

# SEPARATING "FOCUS MOVEMENT" FROM FOCUS

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## 0. Introduction

Movement operations in the Minimalist Program (MP) framework are assumed to be last resort, that is, to have to be driven by some interface need. In recent versions of the MP (Chomsky 2000, 2004), movement has been viewed as a concomitant of the operation 'Agree', under which a head bearing an uninterpretable (unvalued) instance of a formal feature F, acting as Probe, seeks to enter into a feature-matching relation with another category (the Goal) in its c-command domain that is endowed with the feature F. When the head (the Probe) furthermore has the EPP property, i.e., a need to merge a Spec in addition to its complement, then the Goal - specifically, the constituent containing the matching feature - may undergo movement, namely internal Merge with the Probe. A further assumption for the implementation of movement made in Chomsky (2000, 2004) is that categories are active, i.e., visible, for Agree, only if they have some uninterpretable feature. The matching feature found in the search domain of the Probe determines a constituent in accord with the principles of "Pied-piping", and it is this pied-piped constituent that gets merged as the Spec of the Probe satisfying its EPP feature. Thus the 'Move' operation of earlier frameworks is taken to be a composite operation of 'Agree, Pied-Pipe, Merge'.

While the paradigm case and original motivation for this conception of movement was A-movement, namely, the Case and phi-feature agreement system, and the EPP property of T, the same implementation has been commonly extended to A-bar movement cases, such as wh-movement. In the latter case, the feature involved in the Agree operation has, reasonably, been taken to be the morphological feature [wh] (more precisely, interpretable and uninterpretable instances of the [wh] feature, and often an additional [Q] feature, occurring on Probe and Goal). However, as soon as one looks beyond the case of wh-movement, and considers other major A-bar movement processes, exhibiting syntactic properties clearly parallel to wh-movements but with no obvious morphological marking that could suggest the presence of some (uninterpretable) formal feature, the matter of how the 'Agree, Pied-Pipe, Merge' mechanism motivated for the Case-agreement system (A-system) may extend to A-bar movements becomes far less clear.

A direct extension of the A-movement accounts - based on the Agree relation and including some uninterpretable lexical feature rendering the Goal active - to morphologically unmarked A-bar movements, such as e.g. "Topicalization" and "Focus-movement", may turn out to be unmotivated, and in fact empirically inadequate. To begin with, it has the potential of rendering the notion of uninterpretable formal feature empirically vacuous. But more generally, the question of what it is exactly that "drives" particular observed A-bar movement operations in the derivation must be treated as a major empirical issue. The existence and identity of individual formal features of the Probe and Goal allegedly involved in the Agree relation implementing movement (along with the EPP feature of the Probe) needs to be verified by empirical investigation.

In the present paper we will examine a case in point, namely, the overt syntactic A-bar movement commonly referred to as "Focus-movement". This type of movement is attested in a wide variety of languages, such as Hungarian (Brody 1990, 1995; É. Kiss 1987, 1998; Horvath 1986, 1995, 2000; Kenesei 1986, 1995), Basque (Ortiz de Urbina 1989, 1995), Korean (Choe 1995), Kikuyu (Clements (1984), and many others. Below we will revisit the case of Focus-movement as manifested in one of its best-studied instances, Hungarian. We will assess this apparent Focus-movement in relation to minimalist views of A-bar movement, examining in particular whether it is due to a formal [Focus] feature. We will argue against the [Focus]-feature hypothesis, and will advance the proposal that the movement is induced by a separate quantificational operator, namely an "Exhaustive Identification" operator (EI-Op), which interacts with Focus only indirectly. We will evaluate the implications of our findings for the place of Focus in the model, and in particular for its relation to the PF interface. It will be concluded that (a) "Focus-movement" as instantiated in Hungarian fails to motivate the encoding of Focus in the computational system (CS) by a formal feature, (b) the conceptually minimal view of Focus as a uniform purely interface phenomenon can be maintained, (c) a systematic distinction needs to be drawn between two classes of *prima facie* Focus-driven movements, namely, prosodically motivated local "scrambling" (such as Zubizarreta's (1998) p-movements), and A-bar "Focus-movements" that are not driven by Focus at all, and (d) while the former local scrambling-type phenomena can plausibly be attributed to the unmarked position of prosodic prominence (such as main stress) in the clause, there is no reason to assume that main stress, i.e., the prosodically determined Focus position, could drive A-bar movements such as the Hungarian-type "Focus-movement" within the CS.

## 1. Notions of Focus and Focus-related movements

The term Focus, its different definitions, and the theoretical approaches to it proposed in the literature cover a wide and heterogeneous range of phenomena. Here we will provide a brief overview of only those aspects of the vast literature on Focus that will help clarify what will be of relevance for our discussion of so-called Focus-movements.

### 1.1. Approaches to Focus

A commonly used definition of Focus, originating in Jackendoff's work (1972), is in terms of the discourse notion of "presupposition" (also referred to as background); it considers Focus to be the nonpresupposed - i.e., new information - part of the sentence. In other words, Focus constitutes information assumed not to be shared by the speaker and the hearer at the point in the discourse where the sentence is uttered. This notion of Focus is often referred to - in light of further proposed types of Focus - as "information Focus" (e.g. É. Kiss 1998), or as "presentational Focus" (Rochemont 1986). At the same time, further types of Focus have been recognized, such as contrastive Focus (Rochemont 1986), identificational Focus (É. Kiss 1998), emphatic Focus (Zubizarreta 1998). These proposed distinctions between various subtypes are based on observations of distinct kinds of discourse contexts they occur in, or distinct semantic properties, and sometimes, also distinct syntactic realizations they exhibit. (The latter two aspects will be relevant for our account of Hungarian Focus-movement below.) Importantly, however, in all these purportedly different types of Foci, the constituent

in Focus is marked/determined by prosodic prominence, namely by bearing main stress (or pitch accent).

According to Chomsky's (1971) seminal analysis, the systematic correspondence between available Focus options and prosodic prominence in the sentence holds at the level of surface constituency, and can thus most straightforwardly be captured by deriving Focus interpretation directly from prosodic prominence, namely in the English-type languages, from main stress, assigned to surface representations (see (1) below). This approach to Focus has been revived and elaborated in recent work by Reinhart (1995) (see (1) below), based on Cinque's (1993) theory of phrasal stress and its relation to the set of Focus options available (the "focus set") in the sentence. The issue of compatibility between this stress-based conception of Focus and so-called Focus-movements will be a central topic in the present paper.

(1) The Stress-Focus Correspondence Principle (SFCP)

(adapted from Reinhart 1995):

The focus set of a clause consists of the constituents containing the main stress of the clause.

A dichotomy commonly observed in relation to the prosody-Focus relation, which *prima facie* is problematic for the general applicability of the SFCP, is between wide/projecting Focus and narrow Focus (see Selkirk's (1984) "focus projection" conventions); narrow Focus is often claimed to correlate with contrastive function, as opposed to new information Focus. Thus note the difference between examples such as (2), where main stress is on the object, and (3), where main stress is on the verb (Reinhart 1995). Sentence (2) permits three alternative Focus options, as shown by its appropriateness to the three different context questions. In contrast, (3) exhibits "narrow" Focus: it is appropriate only for a context where the verb is the Focus. It fails to permit VP or IP Focus, even though both the VP and the IP constituents contain the main stress of the clause. (Words carrying main stress are capitalized, and Focus constituents - as identified by the context question test - are marked by bracketing.)

- (2) a. Q: What's this noise?  
[My neighbor is building A DESK]
- b. Q: What's your neighbor doing?  
My neighbor is [building A DESK]
- c. Q: What is your neighbor building?  
My neighbor is building [A DESK]
- (3) Q: Has your neighbor bought a desk already?  
My neighbor is [BUILDING] a desk
- cf. Q: What's this noise? / What's your neighbor doing?  
#[My neighbor is [BUILDING a desk]]

This classic problem brought up commonly against Chomsky's (1971) purely stress-based treatment of Focus, and the SFCP in general, is resolved by Reinhart's (1995) interface economy approach. Under interface economy, the reason for the limitation of Focus options in (3), contrasting with those of (2) is that in (3) an operation of stress-shift (to the verb) took place, i.e., there was a relocation of nuclear stress, originally assigned by the NSR

automatically to the direct object in the above example (see (2)). This stress-shift operation is an extra, unforced step in the derivation, hence it violates economy unless its application results in creating a new, otherwise unavailable, interpretation at the semantic interface. In our example, VP and IP are possible Foci (i.e., members of the Focus set of the sentence) without the stress-shift operation, as shown in (2); consequently, the interface economy view of stress assignment and its relation to Focus via the SFCP (1) correctly predicts that in the stress-shifted version of the sentence (3), only the new Focus option - namely V Focus - will be available.

In contrast to the direct stress-based determination of Focus in (1), Jackendoff (1972) postulates a syntactic "F-marker" that associates freely with surface constituents, and receives interpretation in the phonology, triggering the prosodic aspects of Focus, and also triggers Focus interpretation on the constituent in the semantics. Subsequent work by Selkirk (1984) and more recently, Zubizarreta (1998), address the Focus-prosody relation under the T-model architecture which permits no direct interaction between the PF and the LF parts of the derivation. They make use of annotation of the output structures of syntax by a diacritic F-marker, [+F] and [-F], similar to Jackendoff's device; they too attribute to these [F] markers the role of coordinating prosodic prominence and the semantic interpretation of Focus on constituents at the interfaces.<sup>1</sup> It is crucial to note here that these [F] markers are not formal features available in the syntactic derivation. They are considered diacritics, assigned to fully formed phrases at the end of the syntactic derivation, not features introduced on lexical items entering the numeration. Thus the issue of [F] markings proposed in the Jackendoff/Selkirk/Zubizarreta approaches to mediate prosody and Focus at the interfaces is distinct from the substantive issue that we will be concerned with in the following sections on Focus-movement: a formal feature [Focus] that is present and active within the CS proper.<sup>2</sup>

As for the interpretation of Focus in sentence grammar, Chomsky (1976) proposes a covert (LF) movement operation, namely, quantifier raising, that applies to the Focus constituent. Relying on evidence from weak crossover effects, the proposal derives an operator-variable structure, which makes the representation of Focus at LF parallel to structures derived by wh-movement. In place of the Focus constituent, the resulting representation has a variable bound by a definiteness operator. (Main stress is indicated by capitalization.)

- (4) Q: Who does Bill like?  
 Bill likes [JOHN]  
 LF movement: JOHN [Bill likes  $t$  ]  
 the x, such that [Mary visited x] is JOHN

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<sup>1</sup> For further studies of the relation between Focus and prosody, see e.g. Selkirk (1995), Gussenhoven (1984), Cinque (1993), Szendrői (2003), Vogel and Kenesei (1987). The interaction between Focus and prosody from the perspective of information structure, and the encoding of discourse notions in alternative architectures of grammar, are topics pursued in much recent work, such as Erteschik-Shir (1997), Lambrecht (1994), Vallduví (1992).

<sup>2</sup> Even Zubizarreta (1998), whose theory has a class of movements that are sensitive to [F]-marking (her prosodically driven "p-movements"), explicitly incorporates these movements in a separate post-cyclic part of the derivation, after all feature-checking-driven movements, namely, after her postulated level of " $\Sigma$ -structure". This is the stretch of derivation where also her Nuclear Stress Rule (NSR) and Focus Prosody Rule (FPR) are claimed to apply.



- (7) a. Taro-ga [VP2 kyOO [VP1 [DP HON-O] katta]] Japanese  
 Taro-NOM today book-ACC bought  
 'Taro bought A BOOK today.'
- b. [IP2 Hon-O [IP1 Taro-ga [VP2 [ADV KYOO] [VP1 t katta]]]  
 book-ACC Taro-NOM today bought  
 'Taro bought a book TODAY.'

Both in (6) and (7), the movement creates a new, otherwise unavailable Focus option, given stress as assigned by the Nuclear Stress Rule (NSR) to the clause. Nuclear stress is assigned to the rightmost complement of V in Spanish clauses, and to the immediately pre-V complement in Japanese. In both cases above, the movement ("scrambling") removes this complement from the position where it would receive main stress if movement had not taken place; crucially this enables another argument (the subject) in (6), or an adjunct (the adverb) in (7) to receive main stress under the NSR, and thus get interpreted as the Focus of the sentence.

Type I Focus-related movements arise when prosodic prominence in the clause and the syntactic position of a constituent to be interpreted as Focus are in conflict. These movements seem to be due to the need to maximize the effect of the unmarked stress pattern as assigned by the independently motivated NSR to the clause, and thus eliminate the need for extra stress shifting operations to relocate main stress in order to get Focus interpretation on constituents that otherwise would not be members of the Focus set of the sentence (see the SFCP (1), and the discussion in Reinhart (1995), Zubizarreta (1998), Ishihara (2001); for an optimality theoretic approach to conflicts between prosody and syntactic position with respect to Focus, see Samek-Lodovici (2005)).

Notice that the above type of movements, in particular Zubizarreta's p-movements, (a) are local, or at least clause-bounded, and (b) they do not move the constituent in order for it to become the Focus of the sentence, rather they remove constituents from the domain of stress-assignment, and thus have the effect of creating Focus on some other element *in situ*. These two major properties crucially set them apart from the class of Focus-related movements (Type II) that we are concerned with in the present paper: syntactic movements to a designated structural Focus position attributed to languages like Hungarian or Basque (for further instances, see É. Kiss (1995)). It is only these latter, Type II, Focus-related movements, addressed below, that we will refer to by the pretheoretical term "Focus-movement".

Focus-movements - in contrast to p-movements - are movements to an A-bar position, and are required apparently for the licensing of Focus constituents in a designated Spec position. They exhibit long, successive cyclic, extraction, obey the complex-NP and other syntactic island constraints, and license parasitic gaps. The moved phrase - or one of its constituents - gets interpreted as the Focus of the clause it appears in. These well-known syntactic properties are demonstrated for the case of Hungarian in (8)-(12) below.

Before presenting the evidence itself, some well-known basic properties of Hungarian clause structure and the Focus-movement construction need to be sketched. The clause structure of Hungarian is commonly assumed to be V-initial, and in particular, to have no VP-external

designated subject position (SPEC of IP), only a variety of A-bar positions on the left periphery encoding semantic and discourse functions such as topic, and quantification (É. Kiss 1987, Brody 1990). The dedicated "Focus position" in Hungarian must be strictly left-adjacent to V (at least when V is finite), as shown by the post-V position of the otherwise pre-V verbal particle *be* 'in' in (9a-c) vs. (8). The inversion of the normal Prt - V order (see (8)) resulting in the obligatory Focus - V - Prt order in case of Focus-movement, shown in (9a) vs. (9c), is commonly analyzed as V-raising to the functional head position whose Spec is occupied by the Focus-moved phrase. The obligatorily post-V position of otherwise pre-V verbal particles is the major diagnostic property used in studies of Hungarian to distinguish Focus-movement from other A-bar movements to the left periphery, such as Topicalization or overt QR (see Brody (1990), É. Kiss (1987), Horvath (1986)). In the examples below I will be using bracketing to mark the relevant Focus constituent, and capitalization to indicate the phonological word bearing main stress.

- (8) Bemutattam Jánost az unokahúgomnak.  
 in-showed-1SG John-ACC the niece-my-DAT  
 'I introduced John to my niece.'
- (9) Clause-internal Focus-movement:<sup>4</sup>  
 Q: Kinek mutattad be Jánost?  
 'To whom did you introduce John?'  
 a. [AZ UNOKAHÚGOMNAK] mutattam be Jánost.  
 the niece-my-DAT showed-1SG in John-ACC  
 'I introduced John TO MY NIECE.'  
 b. \*Bemutattam Jánost AZ UNOKAHÚGOMNAK.  
 in-showed-1SG John-ACC the niece-my-DAT  
 c. \*AZ UNOKAHÚGOMNAK bemutattam Jánost.  
 the niece-my-DAT in-showed-1SG John-ACC
- (10) Successive cyclic extraction:  
 Q: Kinek hallottad hogy János kölcsönadott 2000 dollárt?  
 whom-DAT heard-2SG that John-NOM loaned 2000 dollar-ACC  
 'To whom did you hear that John had loaned 2000 dollars?'  
 A: [MARINAK] hallottam [hogy János kölcsönadott 2000 dollárt].  
 Mary-DAT heard-1SG that John-NOM loaned 2000 dollar-ACC  
 'I heard that John had loaned 2000 dollars to MARY.'
- (11) Complex-NP Constraint:  
 \*[MARINAK] hallottam [a hírt hogy János kölcsönadott 2000 dollárt].  
 Mary-DAT heard-1SG the news-ACC that John-NOM loaned 2000 dollar-ACC  
 ('It's to MARY that I heard the news that John had loaned \$2000')

<sup>4</sup> Topicalized phrases precede the Focus-moved phrase, as in (i):

- (i) Jánost [AZ UNOKAHÚGOMNAK] mutattam be.  
 John-ACC the niece-my-DAT showed-1SG in  
 'John, I introduced TO MY NIECE.'

Parasitic gap licensing:

- (12) a. [AZ OSZTÁLYTÁRSAIT] hívta meg János  $t$  vacsorára  
 the classmates-his-ACC invited PERF John-NOM dinner-to

még mielőtt bemutatta volna  $pg$  a szüleinek.  
 even before introduced-3SG COND the parents-his-to  
 ('It's HIS CLASSMATES that John had invited  $t$  for dinner  
 even before he would have introduced  $pg$  to his parents')

vs.

- b. János meghívta az osztálytársait vacsorára  
 John-NOM PERF-invited the classmates-his-ACC dinner-to

még mielőtt bemutatta volna \*(őket) a szüleinek.  
 even before introduced-3SG COND (them) the parents-his-to  
 ('John had invited his classmates for dinner even before he  
 would have introduced \*(them) to his parents')

The above syntactic characteristics make Focus-movement fully analogous to wh-movement as attested in the English-type languages. Accordingly, it has been a standard, widely accepted proposal (Horvath (1986, 1995), Brody (1990, 1995)) to integrate Focus-movement with cases of known syntactic feature-driven movements. Specifics of implementation aside, the core of these proposals is the claim that there is a formal feature [Focus], which is on a par with [Case] or [wh] features, and similarly to the latter features, it crucially is present and active in the syntactic derivation. The postulation of a syntactically active formal feature [Focus] was descriptively appealing since (a) it could solve the familiar problem inherent in the T-model of mediating between the prosodic aspect of Focus (a constituent carrying main stress) and Focus interpretation of the corresponding constituent(s), and at the same time, (b) it could also serve - in contrast to interface-assigned "F-marking" - as the driving force for the attested overt syntactic movement of the Focus constituent in the Hungarian-type languages, thus capturing properties it shared with other feature-driven movements. It is important to note here that this [Focus] feature-based account entails a full-fledged syntactic encoding of the notion Focus in the CS, in contrast to alternative, interface or S-structure-based, views. The question is whether this conception of Focus motivated by the need to implement (apparent) Focus-movements is well-founded.

If the syntactically encoded notion of Focus turned out to be necessary and adequate for Focus-movement, this would have the important consequence of indicating that what arguably is the conceptually desirable null hypothesis for Focus, namely a uniformly interface treatment of the notion - such as accounts based on the SFCP (1) (Chomsky 1971, Cinque 1993, Reinhart 1995) - is untenable. Below we will present evidence from Hungarian suggesting that contrary to standard assumptions, a [Focus] feature-based account of syntactic Focus-movement is in fact both inadequate and unnecessary.

## 2. Is Focus-movement due to the formal feature [Focus]?

The theory of a feature-based encoding of Focus in the syntax has developed from Horvath's (1981, 1986, 1995) proposal of a syntactic (formal) feature [+Focus], on analogy to Case and wh-features, and its assignment by a clausal head, and from Brody's (1990) introduction of a functional F(ocus) head in the clausal projection and a corresponding FOCUS-Criterion, requiring the presence of a [+Focus]-bearing phrase in the Spec of FP position, (see also Rizzi (1997)). The FOCUS-Criterion was reformulated in terms of the checking theory of Chomsky's MP (1995) in Brody (1995).

The major ingredients of the [Focus] feature-driven account of Focus-movement are sketched in (13) below, using its MP-inspired implementation (Brody (1995)); let us refer to this approach to (both overt and covert) Focus-movements as Hypothesis A:

- (13) Hypothesis A:
- a. the postulation of a formal feature [+Focus] and a designated functional head in the clausal projection carrying this formal feature - namely, the head F(ocus) projecting an FP
  - b. the option of assigning the [+Focus] feature to a constituent, which as a result of this feature gets interpreted at LF as the Focus of the sentence, and at PF it receives main stress<sup>5</sup>
  - c. the need for the [+Focus] carrying constituent to move to the Spec position of the ("strong"/EPP feature-bearing) clausal head F while establishing a checking relation with the matching (uninterpretable) [+Focus] feature of F<sup>0</sup>

### 2.1. Evidence from "pied-piping": Agree and the position of the matching feature of the Goal

Under Hypothesis A, the [Focus] feature, acting in the CS as a formal feature, can be expected to induce movement of the phrase in which it occurs - to an EPP-feature-bearing Probe - in a way parallel to other feature-driven movements. Let us consider the ability of a phrase to get "pied-piped" due to a formal feature it contains in the case of some familiar feature-driven movements, and compare them to the case of Focus-movement. Independently of whether phrasal movement is implemented as feature-checking in a Spec-head configuration (as in Chomsky 1995), or as being motivated by the presence of an EPP feature on the target of movement, the Probe (as in Chomsky (2001), the phrase moving is crucially determined by and contingent on a relation between a matching formal feature of the Probe and of the moving phrase, the Goal (see the Introduction). One can then expect that various phrasal movements, each involving a feature matching relation (Agree) with some Probe, will manifest uniform "pied-piping" behavior.<sup>6</sup> However, this turns out not to be the case for Focus-movement.

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<sup>5</sup> More precisely, the formal [+Focus] feature triggers main stress on the constituent bearing it, and semantic Focus coincides with this constituent, or is a constituent that contains it (see Selkirk's (1984) Focus projection generalizations).

<sup>6</sup> The term "pied-piping" is not meant literally here. It is not meant to imply that it is the feature that moves, and it "drags" along the rest of the phrase. "Pied-piping" is used merely as a shorthand to indicate the relation between the position of the feature targeted for matching relation with the Probe and the particular phrase containing the feature that can end up moving, and hence satisfying the EPP feature of the Probe.

To start with, let us consider the generalization emerging about the phrases moved (in italics) and the position of the feature-bearing elements (marked by underlining) within them in the case of wh-movements:

English Wh-interrogatives:<sup>7</sup>

- (14) a. I wonder {*which stories/whose behavior*} Mary disliked.  
 b. \*?I wonder *stories about whose behavior* Mary disliked.

Hungarian relatives:

- (15) a. a filmszínésznő [ [akinek a képét] ellopták t ] ...  
 the movie-actress who-DAT the picture-hers-ACC away-stole-3PL  
 'the movie-star whose picture they stole...'  
 b. \*a filmszínésznő [[néhány akiről írt könyvet] láttam t  
 the movie-actress some whom-about written book-ACC saw-1SG  
 a polcon ] ...  
 the shelf-on  
 ('the movie-star a few books written about whom I saw on the shelf...')  
 cf. Láttam néhány Marilyn Monroeról írt könyvet a polcon.  
 saw-1SG some M. M.-about written book-ACC the shelf-on  
 'I saw a few books written about Marilyn Monroe on the shelf.'

The unacceptability of (14b) and (15b) shows that the position of the relevant feature within the phrase determines what can and what cannot get 'pied-piped', and the contrast between the (a) and the (b) versions specifically suggests the hypothesis that a phrase may get moved if the relevant feature occurs on its Spec('s Spec), or on its head, but not if it occurs on a complement or an adjunct of the phrase. That this constraint is not some idiosyncratic property limited to the [wh] feature (or the wh-morpheme) is indicated by evidence from polarity/negative-inversion in English (as in (16)-(18)), and neg-phrase licensing in Hungarian (19-20); both exhibit the above "pied-piping" behavior.

Consider first the moved phrases and the feature [+Neg] within them in (16), as well as the contrasting pairs (17a) vs. (17b) and (18a) vs. (18b). The pair (17a,b) shows that the DP can move when the neg-bearing morpheme occurs in its Spec but not when it occurs in the complement position; the contrast in (18) shows that when the head of a phrase carries [+Neg], the whole DP can move, including a complement, but when the [+Neg] feature is in the complement of the DP, the whole phrase cannot move.

- (16) a. Never have I witnessed such behavior.  
 b. No student's thesis have they read so thoroughly.  
 (17) a. [No young girl]'s participation in the game can they permit.  
 b. \*The participation [of no young girl] in the game can they permit.  
 (18) a. No articles by such a reporter will they agree to publish.

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<sup>7</sup> For accounts of some apparent discrepancies in the pied-piping options found in English wh relatives, see Emonds (1976), Weibelhuth (1992), Horvath (in press).

- b. \**Such articles [by no reporter] will they agree to publish.*

The same generalization about the position of the relevant (matching) feature within the moved phrase is attested in the licensing of Hungarian negative phrases - "*se*-phrases" - by the negative functional head via overt or covert movement to Spec (a Neg-Criterion effect, in the sense of Zanuttini (1997)). The overt movement case is demonstrated by the contrast in (19) and (20) below:

- (19) a. [*Senkit*]           nem láttam    az ablakból.  
           nobody-ACC not saw-1SG the window-from  
           'I didn't see anybody from the window.'  
       b. [*Senkinek az autóját*]       nem láttam    az ablakból.  
           nobody-DAT the car-his-ACC not saw-1SG the window-from  
           'I didn't see anybody's car from the window.'
- (20) \**[a senkire hallgató gyereket] nem büntették meg*  
       the nobody-to listening kid-ACC not punished-3PL PERF  
       ('They didn't punish the kid listening to anybody.')
- cf. *Megbüntették [a senkire nem hallgató gyereket]*  
       PERF-punished-3PL the nobody-to not listening kid-ACC

Webelhuth (1992) reached parallel descriptive generalizations about pied piping, based on a study of wh-movement cases in Germanic:

- (21) Pied piping generalizations:  
       a. A modifier is not a pied piper.  
       b. A theta-marked phrase is not a pied piper.  
       c. Non-theta-marked specifiers (of nonclausal categories) are pied pipers.

In light of the above, let us consider now Focus-movement. It turns out that there is a clear discrepancy between the freedom of apparent pied piping by alleged [Focus]-feature-bearing items and the restricted options of pied piping (conforming to generalizations (21)) by [wh], [Neg], and other established formal-feature-bearing items. This is demonstrated below by the contrast between cases of wh-"pied-piping" as in (22a,b) and (24a,b) vs. the corresponding structurally parallel alleged [Focus]-"pied-piping" cases in (23) and (25), respectively. Notice that even when relative wh-pronouns - known to be permissive as pied-pipers - fail to induce phrasal movement, the (alleged) [Focus] feature-bearing element in the same structural position - namely, in modifier-internal position - gives fully grammatical Focus-movement of the corresponding phrase, as shown in (22) vs. (23) and (24) vs. (25).

- (22) \**a filmszínésznő [[néhány akiről irt könyvet] láttam t*  
       the movie-actress some whom-about written book-ACC saw-1SG  
       a polcon] ...  
       the shelf-on  
       ('the movie-star a few books written about whom I saw on the shelf ...')

vs.

- (23) [*Néhány MARILYN MONROERŐL írt könyvet*] láttam *t*  
 some M. M.-about written book-ACC saw-1SG

a polcon.  
 the shelf-on

'It's a few books written about MARILYN MONROE that I saw on the shelf.'

- (24) \*az ital [[*amit követelő vendégektől*] fél a pincér *t*] ...  
 the drink which-ACC demanding guests-from fear-3SG the waiter-NOM  
 ('the drink customers demanding which the waiter is afraid of ...')

vs.

- (25) [*BARACKPÁLINKÁT követelő vendégektől*] fél a pincér *t*.  
 apricot-brandy-ACC demanding guests-from fear-3SG the waiter-NOM  
 'It's customers demanding APRICOT BRANDY that the waiter is afraid of.'

The "pied-piping" contrast between (22)-(24) and (23)-(25) indicates that the movement in the latter cases is unlikely to be based on a feature-matching/Agree relation involving the alleged formal feature [Focus], borne by the capitalized elements. If there was a feature [Focus] active in the Focus-movement operation, the positions it appears in within the moved phrase in (23) and (25) would not permit movement, as shown by the movement operations reviewed above, as well as in the structurally parallel wh-phrases in (22) and (24). But contrary to expectations under the [Focus]-feature-based account, Focus-movement in (23), (25) and other relevant test-cases, is perfectly grammatical.

The generalization emerging is: Focus-movement takes place irrespective of the structural position of the [Focus]-carrying element, that is, irrespective of the position occupied by the semantic and prosodic Focus within the moved phrase. This is a significant initial indication that Focus-movement is possibly not movement of Focus at all.

One might try to retain the [Focus]-based account, by stipulating that the [Focus] feature behaves in some special way - e.g. projects more freely than other formal features - due to its intrinsic content (e.g. its stress-related nature), but that would amount to admitting that the movement arises not as a configurationally determined process of 'Agree, Pied-pipe, Merge' involving formal feature-matching. Hence such a claim would not be consistent with considering the [Focus] feature as the formal entity that identifies the Goal phrase for movement. The above evidence suggests that a formal feature [Focus] - even if one decided to retain it as a means of encoding the prosody-semantics correlation - is not what enters the Agree relation, and consequently it is not what determines the phrase undergoing Focus-movement. Whether it needs to be postulated as filling the function of the [F]-marker of Selkirk (1984) or Zubizarreta (1998) is not relevant for the issue at hand (on an alternative purely stress-based approach to Focus without any such F(ocus)-marking, see Reinhart (1995)). What is crucial is that the evidence above indicates that this alleged [Focus] feature is

not active in the derivation. Consequently the phrase moved under apparent Focus-movement would either have to be identified by some other formal element present in the derivation, or alternatively, be claimed to be non-feature driven. The remainder of this study will argue in favor of the validity of the former option.

## 2.2. Further evidence: "Focus-movement" is not due to Focus

Having found evidence against the [Focus] feature-driven account (Hypothesis A (13)) from the configurational properties of the purported formal feature [Focus] within the moved phrase, consider next some additional facts about Focus-movement, involving the substance - rather than the formal properties - of the alleged [Focus] feature. The evidence to be presented in 2.2.1 and 2.2.2 below will suggest that the so-called Focus-movement in fact cannot be attributed to the notion Focus; the phenomena will furthermore point the way towards an alternative account of "Focus-movement".

### 2.2.1. Focus-sensitive particles: ONLY vs. EVEN

The morphemes ONLY and EVEN are known to be elements involving association with Focus (see Jackendoff (1972), Rooth (1985)). Specifically, it is well-known that both of these "Focus-sensitive" particles require a Focus constituent within their c-command domain. Given this universal property, consider the Hungarian counterparts of ONLY, namely *csak* in (26), and contrast it with the Hungarian counterpart of EVEN, namely *még ...is* (lit. 'yet...also') in (27).

- (26) a. Mari csak [A FOGADÁSRÓL] késett el.  
Mary-NOM only the reception-from late-was away  
'Mary was late only for THE RECEPTION.'
- b. \*Mari elkésett csak [A FOGADÁSRÓL].  
Mary-NOM away-late-was only the reception-from
- c. \*Mari csak [A FOGADÁSRÓL] elkésett.  
Mary-NOM only the reception-from away-late-was
- d. \*Mari csak elkésett [A FOGADÁSRÓL].  
Mary-NOM only away-late-was the reception-from
- (27) a. Mari elkésett még [AZ ESKÜVŐJÉRŐL] is.  
Mary-NOM away-late-was yet the wedding-her-from also  
'Mary was late even for HER THE WEDDING.'
- b. Mari még [AZ ESKÜVŐJÉRŐL] is elkésett.  
Mary-NOM yet the wedding-her-from also away-late-was  
'Mary was late even for HER WEDDING.'
- c. \*Mari még [AZ ESKÜVŐJÉRŐL] is késett el.  
Mary-NOM yet the wedding-her-from also late-was away

The behavior of ONLY shown in (26) is consistent with the widely held assumption that the licensing of Focus in Hungarian is dependent on the overt "Focus-movement" operation, since the constituent associated with *csak* 'only' is indeed obligatorily preposed from its post-V position, and the preposing necessarily cooccurs with the V-Prt order diagnostic of Focus-movement (see (26a) vs. (26c)). However this case contrasts in an unexpected way with the syntactic patterning of EVEN phrases in the language (27). The grammatical examples (27a,b) involve no Focus-movement - as shown by the post-V position of the Focus constituent associated with *még ... is* 'even' in (27a), and the lack of V-raising, i.e., the Prt-V order, in (27b). Since EVEN, just like ONLY, requires association with Focus, (27a,b) contradict the claim - made under Hypothesis A (13) - that Focus of a post-V constituent in Hungarian necessarily involves movement to a left-peripheral Spec,FP position. More importantly, notice that in spite of the presence of the focus sensitive particle EVEN, Focus-movement of the phrase it associates with is in fact prohibited (27c). Clearly, any account that claims Focus-movement to be due to the presence of a Focus phrase - including, but not limited to Hypothesis A (13) - is unable to predict the above contrast between ONLY vs. EVEN, and in particular, would wrongly predict Focus-movement to be attested in cases such as (27).

### 2.2.2. *In situ Focus in Hungarian vs. Focus-movement*

The apparently paradoxical split attested between the behavior of the above two Focus-sensitive particles ONLY vs. EVEN with respect to Focus-movement becomes less puzzling, when we take a closer look at Focus-movement in light of a standard test for identifying the Focus of the sentence, wh-question and answer pairs. Answers to wh-questions in Hungarian normally exhibit the phrase which corresponds to the variable bound by the wh-operator of the question in the pre-V Focus position, suggesting that the phrase interpreted as the Focus in the answer has undergone Focus-movement (as seen for instance in (9a) vs. (9b) in section 1.2). However, let us consider the kind of wh-question and answer pairs shown in (28)-(29) below.

(28) Q: Hol tudhatnám meg a vonatok menetrendjét?  
 where know-can-COND-1SG PERF.PRT the trains' schedule-POSS-ACC  
 'Where could I find out about the train schedule?'

A: Megtudhatod (például) AZ INTERNETEN  
 PERF.PRT-know-can-2SG for example the internet-on

(vagy TELEFONON is).

or phone-on also

'You could find out about it (for example) on the internet (or also by phone).'

(29) Q: Kiket hívott már meg Anna?  
 who-PL-ACC invited-3SG already PERF.PRT Anna-NOM  
 'Who has Anna (already) invited?'

A: (Valószínűleg) meghívta KATIT ÉS PÉTERT, és  
 probably PERF.PRT-invited-3SG Cathy-ACC and Peter-ACC and

talán MARIT is.  
 perhaps Mary-ACC also  
 '(Probably) she has invited Cathy and Peter, and perhaps also Mary.'

The data in (28b)-(29b) shows that in some cases, the language clearly has answers to wh-questions that do not undergo Focus-movement, in spite of the relevant constituent of the answer being the Focus of the sentence. Furthermore, the sets of cases of Focus with vs. without "Focus-movement" do not appear to be random. So the question is: what distinguishes the above *in-situ* (post-V) Focus sentences from the "standard" type of answer to a wh-question in Hungarian, where the Focus constituent must undergo overt (alleged) Focus-movement?

As pointed out already in earlier work (see Kenesei (1986), É. Kiss (1998), Horvath (1997, 2000)), the observed distinction between the two types of Focus sentences has to do with the exhaustive identification of the particular subset of the contextually relevant set of alternatives for which the predicate holds. Examples like (9) and (26) involving "Focus-movement" exhibit such exhaustive identification, as opposed to the post-V Focus cases (28) and (29), which manifest the absence of exhaustive identification, i.e., in the latter, we have only a partial, non-exhaustive identification of members of the subset for which the predicate holds. Thus, if in some question-answer pair there is explicitly no need or possibility for exhaustive specification in the answer - due to the pragmatics of the situation, such as sufficiency of supplying one instance of the relevant subset of values, as in (28), or due to the lack of exhaustive knowledge of the full subset needed for the answer, (usually indicated explicitly by the speaker), as in (29) - then no preposing of the Focus phrase is needed, or is appropriate, in the answer.

If this descriptive semantic generalization about Focus-movement is correct, the contrast between ONLY sentences, such as (26), and EVEN sentences, such as (27), can fall in place. The meaning of (exclusive) ONLY entails exhaustivity of the subset identified as satisfying the existential presupposition, while EVEN does not; in fact EVEN just adds a member to the relevant set. Thus, descriptively speaking, if it is the exhaustive kind of "Focus" that undergoes Focus-movement, but not the non-exhaustive type, then we indeed expect the phrase associated with ONLY but not the one associated with EVEN to appear in the pre-V Focus position. But what is crucial to notice at this point, and what will provide the foundation for the proposal to be advanced in the rest of this paper, is that the contrasts observed with respect to the movement vs. *in-situ* behavior of Focus constituents in (26) vs. (27) and (9) vs. (28)-(29) straightforwardly suggest that the factor driving the A-bar movements under discussion - i.e., the alleged Focus-movement shown in (9) and (26) - must be something other than Focus.

The dichotomy between exhaustive and non-exhaustive instances of apparent Focus has been motivated and elaborated in the literature, based on Hungarian Focus, by É. Kiss (1998), and more recently by Kenesei (2005). After a detailed characterization of the semantic difference between the two types of cases, these studies concluded that there are two semantically distinct types of Foci to be recognized in the theory. Using É. Kiss's (1998) widely adopted terminology, the two types postulated are: (a) the non-exhaustive "information" Focus - expressing merely new, non-presupposed, information, without excluding other members of

the set of alternatives - which is syntactically manifested as *in-situ* Focus in Hungarian, and (b) the necessarily exhaustive "identificational" Focus, which correlates with overt A-bar movement to the designated Focus (Spec of FP) position in Hungarian.

While the semantic generalization underlying the above distinction seems well-motivated, the crucial questions left open in these studies are: Is it justified to incorporate into the theory this apparent dichotomy by splitting the notion of Focus into two distinct types, and furthermore, how to capture its correlation with the presence vs. absence of (overt) Focus-movement?

### 2.3. Against the assumption of two types of Focus: "identificational" vs. "information" Focus

To start with, retaining Focus as a unitary notion in the grammar, if possible, is clearly a conceptually desirable choice. The unitary treatment of Focus, even in the case of Hungarian, is supported by the fact that prosodic prominence is a property shared by the two allegedly distinct types of Foci. Both *in situ* and A-bar-moved Focus phrases contain the main stress of the clause. Moreover, simply stipulating that "information" Focus is *in situ*, while "identificational" Focus undergoes overt A-bar movement to an "FP" projection (in the Hungarian-type languages), would make the claim that the fact that it is the exhaustively interpreted Focus that undergoes movement rather than the information Focus is an accidental property, and in principle in some other languages, the same two types of Foci could turn up behaving exactly the other way around. However no such languages seem to be attested.

In addition to the above issues inherent in trying to maintain that the alleged Focus-movement is indeed due to (a type of) Focus, notice that this kind of proposal would still provide no way to solve the configurational (pied-piping) problem with Focus as a feature, presented in section 2.1 above. Thus, while a splitting of Focus into "Focus1" (information Focus) and "Focus2" (identificational Focus) would make the specification of the difference in interpretation we saw in section 2.2 possible, and would enable us to state - by stipulation - their correlation with *in-situ* vs. movement realization, via the assumption of an "F2P" projection and a formal feature [Focus2], this would still leave the configurational ("pied-piping") properties of the feature driving "identificational" [Focus2]-movement as problematic as simple [Focus]-feature-based movement was shown to be in section 2.1. In view of the above facts, we will advance here an alternative, non-Focus-driven conception of the alleged "Focus-movement", one that separates the notion of Focus from what in fact drives the A-bar movement under discussion.

### 3. A quantificational E(xhaustive) I(dentification) operator: "Focus-movement" is EI-Op movement

We would like to put forward a proposal (based on Horvath (1997, 2000)) claiming that contrary to appearances, Focus is not split into two types, but is a unitary prosody-based (interface) phenomenon. It is uniform semantically, specifically, it is non-exhaustive, i.e., corresponds to "information Focus" in the earlier descriptive terminology. The apparent semantic dichotomy of Focus discussed above and its correlation with the *in-situ* vs. A-bar movement alternation arise from a factor distinct from Focus.

Let us assume the conceptually minimal hypothesis regarding Focus, namely, that it can remain a syntactically unencoded, pure interface phenomenon, that is, that there is no formal feature encoding it in the CS. This view is consistent with a variety of proposals for the status of Focus, most prominently with the Cinque-Reinhart theory of purely stress-based Focus, making use of the NSR and the SFCP (1) above (Cinque 1993, Reinhart 1995, Neeleman and Reinhart (1998)), but also with other interface-based accounts such as for instance Zubizarreta's (1998). What is then the matching formal feature that triggers overt syntactic A-bar movement in the Hungarian-type alleged "Focus-movement" case?

The evidence presented in section 2.2.1 from the contrasting syntax of the focus-sensitive particles ONLY vs. EVEN, and the evidence in 2.2.2 from the systematic variation in the interpretation of *in-situ* vs. A-bar moved instances of Focus lead to the conclusion that the A-bar movement under discussion - i.e., the alleged Focus-movement - correlates with an "exhaustive identification" operation, and not with Focus. Accordingly, let us capture this generalization directly in our account, by assuming the existence of a quantificational Exhaustive Identification operator (henceforth EI-Op), and propose that the apparent "Focus-movement" is due to this quantificational operator, and Focus plays no role in triggering the movement. Specifically, it is the quantificational EI operator that is encoded and active in the syntactic derivation. Focus is disconnected from the exhaustive identification operation in the sense that it may occur with or without associating with an EI operator, just like it may or may not occur associating with any other focus-sensitive operator. In the absence of an EI-operator or some other focus-sensitive operator c-commanding Focus, the sentence is interpreted as involving (*in-situ*) "information" Focus; when Focus occurs associating with - namely, c-commanded by - an EI operator, the resulting interpretation is what has commonly been considered as exhaustive "identificational/contrastive" Focus. Under the account proposed here (outlined in more detail in section 3.2 below), it is the presence of the EI operator and not some syntactically encoded notion of Focus that determines a phrase as Goal in the case of the apparent Focus-movement under discussion.

The relation of Focus to this EI operator under our account is thus only indirect: it is assumed that the EI-Op postulated involves association with Focus as proposed for focus-sensitive adverbials (as e.g. *even, only*) by Jackendoff (1972) and elaborated based on quantificational domain selection by Rooth (1985) and subsequent work. Focus itself is claimed to be determined in our proposal based on main stress assignment, along the lines of the SFCP (1) and Reinhart's (1995) interface economy proposal for deriving the set of available Focus options.

The clausal projection is assumed in the present account to include a functional head EI<sup>0</sup> that acts as Probe, bearing an (uninterpretable) [EI] operator feature, and in Hungarian, also an EPP feature, thus triggering movement of an EI-operator-phrase in its search domain. The proposal, if tenable, will be able to derive the correlation of the alleged "Focus-movement" of a phrase with its interpretation as exhaustively identifying the particular subset of the contextually relevant set of alternatives for which the predicate actually holds. It will also follow that - other things being equal - when no exhaustive identification is involved, the Focus constituent appears *in situ* in Hungarian, as well (as shown in section 2.2).

Before turning to the specifics of the EI-Op account envisioned for the Hungarian-type "Focus-movement", let us examine first the nature of the observed exhaustive identification effect that we propose to attribute to the EI operator.

### 3.1. Truth-conditional effects of Hungarian Focus-movement and the nature of "exhaustive identification"

Initial semantic support for the quantificational operator we are postulating for Focus-movement cases can be derived from the widely-cited observation, due to Szabolcsi (1981), that contrary to the English-type *in-situ* Focus, Hungarian pre-V Focus has clear truth-conditional effects.

In particular, evidence such as in (30)-(31) below shows that Hungarian pre-V Focus has the import of exhaustive identification manifested in truth-conditional effects; this is in contrast to the corresponding English *in situ* Focus sentences shown in (32)-(33).

- (Context Q: Who did they call up?)
- (30) a. [JÁNOST ÉS MARIT] hívták fel.  
John-ACC and Mary-ACC called-3PL up  
'They called up JOHN AND MARY.'
- b. [JÁNOST] hívták fel.  
John-ACC called-3PL up  
'They called up JOHN.'

The crucial fact is that (30b) in Hungarian is not a logical consequence of (30a). Beyond entailing that 'they called up John', (30b) also entails that they called up nobody else (exhaustiveness). This is also demonstrated by the semantic well-formedness of the following discourse fragment:

- Q: Who did they call up?
- (31) Speaker A: [JÁNOST] hívták fel.  
John-ACC called-3PL up  
'They called up JOHN.'
- Speaker B: Nem igaz. MARIT is felhívták.  
not true Mary-ACC also up-called-3PL  
'Not true. They also called up MARY.'

What is denied in the Hungarian version of (31) by Speaker B is precisely the exhaustiveness of the identification of the subset, namely, *JÁNOST* 'John' in the sentence of Speaker A. In contrast, consider the corresponding pair of English examples (32) - where (32b) is a logical consequence of (32a) - and the semantically infelicitous nature of the discourse in (33), both manifesting *in situ* Focus:

- (Context Q: Who did they call up?)
- (32) a. They called up JOHN AND MARY.  
b. They called up JOHN.

Q: Who did they call up?



- (35) Exclusion by Exhaustive Identification (EI): (a modified version of É. Kiss's (1998, p.249) characterization of her "identificational Focus")  
 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.

### 3.2. *The EI-Op movement proposal*

Based on the syntactic evidence discussed in section 2, and taking into account the above semantic generalizations about the apparent "identificational" Focus, we propose an alternative, quantificational account of the syntactic A-bar movement operation traditionally referred to as "Focus-movement", which attributes this movement to an independent EI operator (characterized in (35)), rather than to Focus. Thus, the proposed account differs crucially from proposals based on a [Focus] feature (such as Hypothesis A outlined in (13)). Furthermore, note that our account also contrasts with recent PF-driven movement proposals - advanced in particular by Szendrői (2003) - which, while also discarding the formal feature [Focus], claim that Focus-movement is directly driven by the PF interface, namely by the unmarked, i.e., non-shifted, position of nuclear stress in the language. (For a detailed critical assessment of the latter type of account, see Horvath (2005a).)

The major ingredients of our EI-Op movement proposal are presented below:

- (36)
- a. Assume that there is an exhaustive identification (EI) operator, and a clausal functional head  $EI^0$  with an uninterpretable EI-operator feature. This operator feature of  $EI^0$  enters into a matching ('Agree') relation with a phrase in its search (c-command) domain. The  $EI^0$  head has furthermore an EPP feature, and consequently (overt) movement, i.e., Internal Merge, rather than merely 'Agree', applies: a matching EI-Op phrase gets attracted by the  $EI^0$  head to the Spec,EIP position.<sup>8</sup>
  - b. The EI operator (EI-Op) - able to enter into an 'Agree' relation with the corresponding [EI] feature of the clausal head  $EI^0$  - can be merged into structure at the root of DP (and apparently of some other phrasal categories, such as PP, VP, and CP, as well).<sup>9</sup> Thus EI-Op movement pied-pipes the phrase whose outermost specifier it occurs in.
  - c. The EI-Op requires the presence of stress-based, "information" Focus within its c-command domain, namely within the phrase it attaches to, just like ONLY and EVEN do

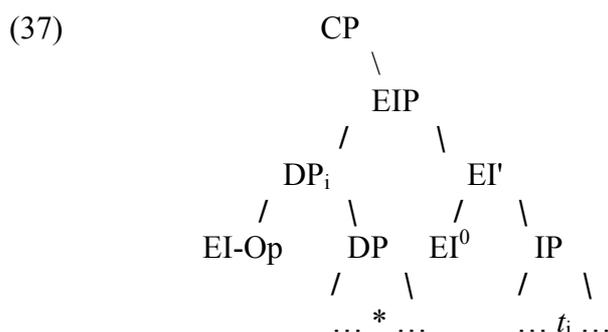
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<sup>8</sup> Note that this parallels the case of wh-movements, and more importantly, in Hungarian also the case of various quantifier phrases, such as e.g. distributive phrases, which undergo overt A-bar movement as well (see Szabolcsi's (1994, 1997) checking-driven movement account for different types of QPs)).

<sup>9</sup> A relevant question arising at this point is why the EI-OP phrase is active as a Goal, i.e., visible for the Probe (i.e., for the  $EI^0$  head) if it has no uninterpretable feature postulated (on this requirement, see Chomsky 2000). This is a more general issue, arising for the whole class of A-bar movements (as opposed to A-movements). Some suggestions for resolving this question will be made in subsection 3.3 below.

within theirs, i.e., it manifests the property of association with Focus. (This is what has misleadingly created the impression that it is a F(ocus) head and a feature [Focus] that drives the preposing.)

The structure for "Focus-movement" - that is, under our proposal EI-Op movement - is shown in (37), following Horvath (1997, 2000): (the asterisk indicates the position of main stress)



Accordingly, consider the sentences in (38), all exhibiting the alleged "Focus-movement" in their derivation, reanalyzed under our proposal as EI-Op movement. The (a), (b) and (c) versions contrast with each other only with respect to their prosodic Focus (the phonological word carrying main stress is capitalized):

- (38) a. [EI-Op [MARI Pesten lakó fiát]] hívták fel  $t_i$ .  
 Mary-NOM Pest-on living son-hers-ACC called-3PL up  
 'They called up [MARY'S son living in Pest].'
- b. [EI-Op [Mari PESTEN LAKÓ fiát]] hívták fel  $t_i$ .  
 Mary-NOM Pest-on living son-hers-ACC called-3PL up  
 'They called up [Mary's son LIVING IN PEST].'
- c. [EI-Op [Mari Pesten lakó FIÁT]] hívták fel  $t_i$ .  
 Mary-NOM Pest-on living son-hers-ACC called-3PL up  
 'They called up [Mary's SON living in Pest].'

Each of the subcases in (38) manifests exhaustive identification of a proper subset of the set of contextually relevant alternatives for which the predicate 'they called up x' could potentially hold. The alternative values of the variable in these cases correspond to the whole preposed DP, namely to the constituent that the EI operator is attached to in [EI-Op DP]. What is then the difference between the three subcases of (38), and how is the role of Focus manifested in these EI-Op constructions? The subcases of (38) arguably differ with respect to the domain of quantification available for the EI-Op. The set of relevant alternatives, i.e., the potential values of the variable bound by the EI-Op, differ in the three subcases due to the different division into Focus vs. background within the three DPs, which in turn depends on the occurrence of main stress on different constituents of the DP. For instance, in (38a) the set of contextually relevant alternatives (in the sense of Rooth (1985)) for the DP [MARI Pesten

*lakó fiát*] 'MARY'S son living in Pest' vary with respect to the possessor phrase: Mari Pesten lakó fiát, Kati Pesten lakó fiát, János Pesten lakó fiát, etc. In contrast, in (38b), the set of relevant alternatives for the DP [*Mari PESTEN LAKÓ fiát*] 'Mary's son LIVING IN PEST' vary with respect to the participial adjunct: Mari Pesten lakó fiát, Mari Londonban lakó fiát, Mari Szegeden lakó fiát, etc.

Notice furthermore that - as argued in detail in 2.1 above - even if the Focus constituent itself were assumed to carry a formal [Focus] feature in the CS, this feature still could not be the one that pied-pipes the DP. This is shown for instance by (38b). The Focus constituent - according to both prosodic prominence and semantics - is the adjunct in the moved DP of (38b); but adjuncts neither "project" Focus to the dominating maximal projection (see Selkirk (1984)), nor do they permit pied-piping in other known A-bar movement cases, such as e.g. wh-movement.

Thus our claim is that it is the  $EI^0$  head - syntactically encoding the quantificational relation of "exclusion by exhaustive identification" - that has the EPP feature and that picks out and attracts the moved phrase, the EI-Op phrase, from its search domain. Focus itself is not encoded syntactically, and hence is not active in the CS. EI-Op is an operator that associates with Focus, i.e., needs Focus in its c-command domain (on accounts of association with focus, see Schwarzschild (1997)). What earlier theories called "information" Focus - i.e., a subtype of Focus distinct from the alleged "identificational" Focus - is nothing but the plain uniform notion Focus, attested directly when it is not in the scope of an EI-Op. In the absence of EI-Op in the structure, no exhaustive/contrastive interpretation arises, and no syntactic A-bar movement of the Focus constituent is expected..

### 3.3. Visibility of the Goal in operator movements

One residual, more technical, issue (pointed out in note 9) is left to be addressed here, regarding the particular formulation given in (36) for our EI-driven movement account. Consider again (36), and specifically, the question of what feature is interpretable and what is uninterpretable on the Probe and Goal involved in the case of EI-driven movement. Assume that as expected based on other known movements, the Probe, namely the  $EI^0$  head in the clausal projection, has an uninterpretable [EI] feature in Hungarian, and in addition bears an EPP feature. What is it then that enters into an 'Agree' relation with it and determines the Goal? According to (36), we assume that it is the EI-Op (attached to the DP in (37)) bearing an interpretable [EI] feature that serves as the Goal. But notice now that if one pursued a full analogy with minimalist accounts of A-movement, then a further condition for 'Agree', and hence for the movement operation, needs to be satisfied: the Goal also has to be "active", i.e., visible to the Probe. Specifically, it would have to bear not only a matching feature to enter into agreement with the uninterpretable feature of the Probe, but would also need to have an uninterpretable feature of its own, such as the [Case] feature is for phrases targeted by A-movement (see Chomsky 2000). So should there be - and can there be - some uninterpretable feature postulated also for EI-Op phrases, and other A-bar moved phrases, to render them visible for search, on the analogy of [Case] in A-moved phrases? The answer appears to be no. First, unlike [Case] for A-movement, the postulation of an additional uninterpretable feature for EI-Op phrases would be an ad hoc stipulation, motivated only by theory-internal considerations. But more importantly, stipulation of an uninterpretable feature for the Goal of A-bar movements would not solve the visibility problem, since unlike A-movements, A-bar

movements, including our EI-Op movement, involve successive cyclic application. So even if the phrase had started out with an uninterpretable feature rendering it visible/active for the CS, it would presumably lose this feature upon movement in the first cycle (phase); consequently, any subsequent movement it undergoes on the successive cycles will still have to take place with no uninterpretable feature on the Goal. A-bar movements thus obviously contrast with A-movements in that the latter arguably check their uninterpretable feature [Case] only on the last step of movement, and indeed are "frozen" for further operations as soon as they enter into agreement with a head's full set of phi-features. No parallel situation holds with respect to the successive steps of A-bar movements.

Given these considerations, we propose that (quantificational) A-bar movements, including our EI-Op movement introduced in (36)-(37), do not involve the requirement of having an uninterpretable feature present on the Goal in a way parallel to [Case] in A-movements. Thus we tentatively propose the following assumption about 'Agree' - and hence movement - relations involving matching operator features, in contrast to matching inflectional (L-related) features:

- (39) The Inherent Visibility of Operator Goals:  
 Interpretable operator features - as opposed to interpretable inflectional (L-related) features - can determine a constituent as Goal under the Agree relation without the constituent carrying an (inherently) uninterpretable formal feature.

The rationale for the existence of the above distinction between operator vs. inflectional Goals of Agree, and consequently between A-bar movement vs. A-movement, may be as follows. Quantificational features of operators attaching to arguments, such as the features of EI-Op, *Wh*, *every*, etc., involve scope, and their scope by definition is uninterpretable without displacement. Consequently, such scope-related features though potentially interpretable, are not interpretable intrinsically: their interpretability is contingent on being in scope (A-bar) position. Thus, in respect to being uninterpretable without movement - hence without entering into the Agree relation - operator features are unlike the case of interpretable inflectional features, such as the number and person features on nominals. The latter are intrinsically interpretable, and thus they need to become "activated" in the CS, i.e., in contrast to quantificational operator features, they are indeed dependent on an inherently uninterpretable feature [Case] to make them visible, in order to be able to enter into an Agree relation with a Probe. An exploration of specific implementations of the above conception of operator movements, stated in (39), is however beyond the scope of the present study.

## 4. Benefits of the EI-Op movement proposal

### 4.1. A prediction: "Focus-movement" without Focus

The EI-Op movement analysis proposed above for "Focus-movement" severs the tie between the movement operation involved and the presence of (prosodic) Focus within the preposed phrase. It captures their observed cooccurrence only indirectly, via the independently attested phenomenon of association with Focus. Thus the EI-Op proposal makes a prediction that is in clear contrast to what we would expect under accounts based on a Focus-bearing constituent attracted by an F<sup>0</sup> head (such as Hypothesis A (13)): there may in principle be

cases where a sentence exhibits "Focus-movement" (i.e., EI-Op movement), yet the preposed constituent does not constitute or contain the Focus of the sentence, rather, it is part of the discourse presupposition. Such cases are in fact attested, as shown in (40) below.

At the left periphery of Hungarian clauses, a variety of additional elements, such as for instance preposed universally quantified phrases, as well as negative elements, can appear preceding a Focus-moved phrase; the universal quantifier may, and in some contexts must, bear the main stress of the clause (see (40a)). Crucially, in such sentences the phrase that underwent "Focus-movement" fails to exhibit main stress, and accordingly, is not interpreted as Focus; rather it is the stressed constituent that gets interpreted as the Focus of the sentence. Consider for instance (40a), and the contrasting (40b):

- (40) a. MINDEN fiú            *Marit*        kérte        fel *t* táncolni    (nemcsak  
every        boy-NOM Mary-ACC asked-3SG up    dance-INF not-only  
a barátja).  
the friend-hers-NOM  
'for all  $x$ ,  $x$  a boy, it was Mary that  $x$  asked to dance (not only for her boyfriend (was it Mary that he asked to dance))'  
Presupposition:  $\exists x$ . it was Mary that  $x$  asked to dance.
- b. MINDEN fiú            felkérte        *Marit*        táncolni    (nemcsak.  
every        boy-NOM up-asked-3SG Mary-ACC dance-INF not-only  
a barátja).  
the friend-hers-NOM  
'for all  $x$ ,  $x$  a boy,  $x$  asked Mary to dance (not only her boyfriend (asked Mary to dance))'  
Presupposition:  $\exists x$ .  $x$  asked Mary to dance.

Importantly, the difference in the position of V in relation to the Prt *fel* 'up' in (40a) vs. (40b) indicates that it is the preposed constituent *Marit* that triggers the V - Prt order in (40a), indicative of Focus-movement, rather than the (preposed) QP *MINDEN fiú*.<sup>10</sup> So in (40a), we have evidence that "Focus-movement" has applied to the direct object *Marit*, yet the phrase bears no main stress, and as predicted by the SFCP (1), it is not interpreted as the Focus of sentence (40a); instead, the phrase *MINDEN fiú* 'every boy' (or *MINDEN*) is.

In example (40a), as well as (40b), the main stress of the clause is on the universally quantified phrase *minden fiú*, and specifically on *minden* 'every'. The Focus, i.e., the main assertion, of the sentence in (40a), as in (40b), is the universally quantified subject. The (allegedly) "Focus-moved" object in (40a) is clearly part of the discourse background/presupposition of the clause. Such cases are expected to be impossible under a [Focus]/FP-driven movement approach.

<sup>10</sup> The overt preposing of distributive quantifiers such as *minden*-phrases is independent of whether they constitute the main assertion/Focus of the sentence (as in (40a,b) or not. Either way they take scope from a left-peripheral position via overt movement in Hungarian (see e.g. É. Kiss 1987, Szabolcsi 1994, 1997).

Notice furthermore that the same facts seem to provide evidence against PF/stress-driven accounts of Focus-movement, such as Szendrői (2003), as well (see Horvath (2005a) for a detailed critique)).<sup>11</sup> Focus-movement takes place in cases like (40a), yet the position where the preposed phrase *Marit* lands is not the position bearing main stress, and hence is not interpreted as the Focus of the clause. Under a directly stress-driven account it is unclear how the movement operation could arise in the derivation of sentences like (40a).

In contrast, consider now our alternative EI-driven account. Given that the movement to pre-V position is claimed to be driven neither by a [Focus] feature nor by stress, but rather by the presence of the EI-operator in the phrase and by the EI<sup>0</sup> clausal head, there in fact is no expectation that every time preposing to the pre-V position applies to some phrase (resulting in the characteristic XP - V - Prt order), that phrase will necessarily end up bearing main stress and hence be the Focus of the sentence. What is predicted by this proposal is that the preposed phrase will have the import of exhaustive identification (in the sense of (35)). Thus the EI-Op approach to apparent "Focus-movement" is better suited to account for the existence of cases such as (40a) than [Focus]-driven or stress-driven movement accounts.

Finally, notice that at this point one might still suspect that (40a) poses a problem also for our EI-driven movement approach, since the generalization (stated in (36c)) that the EI-Op needs to associate with Focus seems to be violated in this case. Our proposal in (36) claimed that the EI operator is parallel to focus-sensitive operators like ONLY and EVEN in that it too requires the presence of stress-based ("information") Focus within its c-command domain, in other words, that it involves association with Focus. This generally valid property of EI is apparently contradicted by the grammaticality of cases like (40a), where the preposed EI-operator phrase [EI-Op - *Marit*] does not exhibit main stress and hence Focus.

But whatever the precise account of this phenomenon turns out to be, notice that the phenomenon itself is not unique to the EI-operator, and in fact it can be shown to be fully consistent with the essence of our proposal. The reason is that exactly the same dissociation between prosodic/information Focus and a "focus-sensitive" operator that we observe with respect to our EI-Op in (40a) is attested also in the uncontroversial cases of association with Focus, such as with the operators ONLY and EVEN. This parallel is exemplified for the case of English ONLY in (41)-(42) below. Though *Mary* in (41) and *graduate students* in (42B) occur in the domain of ONLY, they still fail to bear main stress, and are not the Focus of their clause; instead it is the subject JOHN in (41) and PETER in (42B) that carry main stress and get interpreted as the Focus of the sentence.

- (41) JOHN danced only with Mary (not PETER).  
 (= 'The person who danced only with Mary was JOHN (not PETER).')

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<sup>11</sup> Szendrői's (2003) proposal for Hungarian Focus-movement is given in (i) below. It is based on Reinhart's (1995) PF-interface determination of Focus (see the SFCP in (1)) and on the assumed position of main stress assignment by the NSR in Hungarian intonational phrases:

- (i) Stress-driven Movement:  
 In Hungarian, movement of the focused constituent to the left periphery is triggered by the requirement that a focused constituent be stressed.

- (42) (from Schwarzschild (1997, ex. (28))  
 A: Eve only gave xerox copies to the GRADUATE STUDENTS.  
 B: No, PETER only gave xerox copies to the graduate students.

Thus (41)-(42) suggest that the relation between focus-sensitive operators and Focus in their scope - the latter determined by main stress - is not due to some grammaticalized output condition or to a semantic requirement imposed by the operator. Rather it is a dynamic relation, not required by grammar, which is dependent on the discourse context. Disconnecting prosodic Focus from the domain selection of ONLY is argued for independently by Schwarzschild (1997) and Wagner (2005). Schwarzschild (1997) discusses specifically data such as (41)-(42). He assesses alternative approaches to the association phenomena, and develops a pragmatically-based account of association with Focus that can adequately accommodate the above types of cases.

The same generalization observed in (41)-(42) for English ONLY extends to our EI-Op and its relation to (prosodically determined) Focus (see (40a)); this fact supports the parallel treatment we proposed for them in (36c). Accounts of association with Focus developed for the former (such as e.g. Schwarzschild (1997)) could straightforwardly cover our EI-Op case (40a) as well.

In sum, the EI-based account (outlined in (36)-(37)) correctly predicts that main clausal stress and Focus may fail to coincide with the target position of the alleged "Focus-movement", as shown in cases such as (40a); only exhaustive identification correlates with it consistently.

#### *4.2. Taking stock: further benefits of the EI-based movement account*

Beyond the phenomena discussed in 4.1 above, the EI-driven movement proposal advanced in the present paper has numerous further empirical as well as conceptual advantages over previous accounts of apparent "Focus-movement".

Starting with the empirical side, notice first that the "pied-piping" problem pointed out in section 2.1 in relation to [Focus]-feature driven accounts (such as Hypothesis A (13)) disappears under the EI-Op movement proposal. The EI-Op is assumed to merge with phrases at the root - as expected under Chomsky's (2004) No Tampering Condition - and its position is independent of which element will end up being the Focus within that phrase (see e.g. the DP in (37) and in examples (38) in section 3.2). Given this, the location of Focus within the structure of the moved phrase is clearly irrelevant for the movement operation, it is only the EI-Op that is involved in the matching relation with the Probe. The position of the EI-Op in the Goal phrase it attaches to is a position known independently to induce "pied-piping" effects in other feature-driven movement operations, such as the case of [wh] and [neg] features discussed in section 2.1. Thus the feature [EI] carried by the EI-Op will be accessible to the clausal head  $EI^0$  searching for a matching feature, which - in conjunction with  $EI^0$ 's EPP-feature - will give rise to (phrasal) movement, namely internal Merge consisting of 'Agree, Pied-pipe, Merge'.

Furthermore, since Focus plays no role in driving the alleged "Focus-movement" under our account, the fact that this movement fails to take place in the case of the focus-sensitive operator EVEN, in contrast to the case of ONLY, in Hungarian (see section 2.2.1, examples

(27)) no longer poses a problem either. In fact the otherwise puzzling failure of the alleged "Focus-movement" to apply in the case of EVEN is precisely what is predicted by the EI-Op movement analysis. The operator EVEN associates with Focus, but unlike the operator ONLY, it involves no exhaustive identification of a proper subset of some contextually relevant set of alternatives for which the predicate holds. Specifically, the EVEN operator does not perform exclusion of some members of the set, it only adds to the contextually given set. Thus, the operator feature [EI] clearly does not occur in the case of phrases associating with EVEN, only Focus is involved. Consequently, our account correctly predicts that no "Focus-movement" will take place in this case. This is in direct contrast with the prediction of various Focus-based-movement accounts.

Similarly, the lack of "Focus-movement" in non-exhaustive answers appropriate for certain wh-questions - discussed in section 2.2.2 in relation to examples (28)-(29) - falls in place naturally under the EI-Op-movement proposal. These answers do not involve exhaustive identification, a fact often explicitly indicated in them by expressions added to the Focus phrase such as *például ...* 'for example...', or *'... vagy/és talán XP is* '... or/and perhaps XP too'. So even though they clearly involve Focus, in the absence of an EI-Op the Focus-phrases in such answers are correctly predicted not to undergo movement under our EI-Op analysis.

The above proposal based on a quantificational, syntactically active, EI operator, and the separation of Focus from the syntax of the alleged "Focus-movement" is moreover able to account for why it is "information" Focus (using the terminology of earlier literature) that stays in situ, and it is the so-called "contrastive"/"identificational" Focus that undergoes movement in overt "Focus-movement" languages like Hungarian, whereas the opposite state of affairs is apparently unattested. Under standard Focus-based accounts of the movement, this asymmetry is unexpected.

In addition, our EI operator-based account provides an obvious way out of a problem facing [Focus]-driven accounts of "identificational" Focus in relation to exclusive ONLY (*csak*) in Hungarian (as noted by A. Szabolcsi (p.c.)). ONLY, a known focus-sensitive operator, involves in Hungarian the application of what is taken to be identificational Focus-movement on the standard accounts (see the discussion of (26) in section 2.2.1, and (43) below). Uncontroversially, this "Focus-movement" operation, whether "free" or occurring with ONLY present, has the semantic import of exclusion by exhaustive identification (as shown in section 3). But if so, what could the semantic contribution of ONLY be? Since on the standard account (Hypothesis A (13)), identificational Focus-movement - i.e., the assumed movement of the [Focus]-phrase to Spec of FP - in and of itself results in exhaustive identification and exclusion of a complementary set of the alternatives (see (35)), it is unclear then what the role of ONLY is in sentences like (43b) (on the latter issue, see also Balogh (2005)). Note that both "free" identificational Focus clauses like (43a) and ONLY clauses like (43b) are true under the same conditions, namely, in the case of (43a,b), if and only if 'they called up Mary, and no one else'.

- (43) a. MARIT hívták fel.  
Mary-ACC called-3PL up  
'It's Mary that they called up.'
- b. Csak MARIT hívták fel.

only Mary-ACC called-3PL up  
'It's only Mary that they called up.'

Since our proposal accounts for the alleged "free" identificational Focus (as in (43a)) on the basis of [EI]-driven movement of an EI-Op phrase induced by a clausal head EI<sup>0</sup> that encodes "exclusion by exhaustive identification", and the account crucially separates the latter from Focus, it provides an obvious way to treat exclusive ONLY. This focus-sensitive operator can plausibly be considered as another, alternative, [EI]-feature-bearing operator, which crucially is in complementary distribution with the null EI-Op we motivated for cases like (43a). Both of these operators would thus exhibit the "exclusion by exhaustive identification" meaning, as well as association with Focus, they would attach to the same types of phrases, and both would be attracted by the EI<sup>0</sup> clausal head which bears (at least in Hungarian) the movement-inducing EPP feature. Since the null EI-Op and ONLY (*csak*) are however distinct morphemes, not only their similarities (namely their movement and their EI-meaning), but also their differences can be accommodated.<sup>12</sup> (Some elaboration of the EIP projection in relation to adverbials of exhaustivity, including 'only', and 'exclusively', is provided in Horvath (2005b)).

The EI-Op analysis of "Focus-movement" also resolves the problem of an apparent contradiction involving Focus, "Focus-movement" and island-(in)sensitivity. Focus *in-situ* appears to be insensitive to islands, as observed by Rooth (1985). This suggests that its interpretation does not involve (covert) syntactic movement, a conclusion reflected in Rooth's nonquantificational theory of Focus. Yet syntactic, clearly island-sensitive apparent Focus-movements, as in Hungarian, have been widely attested across languages. The EI-Op movement proposal we motivated in the present study suggests a way to resolve this paradox. The apparent Focus-movements observed may turn out not to be driven by Focus, as it was in fact established above for the case of Hungarian. What may trigger overt or covert movement in these cases are specific operators that associate with Focus, such as the null EI-Op and the corresponding (EPP-bearing) EI<sup>0</sup> clausal head we motivated for Hungarian. Island-sensitive covert movement of phrases to associate with VP-*only* in English is argued for in a recent study of *only* by Wagner (2005), based on evidence from NPI licensing; this movement may well turn out to instantiate a covert variety of the [EI]-driven overt movement we proposed based on Hungarian. (For remarks on cross-linguistic aspects of the [EI]-driven movement hypothesis, see subsection 4.3 below). If the above proposal is on the right track, there is no reason to assume that Focus as such drives syntactic movement, whether before or after Spell-Out, and therefore the apparent contradiction between island-sensitive alleged Focus-movements and the island-insensitivity of Focus will not arise. The absence of island

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<sup>12</sup> Specifically, the negated versions of sentences like (43a) vs. (43b) diverge in interpretation (see Szabolcsi (1994)): (ia) presupposes that they called up someone, and asserts that it was not Mary, whereas (ib) presupposes that they called up Mary, and asserts that they called up someone else too.

- (i) a. Nem MARIT hívták fel.  
not Mary-ACC called-3pl up  
'It's not Mary that they called up.'  
b. Nem csak MARIT hívták fel.  
not only Mary-ACC called-3pl up  
'It's not only Mary that they called up.'

sensitivity manifested by Focus, along with Rooth's (1985) *in situ* nonquantificational proposal for Focus interpretation via alternative sets, thus become consistent on our account with the appearance of overt island-sensitive "Focus-movement".

Finally, it should be noted that the EI-Op movement account we developed in this paper has the consequence of leaving Focus a unitary, prosody-based, syntactically unencoded phenomenon. This view is arguably the null hypothesis, i.e., the conceptually minimal assumption regarding the status of Focus (see Reinhart 1995). Provided they extend to apparent "Focus-movement" cases in general, our findings indicate that the conception of Focus as a single uniform purely interface-based notion in the theory is in fact sustainable.

#### 4.3. *Focus-movement and EI-Op in a cross-linguistic perspective*

The proposal developed in the present paper for the A-bar movement operation referred to as Focus-movement was based on the study of its instantiation in Hungarian. The conclusions reached with regard to this widely-known case of alleged "Focus-movement" delineate some important questions and consequences to be pursued in further cross-linguistic investigation. Specifically, two major issues, and two corresponding directions for investigation, emerge directly from our findings.

First, the fact that the widely assumed [Focus]-driven movement account turned out in fact not to be adequate in this case indirectly suggests the possibility that other apparent instances of "Focus-movement" may, upon closer examination, also fail to support the need for a formal [Focus] feature in the CS; this in turn would show that Focus is a notion not encoded in the syntax. This possibility calls for a reevaluation of earlier [Focus]-driven movement analyses, proposed for a wide variety of languages, in light of the above discussion.

The second issue emerging from the proposal advanced in this paper involves the proposed [EI] feature that determines the EI(P) projection in the clause and that is carried by the syntactic EI-Op. As the EI-Op and the EI<sup>0</sup> clausal head that we argued for in the case of Hungarian were both phonologically null, the next obvious question to ask is: Are there any overt instantiations for these elements that could further support the postulation of the [EI] operator feature in the syntax? Given the assumption of the universality of the set of formal features available for languages, a related topic to address is the status of EI-Op movement cross-linguistically, and in particular, the question: what is the source of variation, given languages such as English, which manifest no obvious overt form of such movement?<sup>13</sup>

While pursuing these cross-linguistic issues is beyond the scope of the present paper, we would like to make some initial remarks regarding each.

Regarding the first question raised above, it is up to further cross-linguistic studies of apparent Focus-driven A-bar movements to determine whether each of these cases only appears to be driven by Focus, as we saw in the case of Hungarian, or there are residual instances that still must be assumed to be driven by syntactically encoded [Focus]. Recall that

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<sup>13</sup> The cleft construction of English may well be an instance of overt EI-Op movement. But what we are referring to here is the fact that the English-type languages fail to exhibit monoclausal [EI]-movement constructions parallel to the Hungarian case.

in the above discussion we suggested the strong hypothesis that the set of syntactic displacement phenomena that *prima facie* appear to be Focus-driven fall into two separate, empirically clearly distinguishable types: (a) one that indeed represents Focus - namely what used to be referred to as "information" Focus - is a local/clause-bounded movement that arguably is due to PF-interface properties, namely to the unmarked position of main stress in the particular language (as assigned by the NSR) in conjunction with the SFCP (1), and (b) a fundamentally distinct type of movement that in fact is not driven by Focus or main stress at all, but by a separate quantificational operator feature within the CS, such as [EI] borne by EI-Op in our proposal (the latter associates with Focus, thus creating the illusion of [Focus]-driven movement). Importantly, neither of these two types of movement involve a formal feature [Focus] and any corresponding F(P) projection in the syntax; thus both of them are consistent with the conceptually desirable unitary interface-based view of the notion of Focus.

Thus, whether the syntactic encoding of Focus can or cannot be eliminated from the theory will depend on the outcome of a reexamination of each apparent Focus-movement case with the above two alternative options in mind.<sup>14</sup> The need for a formal feature [Focus] would arise if some instances of apparent Focus-related movements failed to fit into either of the above two classes.<sup>15</sup> If however these two categories indeed turn out to cover the attested varieties of apparent Focus-related movements, then we have clear support for maintaining a uniformly PF-interface-based conception of Focus in the theory.

As for the second issue raised above, namely whether there are any overt instantiations of the EI<sup>0</sup> functional head in the clausal projection and/or of the null EI-Op we motivated in the paper, an obvious area to investigate would be the function and position of the various alleged morphological "focus-markers" associated with designated syntactic "Focus-positions" in descriptions of a wide range of languages. Some of these may well turn out to be morphemes merged as the head/specifier of the syntactic EIP projection. But apart from this line of investigation, in fact we have already mentioned in section 4.2 above a specific familiar candidate for being an overt realization of our abstract EI operator. Discussing ONLY (*csak*) in connection with the Hungarian examples (43), we noted there that this morpheme can plausibly be analysed as one bearing the [EI] operator feature and being a variant of our null EI-Op (see (43a) vs. (43b)). Generalizing the point regarding ONLY (*csak*) in Hungarian as a morpheme carrying an interpretable version of the [EI] feature, it is reasonable to assume (a) that (exclusive) ONLY carries this [EI] operator feature cross-linguistically (hence its semantic import of "exclusion by exhaustive identification"), and crucially (b) that as such, it may constitute an interpretable variant of the null EI<sup>0</sup> clausal head across languages. Whether the [EI]-morpheme ONLY appears only in the EI<sup>0</sup> head position of the clausal projection, or also in adnominal position (as we suggested above in our discussion of the EI-Op of Hungarian) may be a matter of cross-linguistic variation. (For the claim that ONLY is merged exclusively in the clausal projection, see Kayne's (1998) overt movement analysis, and for

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<sup>14</sup> The choice between the above options is often quite controversial in individual languages, as shown for instance by the radically different analyses proposed for the left-peripheral "Focus" position in Italian (see e.g. by Samek-Lodovici (2005) vs. Rizzi (1997), and other recent work).

<sup>15</sup> It must be noted here that the fact that for instance Hungarian is claimed to have EI-Op movement obviously does not imply that the same language may not have prosodically motivated movements as well. (In fact there is reason to believe that Hungarian does have such movements.)

arguments for "adverbial" ONLY and against adnominal ONLY in relation to German, see Buring and Hartman (2001); on further exploration of the syntactic status of ONLY with respect to Hungarian, see Horvath (2005b).)

Finally, let us turn briefly to the related question of cross-linguistic variation regarding [EI]-driven movement, namely, why languages would apparently fail to exhibit (overt) EI-Op movement. Under the strong assumption that the set of features encoded in the CS is uniform across languages, we expect the [EI] operator feature and the corresponding EIP projection to be universally available. So the question arising is why for instance a language like English would have no overt instance of EI-Op movement (i.e., so-called "Focus-movement"), in contrast to Hungarian.

One possible response would be to try to claim that the English-type languages too have EI-Op movement, however it is covert, rather than overt, movement in the latter language-type. The plausibility of such a claim is enhanced to a certain extent by the observation of an independently known cluster of variation between Hungarian and the English-type languages in relation to overt vs. covert movement. Quantifier phrases (such as e.g. distributive quantifiers, negative phrases) as a class exhibit overt movement in Hungarian, whereas they fail to do so in English (see Szabolcsi (1997)). Thus, under our EI-Op analysis of "Focus-movement", the Hungarian vs. English contrast with respect to the latter could follow automatically from the parameter-setting that underlies the overtness of quantifier movements in Hungarian.

The above proposal for the absence of overt EI-Op movement in the English-type languages assumed that such languages do manifest the relevant feature-driven quantificational movement operations, but do so covertly. An alternative account worth considering may be to claim that although the English-type languages have the EIP and other quantifier projections in their clause structure (similarly to Hungarian), but what is absent in this language-type is an uninterpretable (unvalued) variety of the relevant quantificational features, among them [EI] (in contrast to their presence in Hungarian). Under this alternative proposal, no feature-driven EI-Op movement (whether overt or covert) would be possible in the CS of the English-type languages.<sup>16</sup> The existence/non-existence of feature-driven covert EI-movement in the English-type languages is clearly an empirical question to be explored in further research .

## 5. Conclusion

In the paper we have argued against [Focus]-driven movement hypotheses (such as (13)) regarding apparent Focus-movements, as instantiated in Hungarian, and developed the alternative proposal that the movement is due to an independent quantificational operator, namely an "Exhaustive Identification" operator (EI-Op), which interacts with Focus only indirectly. We assessed the implications of our findings for the place of Focus in the model, and in particular for its relation to the PF interface. The above findings led to the conclusion that "Focus-movement", as attested in Hungarian, fails to motivate the encoding of Focus in

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<sup>16</sup> For interesting empirical evidence in support of the existence of non-feature-driven covert phrasal movement induced by ONLY when attached to the clausal projection in English, see Wagner's (2005) study of NPI licensing.

the computational system (CS) by a formal feature, and therefore, contrary to initial impressions, the conceptually minimal view of Focus as a uniform purely interface-based phenomenon can be sustained. The evidence has motivated instead a syntactically active "Exhaustive Identification" operator, and a corresponding  $EI^0$  clausal functional head, on a par (and in complementary distribution) with the overt operator ONLY. We have furthermore put forward the strong hypothesis that prima facie "Focus-driven" movements fall into two fundamentally distinct classes: (i) prosodically motivated local "scrambling" (see Zubizarreta's (1998) p-movements, and Ishihara (2001)) and (ii) A-bar "Focus-movements". Importantly, the latter are not driven by Focus at all but by quantificational operators in the CS, while the former displacements are local/clause-bounded, and possibly directly PF-driven. Though the scrambling-type Focus-related phenomena can plausibly be attributed to the unmarked position of prosodic prominence (main stress assignment) and an interface principle such as the SFCP (1), there is no reason to assume that the location of main stress, and hence prosodically determined Focus, should be sufficient to drive syntactic A-bar movements such as the Hungarian-type "Focus-movement". The conclusions reached in the paper call for (a) a careful reassessment of other (alleged) cases of Focus-movement attested across languages, and for their evaluation in relation to the conceptual framework proposed above regarding Focus and the distinct sources of apparent "Focus-related" displacements, and (b) for further exploration of the cross-linguistic manifestations of (overt or covert) exhaustivity operators encoded within the syntax proper.

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