

## Structural focus and exhaustivity<sup>1</sup>

### 1. Introduction

The Hungarian sentence has been known to have a structurally determined focus slot in its left periphery. Most approaches to the syntax and the syntax–semantics interface of Hungarian agree that this preverbal focus position is associated with a [+exhaustive] feature. At the same time, however, theories have also been proposed which ignore the exhaustivity of the Hungarian preverbal slot, concentrating their attention on the universal properties of focus, also shared by the prosodic focus of languages with no invariant focus position. Recently, Wedgwood (2005) has explicitly argued against the [+exhaustive] feature of the Hungarian preverbal focus, claiming that the exhaustivity often associated with foci in languages of both the Hungarian type and the English type is a mere pragmatic implicature. This paper will discuss and refute Wedgwood’s claim, and will present new evidence for the exhaustivity of structural focus.

Section 2 introduces the standard arguments for the [+exhaustive] feature of Hungarian structural focus, and the syntactic means of deriving this feature. Section 3 briefly discusses focus theories ignoring exhaustivity, whereas section 4 presents Wedgwood’s theory (2005), denying the encoded exhaustivity of structural focus altogether. After refuting an apparent counterargument of Wedgwood in section 5, section 6 puts forth new evidence supporting the obligatory [+exhaustive] feature of structural focus, based on the interpretation of scalar elements. A scalar element *n*, interpretable as ‘at least *n*’ out of focus, can only mean ‘exactly *n*’ in the preverbal focus slot, which is derived from the exhaustivity of structural focus, involving the exclusion of all alternatives but that denoted by the focussed constituent. It is shown that the ‘exactly *n*’ interpretation is obligatory in focus position irrespective of the pragmatic conditions. What is more, scalar elements for which the ‘at least *n*’ interpretation would lead to a semantic anomaly (i.e., scalar elements representing a value in the negative domain of a bidirectional scale) are obligatorily focussed in Hungarian.

### 2. The standard interpretation of structural focus

In the left periphery of the Hungarian sentence, left-adjacent to the V, there is an optionally filled structural position functioning as a focus slot. In focusless, neutral sentences, the post-

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<sup>1</sup> I owe thanks to Werner Frey, Nick Asher, Caroline Féry, Knud Lambrecht, Christopher Piñón, Anna Szabolcsi, Daniel Wedgwood, and the participants of my focus seminar at Postdam University in the spring term of 2006 for many useful discussions. The writing of this paper was in part supported by Grant TS 49873 of OTKA, the Hungarian National Research Fund.

topic sentence part, functioning as the logical predicate, usually begins with a verbal particle (1a) or a bare nominal complement (1b).<sup>2</sup> Recent studies on Hungarian syntax (e.g. Csirmaz (2004), É. Kiss (2008)) analyze the logical predicate of such neutral sentences as a PredP (subsuming a split VP), with the verbal particle or bare nominal (both marked as [+pred]) occupying Spec,PredP.

- (1)a. Péter [<sub>PredP</sub> meg vette Kertész könyvét]  
 Peter PRT bought Kertész's book-ACC  
 'Peter bought Kertész's book.'
- b. Péter [<sub>PredP</sub> könyvet vett]  
 Peter book-ACC bought  
 'Peter bought some book(s).'

In focus constructions, the predicate section of the sentence begins with the focus, to be immediately followed by the V (2a,b). Since Brody (1991), it has been generally believed that the focus constituent occupies the specifier of a designated functional projection called FocP. In the presence of a focus, the V moves across the verbal particle/bare nominal complement into a head position adjacent to the focus. As shown by Olsvay (2000) and Horvath (2004; to appear), this is the head position of a syntactic projection below FocP (called Non-Neutral Phrase, perhaps a version of FinP). In neutral sentences and focus constructions alike, the main stress falls on the left edge of the logical predicate. The post-focus section of focus constructions is destressed.

- (2)a. Péter [<sub>FocP</sub> KERTÉSZ KÖNYVÉT [<sub>NNP</sub> vette [<sub>PredP</sub> meg *t<sub>V</sub>*]]  
 'It was Kertész's book that Peter bought.'
- b. [<sub>FocP</sub> PÉTER [<sub>NNP</sub> vett [<sub>PredP</sub> könyvet *t<sub>V</sub>*]]  
 'It was Peter who bought some book(s).'

<sup>2</sup> *Meg* in (1a) is a resultative verbal particle, a telicity marker. Verbal particles appear in accomplishment and achievement sentences containing a [+specific] theme; they predicate the result state of the theme. In (1b) *meg* is missing because the theme is a non-specific noun phrase. The bare nominal of (1b) occupies the same Spec,PredP position as the verbal particle of (1a); after all, it is also a secondary predicate predicated of the incorporated internal argument of the V.

<sup>3</sup> In (2a) *könyvét* could also be presupposed and destressed. Irrespective of whether either of its subconstituents is unstressed and given, it is the whole constituent in Spec,FocP, *Kertész könyvét*, that is analyzed as focus.

Such a focus position is not unique to Hungarian. A survey carried out in the framework of the EUROTYP project found that half of the European languages have a structural focus position (É. Kiss 1998c). Hinterhölzl (this volume) argues for a preverbal focus position in Old High German. Fiedler et al. (this volume) point out a clause-final structural focus position in a number of West African languages. Aghem is known to have a postverbal focus slot (although Hyman and Polinsky (this volume) argue that – unlike left-peripheral focus positions – it is not an A-bar position filled by movement).

Hungarian native speakers share the intuition that (1a) and (2a), as well as (1b) and (2b) have different truth conditions. The focus movement of the object in (2a) and the subject in (2b) adds a special component to the meaning of the sentence. Whereas (1a) is true in every situation in which Peter bought a set of objects (or a set of books) including Kertész's book, (2a) is only true in a situation in which the set of objects/books bought by Péter consists of Kertész' book and nothing else. Similarly, (1b) is true whenever the set of persons who bought books includes Peter; (2b), on the other hand, is only true in a situation in which Peter is the only (relevant) person who bought books.

The formalization of this intuition goes back to the work of Szabolcsi (1980, 1981a, 1981b, 1983, 1985, etc.). In these early studies of Szabolcsi, focus is analyzed to express exhaustive listing, i.e., to provide an exhaustive list of the referents for which the statement expressed by the sentence is true. Observe how Szabolcsi (1980, 1981a) paraphrases the meaning of the focus construction in (3a):

- (3)a. [<sub>FocP</sub> PÉTER [aludt a padlón]]  
 Peter slept the floor-on  
 b. 'For every x, x slept on the floor iff x = Péter'

Naturally, the universal quantifier is to be interpreted on a relevant set determined by the given situation or context (e.g. the set of persons staying in a particular apartment at a given time).

Evidence of the [+exhaustive] feature of structural focus is provided by the fact that (3a) and (4) cannot be simultaneously true, i.e., (3a) is not a logical consequence of (4) but contradicts it.

- (4) [<sub>FocP</sub> PÉTER és PÁL [aludt a padlón]]  
 Peter and Paul slept the floor-on

‘It was Peter and Paul who slept on the floor.’

The negated version of (3a), spelled out in (5a), on the other hand, is compatible with (4), as shown in (5b):

(5)a. Nem [<sub>FocP</sub> PÉTER [aludt a padlón]]

‘It wasn’t Peter who slept on the floor.’

b. Nem [<sub>FocP</sub> PÉTER [aludt a padlón]] hanem [<sub>FocP</sub> PÉTER és PÁL ([aludt a padlón])]

‘It wasn’t Peter who slept on the floor but it was Peter and Paul (who slept on the floor).’

Szabolcsi’s formula is also intended to cover structural foci in all-new sentences, e.g.:

(6) [<sub>FocP</sub> PÉTER [aludt a padlón]] vagy [<sub>FocP</sub> A VENDÉG [ment szállodába]]?

Peter slept the floor-on or the guest went hotel-to

‘Was it Peter who slept on the floor, or was it the guest who went to a hotel?’

(6) can only be asked if in one of the two alternative worlds Peter exhausts the set of persons who slept on the floor, and in the other one the guest exhausts the set of persons who went to a hotel.

A further evidence of the exhaustivity of structural focus presented by Szabolcsi (1980) involves conditionals. A non-focussed *if*-clause is a unidirectional conditional; a focussed *if*-clause, on the other hand, is understood as a bidirectional, corresponding to an *if and only if* clause. (The focus function of a subordinate clause is indicated by the focus position of the pronominal associated with it. The clausal constituent itself cannot appear in Spec,FocP, presumably owing to a prosodic constraint requiring that the focus constituent form a phonological word with the V.) Compare:

(7)a. Meg-kapod a pénzt akkor, ha el- végzed a munkát.

PRT get-you the money then if PRT do-you the job-ACC

‘You get the money in case you do the job.’

b. [<sub>FocP</sub> AKKOR<sub>i</sub> [kapod meg a pénzt]] [ha elvégzed a munkát]<sub>i</sub>

‘It is in the case you do the job that you get the money.’

Kenesei (1986, 149), proposing an alternative to the focus interpretation of Szabolcsi (1980, 1981a), did not discard the [+exhaustive] feature, but represented it as something presupposed rather than asserted. In Kenesei's theory, the focus expresses exclusion by identification. This term is based on the intuition that focussing means both the identification of a referent, and the exclusion of potential alternatives. (Notice that in Hungarian, universal quantifiers, e.g. *mindenki* 'everybody', involving no exclusion, cannot be moved into the focus position.) Kenesei's logical formula for focus contains an iota operator:

(8)a. [<sub>FocP</sub> PÉTER [aludt]]

'It was Peter who slept.'

b.  $\iota x$  [Slept (x) ] = p

(8b) presupposes that there is a unique individual who slept, and asserts that this individual is Peter.

In her (1994) study, Szabolcsi basically adopts Kenesei's notion of focus, however, she proposes to change the formalism in such a way that it can also handle plurals:

(9)  $\lambda z \lambda P$  [ $z = \iota x$  [ $P(x) \ \& \ \forall y$ [ $P(y) \rightarrow y \leq x$ ]]]

Modifying Kenesei's notion of 'exclusion by identification' to some extent, É. Kiss (1998a) describes the focus function as 'exhaustive identification'. The paper assumes a focus operator which operates on the set of contextually determined elements for which the predicate of the sentence can potentially hold, and exhaustively identifies the proper subset of this set for which the predicate actually holds, excluding the complementary subset. The preverbal focus represents the value of this operator.

As shown by É. Kiss (1998a), a constituent conveying new information, answering an explicit or implicit wh-expression, can also appear in the postverbal part of the sentence; however, postverbally it has a non-exhaustive reading. Compare the two alternative ways of answering the wh-question in (10a):

(10)a. [<sub>FocP</sub> KIKET [hívtál meg ma estére?]]

who-PL-ACC invited-you PRT today evening-for

'Who did you invite for tonight?'

b. [<sub>FocP</sub> PÉTERT és PÁLT ([hívtam meg])]

‘It is Peter and Paul (that I invited).’

c. Meg hívtam PÉTERT és PÁLT.

‘I invited Peter and Paul.’

The answer in (10b) is false if I also invited others than Peter and Paul. The answer in (10c), on the other hand, does not imply or implicate that I invited nobody but Peter and Paul; on the contrary, native speakers would use it to suggest that the answer is partial, non-exhaustive. The structural focus, illustrated in (10b), is called identificational focus. The prosodic focus in (10c) is a mere information focus. The preverbal identificational focus is optionally present; it represents the value of an operator; it is exhaustive; it has scope; it involves distributional restrictions; it is always a major constituent (an argument of the V or an adjunct); it is associated with a fixed structural position; and it is derived by movement. The information focus, on the other hand, is a mere pragmatic–prosodic phenomenon, marked by primary stress, expressing new information. Every sentence contains an information focus, the size of which can vary. The prosodic focus of English is information focus. The English equivalents of the Hungarian preverbal identificational focus are the cleft and the pseudo-cleft constituents.

In É. Kiss (2006a,b), I analyzed the preverbal focus as a specificational predicate – adopting Higgins’s (1973) analysis of the English pseudo-cleft constituent, and Huber’s (2000) analysis of the German and Swedish cleft constituent. In this approach, which I also maintain in this paper, the focus referentially identifies the set determined by the presupposed section of the sentence, by listing its members. The meaning of (10b), for example, can be explicated informally as follows:

(10b)’. ‘Who I invited are Peter and Paul.’

The focus as a specificational predicate is predicated of the open sentence determined by the post-focus projection. Focus movement serves the purpose of realizing in syntactic structure the specificational predicate – argument (i.e., the focus – presupposition) articulation.<sup>4</sup>

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<sup>4</sup> Szabolcsi (1980) was the first to notice the ‘qualitative’, i.e., predicative, nature of focus in examples like (i), where the two foci can denote the same individual because of the non-referring, predicative function of the focus constituents. The coreferent reading is impossible in any other structural position – see (ii), (iii):

(i) [<sub>FocP</sub> A BARÁTNŐMET<sub>i</sub> [hívtam meg]], nem [<sub>FocP</sub> A MINISZTER FELESÉGÉT<sub>i/j</sub>]  
my friend-ACC invited-I PRT not the minister’s wife-ACC  
‘It was my friend that I invited, not the minister’s wife.’

In this framework, the [+exhaustive] feature of focus is a semantic consequence of its specificational predicate role. The focus serves to specify the set determined by the presupposed sentence part by listing its members, and it fulfils this function if it enlists the members of the set exhaustively. Thus the exhaustivity of structural focus is neither a lexical property (like the *wh* feature of interrogative expressions), nor a feature assigned by a focus operator in the course of the derivation, but a semantic consequence of the specificational predicate role of the focussed constituent. Universal quantifiers cannot be focussed because they cannot function as predicate nominals (cf. Giannakidou and Quer 1995).

The most recent theory attributing a [+exhaustive] feature to the Hungarian preverbal focus is the Exhaustive Identification Operator theory of Horvath (2004). According to Horvath, the preverbal focus position in the Hungarian sentence is, in fact, a kind of quantifier position, the specifier of an Exhaustive Identification Phrase (EIP), to be filled by a constituent combined with an invisible Exhaustive Identification Operator (EIOp). The source of exhaustivity is the EIOp, whose function is described by Horvath (2004) as follows:

- (11) EI operates on a set of contextually or pragmatically given elements for which the predicate phrase can potentially hold; it identifies the exhaustive proper subset of this set for which the predicate phrase actually holds.

In Horvath's terminology, the term 'focus' is restricted to the pragmatic–prosodic information focus of É. Kiss (1998a); it is defined as a syntactically unencoded interface phenomenon, marked prosodically across languages. The relation between exhaustivity and focus is indirect; the EIOp, similar to *even* and *only*, requires association with focus. This is not an absolute requirement though; Horvath also quotes examples in which the constituent associated with the EI operator is presupposed and deaccented; the information focus, bearing primary stress, is a quantifier preceding the EIOpP. For example:

- (12) MINDEN fiú [<sub>FocP</sub> Marit [kérte fel táncolni]], nemcsak a barátja.  
 every boy Mary-ACC asked PRT to.dance not only her friend  
 'Every boy asked Mary [and noone else] for a dance, not only her friend.'

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- (ii) *A barátnőmet<sub>i</sub> meg-hívtam, a miniszter feleségét<sub>\*i/j</sub> nem.*  
 'My friend, I invited, the minister's wife, I didn't.'

- (iii) *Meg-hívtam a barátnőmet<sub>i</sub>, de nem hívtam meg a miniszter feleségét<sub>\*i/j</sub>.*  
 'I invited my friend, but I didn't invite the minister's wife.'

### **3. Focus theories ignoring the exhaustivity of structural focus**

Though the exhaustive interpretation of the preverbal focus has never been questioned by native Hungarian speakers, including linguists, there have been proposals which, aiming to formulate a universal theory of focus, regard the [+exhaustive] feature of the Hungarian preverbal focus as irrelevant. In the theory of Bródy (Brody 1991, 1995), constituents in the preverbal focus position have a [+f] feature, and they have been raised to Spec,FocP to enter into a checking relation with the [+f] feature of the Foc head. Universal quantifiers, which can be adjoined to FocP in visible syntax and be assigned primary stress in Hungarian, are assumed by Bródy to have the same [+f] feature. In Bródy's analysis, Q-raising to FocP is also movement into the checking domain of the Foc head. Bródy also attributes a [+f] feature to postverbal constituents bearing a primary stress, e.g. the postverbal stressed object of (10c), and to the prosodic focus of the English sentence. These constituents are raised to Spec,FocP at LF. If an English prosodic focus, or a Hungarian postverbal information focus also has a [+f] feature, then [+f] cannot encode exhaustive identification. If exhaustive identification means the identification of the proper subset of a relevant set, and the exclusion of the complementary subset, then [+f] cannot involve exhaustive identification in the case of universal quantifiers, either. That is, the [+f] feature in the theory of Bródy has no [+exhaustive] component.

Exhaustivity plays no role in the focus theory of Szendrői (2003), either, where focus movement is triggered by the requirement of stress–focus correspondence – as proposed by Reinhart (1995). According to the Stress–Focus Correspondence Principle of Reinhart, the focus of a clause is any constituent containing the main stress of the intonational phrase, as determined by the stress rule. Focus and main stress can be made to coincide in two ways: by syntactic transposition, or by stress shift onto the constituent to be focussed. According to Szendrői, Hungarian always adopts the first option. In Hungarian, the Nuclear Stress Rule marks the leftmost position of the VP as the position of main stress, hence focus movement is movement to the left edge of the VP. Examples like (10c), containing a postverbal focus, are claimed by Szendrői to represent VP-focus, and the difference between the interpretation of (10b) and (10c) is claimed to be a difference between narrow focus and wide focus. Exhaustivity plays no role in the analysis.

### **4. A focus theory denying the exhaustivity of structural focus**

Whereas Bródy (1990, 1995) and Szendrői (2003) are merely silent about the Hungarian preverbal focus being obligatory interpreted as [+exhaustive], Wedgwood explicitly denies that structural focus encodes a [+exhaustive] feature (see Wedgwood 2005). He is aware of the fact that the Hungarian preverbal focus is usually understood to be exhaustive; however, he claims that its exhaustivity is a mere implicature, which is elicited by a narrow focus also in languages with no focus movement, e.g. in English. The exhaustivity implicature can be derived either from Grice's Maxim of Quantity (Grice 1967/1975), or from the general principles of inference of Sperber and Wilson's Relevance Theory (1986/1995). The first sub-maxim of Grice's Maxim of Quantity says „make your contribution as informative as is required (for the current purposes of the exchange)”. When new information is presented in a restricted context (in answer to an explicit or implicit question), an exhaustive answer is the optimally relevant answer, therefore, exhaustivity is always expected.

Naturally, an answer is understood to be exhaustive only with respect to the given context – as pointed out by Szabolcsi as early as in (1980, 1981) based on examples like (13):

(13) [<sub>FocP</sub> JOSEPH CONRAD [<sub>született lengyelnek</sub>]]

Joseph Conrad was.born Polish-DAT

‘It was Joseph Conrad who was born Polish.’

Joseph Conrad does not exhaust the set of all people born Polish; however, he may exhaust the set of those born Polish when talking about great English writers.

A narrow focus, i.e., that congruent with a wh-expression, is non-exhaustive only in two cases: i. if it is mutually manifest to the interlocutors that the speaker does not expect an exhaustive answer, e.g.:

(14) Honnan tudhatom meg a menetrendet?

‘Where can I learn the railway time table?’

Meg-tudhatod az INTERNETRŐL.

PRT learn-can-you the Internet-from

‘You can learn it from the internet.’

ii. The answer is not interpreted as exhaustive if the speaker makes it manifest that he is only giving partial information, e.g.:

(15)a. Kiket hívtál meg szombat estére?

‘Who did you invite for Saturday night?’

b. Többek között PÉTERT ÉS ÉVÁT (hívtam meg).

others among Peter-ACC and Eve-ACC invited-I PRT

‘Peter and Eve, among others.’

The Hungarian preverbal focus and the English cleft focus are exhaustive in the unmarked case because they usually represent narrow foci. The correlation between narrow focus and exhaustivity is derived from Sperber and Wilson’s Principle of Relevance (1986/1995):

(16) **Principle of Relevance:**

Hearers seek to optimize the communicative rewards of processing an utterance, relative to the effort this processing demands.

A context elicits an utterance with a wide focus when existing assumptions need to be strengthened; the hearer’s commitment to their truth needs to be increased. A context eliciting a narrow focus requires a greater processing effort, involving the contradiction and elimination of existing assumptions. Such an effort is worthwhile if the identification of the alternative to be contrasted with the existing assumptions is exhaustive.

If exhaustivity is a mere pragmatic implicature also in the case of the Hungarian preverbal focus and the English cleft focus, then it should be cancellable under appropriate pragmatic conditions. Wedgwood claims that this is indeed the case.

**5. Apparent arguments against the [+exhaustive] feature of structural focus**

An obvious argument allegedly refuting the exhaustivity of the Hungarian preverbal focus is provided by examples like (15b), in which the expression *többek között* ‘among others’ explicitly denies the exhaustivity of the preverbal *Pétert és Évát* ‘Peter and Eve’. This counter-argument, however, is only apparent. The constituent that occupies the structural focus position in (15b) is *többek között Pétert és Évát* ‘Peter and Eve among others’. This can be proved by the constituency test provided by *még...is* ‘even’. *Még...is* is a complex modifier consisting of a proclitic and an enclitic, which must be cliticized to one and the same constituent. Whereas *még...is* cannot surround a string of two arguments, or an argument and an independent adjunct – see (17a,b), *még többek között Pétert és Évát is* is grammatical – see (17c).

- (17)a. \**Még* Évának egy könyvet *is* viszek ajándékba.  
 even Eve-DAT a book-ACC also take-I present-for  
 ‘I take even a book to Eve as a present.’
- b. \**Még* holnap Évát *is* meg látogatom.  
 even tomorrow Eve-ACC also PRT visit-I  
 ‘I visit even Eve tomorrow.’
- c. *Még* többek között Pétert és Évát *is* meg látogattam.<sup>5</sup>  
 even among others Peter-ACC and Eve-ACC also PRT visited-I  
 ‘I visited even Peter and Eve, among others.’

If the Spec,FocP of (15b) is occupied by *többek között Pétert és Évát* ‘Peter and Eve, among others’, then the focus of (15b) is an exhaustive focus. It specifies the members of the set determined by the presupposed part of the given sentence by naming two of them, and referring to the rest of them as a group with the pronoun *többek* ‘others’. If *többek* ‘others’ were omitted, the set could only include Peter and Eve and no one else.<sup>6</sup>

Wedgwood’s main argument against the encoded exhaustivity of structural focus is borrowed from Horn (1981). Horn’s argument is based on the following minimal pair (translated into Hungarian by Wedgwood (2005:137)):

- (18)a. ??Azt tudtam, hogy Mari meg-evett egy pizzát, de most vettem észre,  
 that knew-I that Mary PRT ate a pizza but now took-I notice  
 hogy egy pizzát evett meg.  
 that a pizza ate-she PRT  
 ‘I knew that Mary ate a pizza, but I have just noticed that it was a pizza that she ate.’
- b. Azt tudtam, hogy Mari meg-evett egy pizzát, de most vettem észre,

<sup>5</sup> The fact that *többek között* can also be separated from *Pétert és Évát* does not refute their initial constituency. Adjuncts of nominal heads can be freely extraposed in Hungarian. A focussed constituent must be head-final, hence the adjunct of a focussed nominal must, in fact, either be extraposed or be turned into a premodifier. Cf.

(i)\*<sub>[FocP]</sub> A házat a sziklák alatt [vettem meg]  
 the house the cliffs below bought-I PRT  
 ‘I bought the house below the cliffs.’  
 (ii) <sub>[FocP]</sub> <sub>[DP]</sub> A házat *t<sub>i</sub>* [vettem meg] <sub>[PP]</sub> a sziklák alatt;  
 (iii) <sub>[FocP]</sub> A sziklák alatti házat [vettem meg]

<sup>6</sup> As an anonymous reviewer points out, *többek között* is always unstressed. The reason for this is presumably the pronominal status of *többek* ‘several [ones]’.

that knew-I that Mary PRT-ate a pizza but now took-I notice  
hogy csak egy pizzát evett meg.

that only a pizza ate-she PRT

‘I knew that Mary ate a pizza, but I have just noticed that it was *only* a pizza that she ate.’

Horn and Wedgwood assume that the [+exhaustive] feature is encoded by the particle *csak/only* in (18b). The two clauses of (18b) can be contrasted because of the presence of exhaustivity in the second clause. In the second clause of (18a), on the other hand, the structural focus itself carries no [+exhaustive] feature, which is why the two clauses cannot be coordinated by the contrastive *de* ‘but’.

In my opinion, this argument is not convincing. The first problem is that (18a) is ungrammatical under the prosody in (19a), and is grammatical under the prosody in (19b). The ?? native speakers assigned to (18a) presumably indicates that it takes some effort to find a context eliciting (19b).

(19)a. \*Azt tudtam, hogy Mari meg-evett egy pizzát, de most vettem észre, hogy

[<sub>FocP</sub> egy PIZZÁT [evett meg]]

‘I knew that Mary ate a pizza, but I have just realized that it was a pizza she ate.’

b. Azt tudtam, hogy Mari meg-evett egy pizzát, de most vettem észre, hogy

[<sub>FocP</sub> EGY pizzát [evett meg]]

‘I knew that Mary ate a pizza, but I have just realized that it was one pizza she ate.’

As for (19a) (i.e., the prosodically more unmarked version of (18a)), if two clauses differ only to the extent that the object has a [+exhaustive] feature in the second one, then the relation between the two clauses is not ‘contrast’; rather, the second clause makes the first one more precise. The first clause of (19a) does not encode the exhaustivity of the object, but does not exclude it, either. The second clause, imposing a [+exhaustive] reading on the object, merely restricts its interpretative possibilities. Since the meanings of the two clauses are not identical, it should be possible to conjoin them without a tautology arising; however, the conjunction must be appositive instead of contrastive:

(20) Mari meg-evett egy pizzát, pontosabban [<sub>FocP</sub> egy PIZZÁT [evett meg]]

Mary PRT ate a pizza more.precisely a pizza-ACC ate-she PRT

‘Mary ate a pizza, more precisely, it was a pizza she ate.’

(18b) is acceptable with a contrastive conjunction because the second clause not only makes the meaning of the first one more precise by fixing the value of the exhaustivity feature of the object, but it also adds a negative evaluation to it by means of *only*. As argued in É. Kiss (1996, 1998a), *only* is an evaluative scalar modifier expressing that the scalar degree it modifies represents a low, or at least non-maximal, degree of the given scale. The synonymy of (21a,b) might seem to suggest that *only* is merely the spelling out of the exhaustivity feature of the focus. That this is not the case is proven by the ungrammaticality of (22b) as opposed to (22a).

(21)a. [<sub>FocP</sub> ÉVA [volt Mária lánya]]

Eve was Mary's daughter

b. [<sub>FocP</sub> Csak ÉVA [volt Mária lánya]]

only Eve was Mary's daughter

(22)a. [<sub>FocP</sub> MÁRIA [volt Éva anyja]]

Mary was Eve's mother

b. \* [<sub>FocP</sub> Csak MÁRIA [volt Éva anyja]]

only Mary was Eve's mother

A focus modified by *csak* is presented as a scalar value contrasted with higher values of the given scale. A single daughter represents a low value on the scale of potential daughters (consisting of a single daughter, a set of two daughters, a set of three daughters, etc.), a mother, on the other hand, cannot be opposed to higher values on the scale of mothers.

The expression *only a pizza* can generate either a qualitative or a quantitative scale. Compare:

(23)a. Mari csak egy PIZZÁT evett.

'It was only a pizza that Mary ate.'

b. Mari csak EGY pizzát evett.

'It was only one pizza that Mary ate.'

In the case of (23a), the scale of foods can be a qualitative scale extending, say, from pizza to beefsteak. In this case *only* contrasts pizza with the more delicious, more sophisticated, more

valuable kinds of food. But (23a) can also evoke a quantitative scale. The degrees of this type of scale are of the kind ‘a pizza’, ‘a pizza and a salad’, ‘a pizza, a salad, and an ice cream’, etc. In the case of (23b), the scalar degrees above ‘one pizza’ are ‘two pizzas’, ‘three pizzas’ etc. The latter reading can also be elicited without *only*, given that the numeral *egy* ‘one’ (the stressed equivalent of the indefinite article in Hungarian) represents a low (in fact, the lowest) degree of the scale of positive whole numbers also without the evaluative particle *only*. That is why (19b) is acceptable; its second clause can be contrasted with the first one because the second clause not only has the value of the exhaustivity feature of the object fixed, but it also assigns to the object a low scalar value.

In view of these considerations, Wedgwood’s arguments do not prove that the [+exhaustive] feature of structural focus can be absent, hence they do not support the conclusion that the exhaustivity of structural focus is a cancellable pragmatic implicature.

## 6. A further argument for the [+exhaustive] feature of structural focus

In Hungarian, expressions containing a numerical modifier *n* can be interpreted as ‘at least *n*; *n* or more’ in every sentence position but Spec,FocP (see É. Kiss 2006c). Observe how *két gyereket* ‘two children’ is interpreted in VP-internal position (24a), in topic position (24b), and, supplied with the maximizer *is* ‘even’, in distributive quantifier position (24c) – as opposed to Spec,FocP (25):

- (24)a. Aki [<sub>PredP</sub> fel-nevelt két gyereket], az 15% nyugdíjmelésre jogosult.  
 who up brought two children (s)he 15% pension-raise-to entitled-is  
 ‘Who brought up (at least) two children is entitled to a 15% pension raise.’
- b. Aki [<sub>TopP</sub> két gyereket [<sub>PredP</sub> fel-nevelt]], az 15% nyugdíjmelésre jogosult.  
 ‘Who brought up (at least) two children is entitled to a 15% pension raise.’
- c. Aki [<sub>DistP</sub> két gyereket is [<sub>PredP</sub> fel-nevelt]], az 15% nyugdíjmelésre jogosult.<sup>7</sup>  
 ‘Who brought up (at least) two children is entitled to a 15% pension raise.’

- (25) Aki [<sub>FocP</sub> KÉT GYEREKET [nevelt fel]], az 15% nyugdíjmelésre jogosult.  
 ‘Who brought up [exactly] two children is entitled to a 15% pension raise.’

<sup>7</sup> *is* in (24c) is a distributive particle. A numeral associated with it cannot be focussed; it must land in Spec,DistP, the landing site of distributive quantifiers, e.g., universals.

What we attest in (24a-c) is not surprising. According to a well-known hypothesis, the basic meaning of a numerical modifier  $n$  in natural languages is ‘at least  $n$ ’, ‘ $n$  or more’ – cf. e.g. Horn (1972; 1981), Levinson (2000), and Kadmon (2001).<sup>8</sup> It is easy to see why. The truth of the statement *John brought up two children* is preserved also in case the number of children brought up by John increases to three, four, or ten (as one cannot bring up ten children without also bringing up two children). What needs to be explained is why a numerical modifier is still mostly interpreted at its face value. The face-value interpretation of numerical modifiers is attributed to a so-called scalar implicature, which fixes the upper bound of ‘at least  $n$ ’ by adding the meaning component ‘at most  $n$ ’ to it. The presence or absence of this implicature is supposed to depend on pragmatic conditions, as follows from Grice’s Maxim of Quantity, requiring a speaker to be as informative as is necessary for the current purposes of the exchange (Grice 1967/1975). For example, if we are interested in a person’s family status, and he tells us that he has raised two children, we will associate the expression *two children* with a scalar implicature, i.e., we will interpret it as ‘exactly two children’ – because a person asked about his family status is sufficiently informative only if he gives us the exact number of his children. If, on the other hand, we are talking about a benefit allotted to people who have brought up a certain number of children, it seems sufficient to fix the lower boundary of the number of children required in order to receive the benefit. That is, in this case no scalar implicature is induced. Accordingly, *két gyereket* ‘two children’ in (24a-c) is understood to mean ‘at least two children’.

In focus position, the interpretation ‘at least  $n$ ’ is impossible – no matter what the pragmatic conditions are. Thus no matter how pragmatically unlikely it may be, (25) can only mean that only the persons who have raised exactly two children (no less and no more) are entitled to the benefit.

The meaning difference between a non-focussed and a focussed numerically quantified expression becomes even more obvious under negation. Compare:

(26)a. János NEM nevelt fel két gyereket.<sup>9</sup>

John not brought up two children

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<sup>8</sup> Not everyone shares this view, though. Horn (1992; 1996), Geurts (2006), and Breheny (2008) argue for theories in which the ‘exactly  $n$ ’ interpretation of numerals is primary, and the ‘at least  $n$ ’ interpretation is derived. Breheny (2008) derives the ‘at least’ reading from the ‘exactly’ reading by pragmatic reasoning. Geurts (2006) distinguishes quantifier and predicate senses of a numeral, the former associated with an ‘exactly’ interpretation, and the latter associated with an ‘at least’ interpretation. The two readings are related by type-shifting rules.

<sup>9</sup> What triggers the inversion of the V and the particle (more precisely, the extraction of the V across the particle) in (24a) is not a focus but the negative particle.

‘John did not bring up two children.’

b. János NEM [<sub>FocP</sub> két gyereket [nevelt fel]]

‘It wasn’t two children that John brought up.’

(26a) is only true if John brought up less than two children, i.e., if he brought up one child or no child at all. (26b), on the other hand, is true whether the number of children brought up by John is smaller than two or larger than two. ((26b) cannot be used if John brought up no child – because a structural focus is associated with an existential presupposition. The presupposed part of the sentence is understood to determine an existing, non-empty set.)

The fact that a focussed numerical modifier  $n$  cannot be interpreted as ‘at least  $n$ ;  $n$  or more’ must be a consequence of the [+exhaustive] feature of focus. If focussing means the exhaustive identification of the alternative named by the focussed expression from among the set of potential alternatives, then the focussing of an expression containing the numeral  $n$  will exclude the alternatives containing  $n+1$ ,  $n+2$ ,  $n+3$  etc. If the [+exhaustive] feature of focus were a pragmatic implicature, it ought to be sensitive to pragmatic conditions. The fact that it is not affected by pragmatics indicates that it is a semantic feature, an inherent property of structural focus.

Actually, focussed noun phrases involving no numerical modifier can also be looked upon as scalar elements in the case of which the upward extending interpretation is blocked, resulting in an ‘at least  $x$  and at most  $x$ ’ reading. Consider again the examples under (10), repeated here as (27).

(27)a. [<sub>FocP</sub> KIKET [hívtál meg ma estére]]?

who-PL-ACC invited-you PRT today night-for

‘Who have you invited for tonight?’

b. [<sub>FocP</sub> PÉTERT és PÁLT [hívtam meg]]

Peter-ACC and Paul-ACC invited-I PRT

‘It is Peter and Paul that I have invited.’

c. [<sub>PredP</sub> Meg-hívtam PÉTERT ÉS PÁLT.

‘I have invited Peter and Paul.’

d. [<sub>TopP</sub> Pétert és Pált [<sub>PredP</sub> MEG-hívtam]]

‘Peter and Paul, I have invited.’

Let us generate all the possible subsets (the power set) of the set of those who I could have invited for tonight, and let us order them along a scale. The one-member subsets, e.g. {Peter} or {Paul}, will represent the lowest degree of the scale, the two-member subsets like {Peter, Paul} will represent the second degree of the scale, the three-member subsets such as {Peter, Paul, Stephen} will represent the third degree of the scale etc. A non-focussed *Peter and Paul* means ‘at least Peter and Paul’ because – in addition to forming a two-member subset – it can also represent a subset of larger, three- or four-member subsets. If, on the other hand, *Peter and Paul* is focussed, it can only denote the two-member subset {Peter, Paul}. That is, exhaustivity and the blocking of upward extension along a scale are two sides of the same coin.

The correlation between the ‘at least  $n$ ’ versus ‘exactly  $n$ ’ interpretation of a numeral and the discourse function of the numerically modified expression has already been noticed – by Szabolcsi (1981a,b), Fretheim (1992), van Kuppevelt (1996), and Wedgwood (2005), among others. What Fretheim observed was that the interpretation of a numerical modifier  $n$  in Norwegian is related to the stress of the modified expression. If  $n$  is part of an unstressed, contextually given, salient expression,  $n$  means ‘at least  $n$ ’. Otherwise,  $n$  means ‘exactly  $n$ ’. In fact, the so-called scalar implicature, supplementing the meaning ‘at least  $n$ ’ with the upper bound ‘at most  $n$ ’ depending on pragmatic conditions, can only be elicited by salient, topical numerically modified expressions. In the case of foci, the upper bound is obligatory, which suggests that it is not imposed upon the meaning of  $n$  by a weak pragmatic implicature but is part of the meaning of the utterance.

Van Kuppevelt (1996) extended Fretheim’s observation to scalar elements other than numerals. Similar to Fretheim, van Kuppevelt argues that the ‘exactly  $n$ ’ reading of focussed scalar expressions is not a pragmatic implicature but a semantic entailment. Actually, van Kuppevelt uses the term *satisfactory comment* instead of *focus*. He establishes the information structure of a sentence by questions. A satisfactory comment is (the non-presupposed part of) a uniquely determining answer to an explicit or implicit question. An answer which leaves open the possibility of alternatives (to be eliminated by a further subquestion) does not count as a satisfactory comment.

Wedgwood (2005, ch. 5.2.4) also discusses English examples corresponding to those in (20)-(21), and identifies the ‘exactly  $n$ ’ reading of numerals as their exhaustive reading. He claims that the ‘exactly  $n$ ’ interpretation of numerals correlates with narrow focus function. In examples like those in (20), ‘what is really being questioned is the existence of a set of (someone’s) children of a certain cardinality... Any assertion of the existence of a set of a

given cardinality is compatible with the existence of sets with higher cardinalities because the smaller set can be simply a proper subset of a larger one... In contrast, when the existence of the set is presupposed but its cardinality is in question...it is precisely the choice of one cardinality from among the set of alternative cardinal values that is at stake, so the assertion that a certain cardinality holds implicitly excludes other cardinalities, whether higher or lower.” (Wedgwood 2005:165)

My point is that what has been observed about stressed numeral expressions by Fretheim, about numeral expressions functioning as satisfactory comments by van Kuppevelt, and about numeral expressions functioning as narrow foci by Wedgwood is grammaticalized in Hungarian. The ‘exactly *n*’ reading of numerals is associated with a particular structural position with an encoded [+exhaustive] feature, and is not sensitive to pragmatic or contextual conditions.

In van Kuppevelt’s framework, it is contextually determined what counts as a satisfactory comment. Compare his illustrative minimal pair:

(28) [Harry did a lot of shopping this afternoon.]

How many books did he buy?

#He bought four<sub>Comment</sub> books. In fact he bought seven.

(29) [Did Harry get a free book in this shop? If he bought four books, he got one.]

How many books did he buy?

He bought four<sub>Comment</sub> books. In fact he bought seven.

In the context of (28), the numeral is a satisfactory answer only under its ‘exactly four’ reading. In the context of (29), on the other hand, a process of „topic weakening” takes place, which renders the numeral a satisfactory answer also under its basic ‘at least four’ interpretation.

In Hungarian, the situation is much clearer. In the two different contexts, both the questions and the answers have different structures, and the interpretation is structurally determined. In the context of (28), a *how many* question is asked, which is answered with a focussed numerically modified expression:

(30) [<sub>FocP</sub> HÁNY KÖNYVET [vett Harry]]?

how.many book-ACC bought Harry

‘How many books did Harry buy?’

[<sub>FocP</sub> NÉGY könyvet], #valójában hetet is.  
four book-ACC in.fact seven-ACC even

‘Four books, in fact, seven.’

The focussed numeral phrase is correctly predicted not to allow an upward extending interpretation.

In the context of (29), we have two options. We can ask a *yes-no* question, with the numerically modified expression in postverbal position. In that case, its meaning is ‘at least four’ both in the question and in the answer (31). Alternatively, we can ask a *wh*-question, with the *how many* phrase and the corresponding numeral phrase in focus position. In that case, the numeral phrase must be interpreted at face value (32).

(31) [Did Harry get a free book in this shop? If he bought four books, he got one.]

VETT Harry négy könyvet?  
bought Harry four book-ACC  
‘Did Harry buy four books?’  
Igen, VETT négy könyvet. Valójában hetet is.  
yes bought-he four book in.fact seven-ACC even  
‘Yes, he bought four books. In fact, he bought seven.’

(32) [Did Harry get a free book in this shop? If he bought four books, he got one.]

[<sub>FocP</sub> HÁNY KÖNYVET [vett]]?  
‘How many books did he buy?’  
[<sub>FocP</sub> HÉT KÖNYVET]  
‘Seven books.’  
#[<sub>FocP</sub> NÉGY KÖNYVET]  
‘Four books.’

That is, in Hungarian the preverbal structural focus position blocks the ‘at least *n*’ reading irrespective of pragmatic conditions.

Wedgwood (2005) would correctly analyze the sentences in (31) to contain a wide focus, with the numeral having an ‘at least four’ reading. What would be problematic for him is the discourses in (33) and (34), containing a non-preverbal narrow information focus.

(33) Kapott Harry ajándékkönyvet? Ha vett négy könyvet, kapott egyet ajándékba.

‘Did Harry get a free book? If he bought four books, he got one for free.’

[<sub>FocP</sub> HÁNY KÖNYVET [vett]]?

‘How many books did he buy?’

Vett négy könyvet. Valójában hetet is.

bought-he four book-ACC in.fact seven-ACC even

‘He bought four books. In fact, he bought seven.’

(34) Kapott Harry ajándékkönyvet? Ha vett négy könyvet, kapott egyet ajándékba.

‘Did Harry get a free book? If he bought four books, he got one for free.’

Négy könyvet VETT. Valójában hetet is.

four book-ACC bought-he in.fact seven-ACC even

‘Four books, he bought. In fact, he bought seven.’

(*Négy könyvet* in (34) is to be pronounced with a contrastive intonation, i.e., with a rise or fall-rise developing into a hat contour.) If the information focus of a sentence is the constituent congruent with the wh-phrase of the question eliciting the sentence, then (33)-(34) contain a narrow focus. This narrow focus is stressed, but its stress is weaker than the main stress falling on the left edge of the logical predicate (in these cases, the V). As shown by these examples, a narrow information focus is not identical with a structural focus! *Négy könyvet* is a narrow information focus left in situ in the VP in (33), and is a contrastive topic in (34). The verbal projection cannot be deleted in these examples because the non-focus position of the numerically modified expression cannot be indicated otherwise. Actually, for a contrastive topic to be identifiable, it is sufficient to spell out an adverb adjoined to the verbal projection:

(35) [<sub>FocP</sub> HÁNY KÖNYVET [vett Harry]]?

‘How many books did Harry buy?’

[<sub>TopP</sub> Négyet [<sub>FocP</sub> BIZTOSAN/MINDENKÉPPEN [<sub>FocP</sub> ]]]

four-ACC for.sure /by.all.means

‘Four, for sure/by all means.’

That is, the obligatory blocking of the ‘at least’ interpretation of numerals is structure-dependent in Hungarian; it is a concomitant of the preverbal focus position; it cannot be accounted for in pragmatic terms.

The claim that exhaustivity is a grammaticalized property of the Hungarian preverbal focus is also supported by examples of different types.

Indefinite numerals like *pár* ‘couple of’, *néhány* ‘some’ have different meanings in focus position and in non-focus position. In focus position, the upward extension of their interpretation is blocked. Compare the following examples:

(36)a. *Hogy sikerült az adománygyűjtés?*

how succeeded the fund-raising

‘How was the fund-raising?’

b. [<sub>TopP</sub> *Pár forint* [<sub>PredP</sub> *össze-gyűlt*]] *így meg tudtuk venni az ajándékot.*

couple forint PRT gathered so PRT could-we buy the present-ACC

‘A few forints were collected, so we could buy the present.’

c. % [<sub>FocP</sub> *PÁR FORINT* [*gyűlt össze*]] *így meg tudtuk venni az ajándékot.*

‘It was few forints that were collected, so we could buy the present.’

(37)a. *Hogy sikerült az adománygyűjtés?*

‘How was the fund-raising?’

b. % [<sub>TopP</sub> *Pár forint* [<sub>PredP</sub> *össze-gyűlt*]] *így nem tudtuk megvenni az ajándékot.*

‘A few forints were collected, so we couldn’t buy the present.’

c. [<sub>FocP</sub> *PÁR FORINT* [*gyűlt össze*]] *így nem tudtuk megvenni az ajándékot.*

‘It was few forints that were collected, so we couldn’t buy the present.’

In (36a), the topicalized *pár forint* ‘a couple of forints’ has an upward extending interpretation, meaning ‘a couple of forints or more’, ‘a couple of forints in the least’, which licences a positive result clause. As shown in (37a), the same sentence is incompatible with a negated result clause. In (36b), on the other hand, the focussed *pár forint* ‘a couple of forints’ means ‘a couple of forints’ and no more, which is incompatible with a positive result clause, but can licence a negative result clause, as shown in (37b).

*Sok* ‘many’ is known to be ambiguous between a partitive, or proportional, and an absolute, or ‘counting’ reading (a term of Szabolcsi (1997)). The upward extending interpretation is only allowed by the partitive, or proportional *sok* ‘many’. Under this reading,

the *sok* phrase denotes a relatively large subset of a set, the size of which can be extended until it becomes identical with the maximal set. Thus the following example is not contradictory:

- (38) [<sub>TOPP</sub> *Sok kollégát* [<sub>PredP</sub> meg-hívtam]]; tulajdonképpen mindet.  
 many colleague-ACC PRT invited-I actually all-ACC  
 ‘I invited many colleagues; actually all of them.’

In focus position, on the other hand, the *sok* phrase is not partitive or proportional; it denotes an indefinite absolute number; it functions as a ‘counting’ quantifier:

- (39) [<sub>FocP</sub> SOK KOLLÉGÁT [hívtam meg]]  
 many colleague-ACC invited-I PRT  
 ‘It was many colleagues that I invited.’

(39) means ‘the number of colleagues I invited is many’. *Sok* in (39) evokes no superset, no scale. Szabolcsi (p.c.) demonstrates the meaning difference between the partitive *many* and the ‘counting’ *many* with a minimal pair of the following type:

- (40)a. [<sub>TOPP</sub> *Sok kolléga* [meg-jelent]] [<sub>TOPP</sub> *sok kolléga* [nem jelent meg]]  
 many colleague PRT appeared many colleague not appeared PRT  
 ‘Many colleagues appeared, many colleagues did not appear.’  
 b.#[<sub>FocP</sub> SOK KOLLÉGA [jelent meg]] [<sub>FocP</sub> SOK KOLLÉGA [nem jelent meg]]  
 ‘It was many colleagues that appeared, it was many colleagues that did not appear.’

The second clause of (40a) makes a statement about the complementary subset of the set denoted by the non-focussed, partitive *many* phrase. In (40b), on the other hand, the focussed, ‘counting’ *many* evokes no superset and no complementary subset, hence the second clause is uninterpretable. The absolute reading of *sok* ‘many’, enforced in focus position, corresponds to the ‘exactly *n*’ reading of focussed numerals.

Interestingly, *kevés* ‘few’ phrases are obligatorily focussed in Hungarian:

- (41)a.\*Meg-hívtam *kevés kollégát*.  
 PRT invited-I few colleague-ACC

‘I invited few colleagues.’

b. \*<sub>[TopP</sub> *Kevés kollégát* <sub>[PredP</sub> meg-hívtam]

‘Few colleagues, I invited.’

c. <sub>[FocP</sub> KEVÉS KOLLÉGÁT <sub>[hívtam meg]</sub>

‘It was few colleagues that I invited.’

In the presence of a preverbal focus, a *kevés* phrase can also appear behind the V; however, as shown in É. Kiss (1998b), it occupies a focus position (the specifier of a lower FocP projection) postverbally, too. (Whereas a postverbal numeral can, but need not, be analyzed as a lower, ‘second occurrence’ focus, for *kevés* phrases, which can only occur in Spec,FocP, this is the only option. Notice that, whereas a numeral can stand postverbally also in lack of a preverbal focus, a postverbal *kevés* phrase is only licensed by a preverbal, ‘first occurrence’ focus.) In multiple focus constructions, e.g. in (42), the V is attracted across the lower Foc to the higher Foc head, that is why the filler of the lower Spec,FocP surfaces postverbally.

(42) <sub>[FocP</sub>A ROSSZ IDŐ miatt <sub>[NNP</sub>hívtam <sub>[FocP</sub>KEVÉS KOLLÉGÁT <sub>[NNP</sub> t<sub>V</sub> <sub>[PredP</sub>meg t<sub>V</sub>]]]]<sup>10,11</sup>

the bad whether because invited-I few colleague-ACC PRT

‘It was because of the bad weather that I invited FEW COLLEAGUES.’

As argued in É. Kiss (2006c), a *kevés* phrase must be moved into Spec,FocP because in other sentence positions it would be associated with an upward extending interpretation, which is inadmissible in the case of a scalar value in the negative domain of a bidirectional scale. Horn

<sup>10</sup> In a more unmarked version of (38), the verbal particle immediately follows the overt V. É. Kiss (2008) argues at length that V movement frees up postverbal word order, and postverbal constituents are rearranged according to the law of growing constituents of Behaghel (1932).

<sup>11</sup> The interpretation of a postverbal *pár* ‘couple of’ phrase also depends on whether or not the preverbal focus slot is filled. The postverbal *pár* phrase in the focus construction in (i) can be understood either as a (second) focus - on a par with (37c), or as a non-focus, on a par with (36b).

(i) <sub>[FocP</sub> CSAK ESTÉRE gyűlt össze *pár forint*

only evening-by gathered together couple forint

így nem tudtuk meg-venni az ajándékot/meg tudtuk venni az ajándékot.

so not could-we PRT buy the present /PRT could-we buy the present

‘It was only by the evening that a couple of forints were collected, so we couldn’t buy/we could buy the present.’

In the absence of a preverbal focus, the postverbal *pár*-phrase cannot be analyzed as the specifier of a second, lower focus projection, and, accordingly, it is interpreted as a non-focus:

(ii) *Össze-gyűlt estére pár forint, így meg tudtuk venni az ajándékot/\*nem tudtuk meg-venni az ajándékot.*

‘A couple of forints were collected by the evening, so we could buy/\*we couldn’t buy the present.’

(1989:235), in fact, claims that „positive and negative quantifiers, modals, and related operators must be represented on distinct, though related, scales. There can be no single scale on which operators like *some* and *not all*, or *possible* and *unlikely*, can be plotted. Rather, there is one scale defined by the positive operators and one by their negative counterparts.” In Horn’s theory of quantitative scales, *few* and *many*, *beautiful* and *ugly* cannot belong to the same scale because, if  $P_j$  outranks  $P_i$  on a Horn scale, then, by definition, a statement containing an instance of the former unilaterally entails the corresponding statement containing the latter. In other words, assuming Horn’s (1972; 1989) notion of scale,  $P_i$  and  $P_j$  can be regarded as values of the same scale iff the interpretation of  $P_i$  can potentially be extended up to  $P_j$ . In Horn’s theory, *kevés kolléga* ‘few colleagues’ and *sok kolléga* ‘many colleagues’ cannot belong to the same scale because the extension of the interpretation of *kevés kolléga* to the scalar value represented by *sok kolléga* is impossible, given that the statement *I invited many colleagues* does not entail the statement *I invited few colleagues*.

Native speakers of Hungarian handle this problem differently. For them, *kevés kolléga* ‘few colleagues’ and *sok kolléga* ‘many colleagues’ clearly represent opposing values of the same scale, with *kevés kolléga* in the negative domain, and *sok kolléga* in the positive domain of the scale. What is ruled out is the upward extending interpretation of *kevés kolléga* – by its obligatory focussing. Upward extending interpretation is generally blocked in the case of scalar expressions in the negative domain of bidirectional scales, and the means of this is obligatory focussing.

As discussed in detail in É. Kiss (2006c), this generalization extends to negative adverbs of degree, manner, and frequency, as well. These types of adverbs are obligatorily moved to focus position, unlike their positive counterparts:

(43)a. János [<sub>PredP</sub> *gyakran* [<sub>PredP</sub> meg-látogat]]

John often PRT visits-me

‘John often visits me.’

b. \*János [<sub>PredP</sub> *ritkán* [<sub>PredP</sub> meg-látogat]]

John seldom PRT visits-me

c. János [<sub>FocP</sub> RITKÁN [látogat meg]]

‘It is seldom that John visits me.’

(44)a. János [<sub>PredP</sub> *nagyon* [<sub>PredP</sub> el -fáradt]]

John very-much PRT got.tired

‘John got tired very much.’

b.\*János [<sub>PredP</sub> *alig* [<sub>PredP</sub> *el* -fáradt]]

John hardly PRT got.tired

c. János [<sub>FocP</sub> ALIG [fáradt *el*]]

‘HARDLY did John get tired.’

(45)a. János [<sub>PredP</sub> *ügyesen* [<sub>PredP</sub> *meg-csinálta a feladatot*]]

John skilfully PRT did the job

‘John did the job skilfully.’

b.\*János [<sub>PredP</sub> *ügyetlenül* [<sub>PredP</sub> *meg-csinálta a feladatot*]]

John unskilfully PRT did the job

c. János [<sub>FocP</sub> ÜGYETLENÜL [*csinálta meg a feladatot*]]

‘It was unskilfully that John did the job.’

What forces the focussing of negative adverbs is the need to block the upward extension of their interpretation. Since they represent scalar values in the negative domain of bidirectional scales, an upward extending interpretation could lead to a semantic anomaly. The possibility of upward extension being structure-dependent in Hungarian, it can only be blocked by movement into the structural focus position.

## 7. Conclusion

The paper has argued for the claim that the structural focus of the Hungarian sentence, occupying Spec,FocP, and structural focus (e.g. the English cleft), in general, encodes the feature [+exhaustive]. After reviewing the standard arguments for the exhaustivity of structural focus, a new argument against it, proposed by Wedgwood (2005), has been examined, and has been shown to be based on a false premise. Finally, a new type of evidence has been presented. It has been argued (following van Kuppevelt (1996), and Wedgwood (2005)) that the ‘exactly *n*’ reading of a focussed numeral (as opposed to its basic, ‘at least *n*’ meaning) is a manifestation of its exhaustivity. It has been shown that the ‘exactly *n*’ meaning of focussed numerals is grammaticalized in Hungarian; it is associated with the preverbal focus position, causing obligatory focus movement in the case of certain types of scalar elements, and predictable, structurally determined meaning differences in the case of others.

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