ember   kit   hívott meg?
              Every   man   who-ACC invited PRT
              'For everyone, who did they invite?'
      b.   Minden ember   JÁNOST   hívta   meg.
            every man   John-ACC   invited   PRT
            'Everyone invited JOHN.'

In fact, the phenomenon is more general: no quantifier that would otherwise target a left-peripheral position can precede a fronted *wh*-element, even if they can precede fronted non-*wh* foci. We agree with Lipták's (2001) proposal that the reason for this is that the *wh*-word must establish a local relation with the Q-operator in C for clause-typing reasons. The fronted quantifiers would act as interveners.[3]

(24) a.   *Péter is/   *legalább hat fiú kit   hívott meg?
              Peter too/   at.least six boys   who-ACC   invited PRT

---

[3] Note that unlike in English, in Hungarian, fronted *wh*-phrases can be preceded by major constituents. Topics (both aboutness and contrastive topics) surface in this position:

(i)   Pétert,   (azt/őt) kinek   mutatták   be   tegnap?
       Peter-ACC   that/him who-to   introduced   PRT   yesterday
       'Peter, who was he introduced yesterday to?'
(ii)   Pétert   kinek   mutatták   be?
       Peter-ACC   who-to   introduced   PRT
       'Who was Peter introduced to?'

'Peter too/ At least six boys invited who?'
   b. Péter is/   legalább hat fiú JÁNOST   hívta meg.
         Peter too/ at.least six boy John-ACC   invited PRT
         'Peter too/ At least six boys invited JOHN.'

As a first step towards a solution for the existence of (19), note that it means (25a), rather than (25b). So, (19) is expecting an exhaustive list of people that called Mary and not an exhaustive list of people who called *only* Mary, see (26). So, the scope of the fronted focal DP *Marit* 'Mary-acc' is outside the embedded question.

(25) a. There is a unique person x such that I would like to know who called x. x is Mary.
    b. #I would like to know who called a unique person x. x is Mary.

(26) A: Pétert felhívta Zsuzsi es Szilvi.
      'Peter was called by Sue and Sylvia.'
    B: Jó, de én AZT szeretném tudni, hogy MARIT ki hívta föl?
      OK, but I DEM-ACC would.like.I know-INF that Mary-ACC who called PRT
      'Sure, but I would like to know who called MARY.'
    A: Gábor és Zsuzsi
      'Gabor and Sue.' = the maximal set of individuals who called Mary
    A': #Gábor.
      'Gabor.'= the maximal set of individuals who called *only* Mary

This suggests that embedding helps because it provides an escape route for the fronted focus at LF: the focal constituent may raise and take scope above the matrix verb. Hence the grammaticality of (19) follows.
   In fact, the matrix verb does not even have to be actually present, a contextually indicated performative will do:

(27) A: Zsuzsit felhívta Péter és János.
      Sue-acc PRT-called Peter and John
      'Sue was called by Peter and John.'
    B: Jó, de MARIT ki hívta fel?
      OK, but Mary-ACC who called PRT
      'OK, but (I want to know) who called MARY.'

We may wonder whether the same LF-escape route is available for quantifiers. In principle, we may expect that quantifiers, which are lexically marked for quantificational force, are not able to similarly raise out of the clause. This would be on the grounds that in order to maintain some transparency between overt syntax and LF (cf. Brody 1995b, Reinhart 2006), if such elements undergo A'-movement in overt syntax, their surface position determines their maximal scope. Unlike focus, the elements *mindenki* 'everyone'/ *Péter is* 'Peter too'/ *legalább HAT fiú* 'at least six boys' are all inherently quantificational. As expected under this assumption, examples like (28) are ungrammatical:

(28) *Azt szeretném tudni, hogy mindenki/ Péter is/ legalább HAT fiú kit hívott föl.
    DEM-ACC *would.like-I know*-INF *that everyone who*-ACC *called* PRT
    'I would like to know for everyone who they called.'

However, examples like (29) appear to be fully grammatical, in parallel with the focus example in (19):

(29) a. Minden nap fel kell írni Péternek, hogy minden szobába ki ment be $\forall > wh$
      Every day prt should write-inf that every room-into who entered prt
      'Every day we must write down who entered which room.'
    b. ?Fel kell írni, hogy minden szobába ki ment be $*\forall > wh$
      prt should write-inf that every room-into who entered prt
      'We must write down who entered every room?'

So, in general the transparency principle freezes scope, but a quantifier may act as a scope marker for a quantifier belonging to the same type. This is in the spirit of the transparency principle, which requires that moved inherently quantificational elements make their scope explicit in overt syntax. It is not surprising that this requirement can be met not only by the quantifier overtly moving into its scope position, but also by the presence of an alternative relevant scope marker.

4 Conclusion

We proposed that certain question-answer pairs involve a pair of exhaustive operators, the second of which gives rise to the exhaustive interpretation of answers. Some foci are interpreted exhaustively. These are answers to corresponding (implicit) questions and have the same syntax. In Hungarian, EXH gives rise to overt movement. In this framework Hungarian focus movement and Hungarian *wh*-movement is supposed to pattern alike both syntactically and semantically, as both are EXH-movement operations. We showed how in our approach and old and puzzling discrepancy noted by Varga (1982) can be accounted for.

References

Beaver D. & E. Onea (2009) *Hungarian focus is not exhausted.* to appear. In S. Ito and E. Cormany (eds), *Proceedings of Semantics and Linguistic Theory (SALT) XIX, 2009*, CLC Publications, Cornell;

Brody, M. (1995a). Focus and checking theory. In *Levels and Structures, Approaches to Hungarian* 5, István Kenesei (ed.), Szeged: JATE. 31–43.

Brody, M. (1995b) *Lexico-logical form.* MIT;

Cable, Seth (2008) *Wh-Fronting (in Hungarian) is Not Focus-Fronting*. Manuscript. University of British Columbia. Vancouver, BC

É. Kiss, Katalin (2006), 'Focussing as Predication', in Valéria Molnár and Susanne Winkler (eds), *Architecture of Focus*, Berlin: Mouton de Gruyter, 169-96.

É.Kiss, Katalin (2010). Structural focus and exhaustivity. In: Malte Zimmermann – Caroline Féry (eds) *Information Structure. Theoretical, Typological and Experimental Perspectives.* Oxford-New York, Oxford University Press, 64-88.

Groenendijk, J. & M. Stokhof (1984) *Studies on the semantics of questions and the pragmatics of answers.* PhD UvA.;

Haida, Andreas (2007). *The Indefiniteness and Focusing of Wh-Words*. PhD thesis. Humboldt University Berlin.

Horvath, J. (1986) *FOCUS in the Theory of Grammar and the Syntax of Hungarian*. Foris;

Horvath, J., 2000. Interfaces vs. the computational system in the syntax of focus. In: Bennis, H., Everaert, M., Reuland, E. (Eds.), *Interface Strategies*. The Dutch Royal Academy of Arts and Sciences, Amsterdam. 183–207.

___ **(2005)** Is 'Focus Movement' Driven by Stress? *Approaches to Hungarian* 9, 131-158;

Lewis, D. (1983) Scorekeeping in a language game. In D. Lewis (ed.) *Philosophical papers*, vol. 1. Oxford: OUP. 233-249.

Lipták, A. (2001) *The syntax of* wh-*items in Hungarian*. PhD, Leiden.

Molnár, V. (2002) Contrast – from a contrastive perspective. In *Information structure in a cross-linguistic perspective*, H. Hasselgård et al (eds.), Rodopi, 147-161.

Molnár, V. and Winkler, S. (2010) Edges and gaps: contrast at the interfaces. *Lingua* 120, 1392–1415.

Newson, Mark and Vili Maunula (2006) Word Order in Finnish: whose side is the focus on? *The Even Yearbook 7*, 1-33.

Reinhart, T. (2006) *Interface Strategies*. MIT;

Surányi, Balázs (2003). *Multiple Operator Movements in Hungarian.* Utrecht: LOT Dissertation Series.

Surányi, Balázs (2007). Focus structure and the interpretation of multiple questions. In: *On Information Structure, Meaning and Form*. Kerstin Schwabe and Susanne Winkler (eds.) Amsterdam/Philadelphia: John Benjamins. 229-253.

Szabolcsi, A. (1981) The semantics of Topic-Focus articulation. *Formal methods in the study of Language*, Groenendijk et al. eds., UvA.

Szendrői, K. (2003). A stress-based approach to the syntax of Hungarian focus. *The Linguistic Review* 20(1), 37-78.

Szendrői, K., I. T. Hooge and Iris Mulders (2010) *Resolving focal ambiguity with* only *online: evidence from response times and eye movements.* Ms. UCL/Utrecht University. 64pp.

Varga, L. (1982) Két szintaktikai pozícióról [On two syntactic positions], *Magyar Nyelv* 78:150-169.;

Wedgwood et al (2006) *Hungarian 'focus position' and English it-clefts: the semantic underspecification of 'focus' readings,* Ms., Edinburgh.