

# Mechanisms of *wh*-saturation and interpretation in multiple *wh*-movement

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## 1. Introduction

Multiple *wh*-constructions, mostly of the Slavic type, have received considerable attention in recent minimalist literature. The present article demonstrates that Hungarian exhibits (at least) three syntactic patterns of multiple *wh*-questions, and relates these three syntactic patterns in a principled way to different focus structures. Modulo distinctions in focus structure, I relate the three multiple *wh*-constructions to three distinct sets of answerhood conditions they are shown to be matched with, arguing that multiple (overt or covert) movement to the same projection results in a pair list interpretation, while otherwise only a single pair reading is available. Providing a typological outlook, I show that this account of answerhood conditions can be maintained more generally.

Briefly, the paper is structured as follows. In Section 2, I establish that Hungarian multiple *wh*-fronting (henceforth MF) cannot be reduced either to multiple focus fronting, cf. Rizzi (1997, 1998, 1999, 2000, 2002) or to multiple topi-  
fronting, cf. É.Kiss (1994, 2002), or to multiple topicalization. In Section 3, I examine the topic/focus structure of both the Slavic type MF and the apparently English type multiple *wh*-questions to be found in Hungarian, and propose a syntactic analysis that holds that in the MF pattern in Hungarian exactly one *wh*-phrase bears both [+foc] and [+wh], and the rest of the fronted *wh*-elements carry only [+wh], all occupying multiple specifiers of a single FocP projection. The seemingly uniform English-type multiple *wh*-pattern is in fact to be factored into two covert structures corresponding to two focus structures. Then in Section 4, I go on to derive the way the three different syntactic structures I have found match up with three distinct sets of answerhood conditions. In Section 5, I probe into various MF and non-MF languages, showing that the account of answerhood conditions I have put forward can be maintained in the context of a more general typology of interpretations available in multiple *wh*-constructions.

## 2. Movement in multiple *wh*-fronting

### 2.1 Multiple focusing

It is a standard view that *wh*-operators in single *wh*-questions are a special case of focus operators (e.g. Rochemont 1978, 1986, Culicover and Rochemont 1983, Horváth 1986), and indeed in Hungarian (or Italian, Greek, Catalan, Bengali etc.) single *wh*-movement and focus movement apparently target the same left-peripheral position, identified as FocP in Brody (1990).

Rizzi (1997, 2000) argues that MF in Slavic  
-Croatian matrix short *wh*-  
movement contexts (as well as in analogous MF contexts in other languages) derive from multiple syntactic focalizations of *wh*-its (cf. Rizzi 1995, 1998  
see also Citko 1998), where the offending [+foc] feature is located on the moved *wh*-

elements and not on the attractor, hence the order of checking the *wh*-elements is free, hence it can be Superiority-violating (Boskó (1998, 1999, 2002) and this to Bulgarian, and Stepanov (1998) to Russian. Now Hungarian multiple *wh*-fronting can freely be Superiority-violating, in matrix, in long-movement, as well as in embedded contexts. I argue, however, that the analysis of Superiority-violating multiple *wh*-fronting involving multiple focusing proposed by Boskó can be extended to Hungarian. More precisely, treating MF in Hungarian as multiple syntactic focalizations is on the one hand unjustified, and on the other, not a necessity.

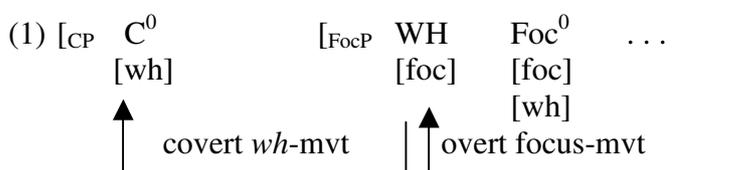
It is not a necessity because Boskó's account of a Superiority effect depends not on the *nature* of the feature being [+foc], but on its location (being on the moved elements). Consequently, the very same account can be transposed to [+wh] feature on the moved *wh*-items. Independently of this option, the apparent violations of Superiority can be easily put down in Hungarian to the attested freedom in the basic order of constituents of the (extended) VP (for the basic order within VP, see É.Kiss 1994, 2002).

On the other hand, a Boskó-style analysis cannot characterize Hungarian, given that multiple overt focusing—which is available in Serbo-Croatian—is strictly prohibited in Hungarian. In Hungarian only a unique preverbal focus is allowed, whereas MF involves multiple instances of preverbal *wh*-elements.

Boskó argues that in echo-questions *wh*-elements are focused, but do not have a [wh]-feature. Now in this regard what is interesting to observe is that although Hungarian single echo-questions must front the (only) *wh*-element, a multiple echo-question cannot front all *wh*-items (in contrast to Serbo-Croatian, Boskó 1997, 1999, and Béjar & Boskó 2000). This fact should mean once again that Hungarian MF involves only a unique focused *wh*-item, the rest of the *wh*-expressions are non-focused.

## 2.2 Covert *wh*-movement and MF via quantifier movement?

Even though syntactic focusing cannot be held responsible for MF in Hungarian, the standard view that the fronted *wh*-element in *single* questions is focused and is in a syntactic focus position may be adopted nonetheless. The question then is still open whether the single fronted *wh*-element has also undergone *wh*-movement in overt syntax, or *wh*-movement takes place covertly (in the spirit of Boskó's proposal) to a higher functional projection of the CP-system. In recent work (though without explicit reference to the multiple *wh*-analysis) Lipták (2008) has written a similar analysis, viz. (1).



In order to treat the non-final (and non-focused) fronted *wh*-elements in MF constructions (i.e. WH<sub>1</sub> and WH<sub>2</sub> in (3) below), Lipták adopts a common assumption from the relevant literature on Hungarian (e.g. Horváth 1998, Puskás 2000, É.Kiss 2002), namely one that holds that these *wh*-items have the status of universal quantifiers of the *every*-QP type, a view that originates with É.Kiss (1992, 1993) and Comorovski

(1989) (cf. also Garrett 1996). If *every*-QPs (or other increasing distributive quantifiers) co-occur with and outscope a focus, they are typically fronted to a position above fronted focus (their scope position) (2). É.Kiss (1992, 1993) claims that non-final fronted *wh*-elements are analogous both syntactically and semantically to *every*-QPs, hence (3a) can be paraphrased as (3c).

- (2) a. Mindenki minden lánynak JÁNOST mutatta be  
 everybody every girl-dat J.-acc introduced Pref  
 ‘Everybody introduced JOHN to every girl’  
 b. [ every<sub>1</sub> [ every<sub>2</sub> [ focus . . .
- (3) a. Ki melyik lánynak kit mutatott be?  
 who which girl-dat who-acc introduced Pref  
 ‘Who introduced who to which girl?’  
 b. [ WH<sub>1</sub> [ WH<sub>2</sub> [ WH<sub>3</sub> . . .  
 c. ‘For every person, tell me for every girl who he introduced to her’

I now show briefly that on the one hand, *wh*-movement per se is overt in Hungarian, and on the other, the universal quantifier treatment of non-final fronted *wh*-items is unsupported.

Elsewhere I presented considerations that show that Lipták’s arguments in favour of a covert *wh*-movement step in Hungarian are inconclusive (Surányi 2004). Below I will concentrate on two arguments that directly undermine the covert *wh*-movement analysis. The first point to be made is that if in a MF question like (3), WH<sub>3</sub> by assumption covertly raises to a C position higher than WH<sub>1</sub> and WH<sub>2</sub> and takes widest scope, then the sorting key (cf. Kuno 1982, Kuno and Takami 1993) should be provided by WH<sub>3</sub>. This is contrary to fact, since in MF questions the sorting key is invariably supplied by the leftmost *wh*-element, i.e. WH<sub>1</sub>:

- (4) a. Ki melyik tárgyat tanítja?  
 who which subject-acc teaches  
 ‘Who teaches which subject?’  
 b. Pál a szintaxist tanítja, Márk a szintaxist és a morfológiát, . . .  
 ‘Paul teaches syntax, Mark teaches syntax and morphology. . .’  
 c. #(5b)
- (5) a. Melyik tárgyat ki tanítja?  
 b. A szintaxist Pál és Márk tanítja, a morfológiát Márk, . . .  
 ‘Syntax is taught by Paul and Mark, morphology by Mark. . .’  
 c. #(4b)

An interesting contrast between syntactic focusing and single *wh*-fronting, which are by assumption identical in overt syntax, comes from Lipták (2001). Focus in a headless relative clause may or may not overtly pied-pipe the containing headless relative to a matrix focus position. However, the same is obligatory for a *wh*-element.

- (6) a. Az jöhet be [aki PÉTERT ismeri]  
 that-nom come-pot-3sg in who-rel P-acc knows

- b. ?(Csak) [aki PÉTERT ismeri] jöhet be  
 (only) who-rel P-acc knows come-pot-3sg in  
 ‘Those who know PÉTER can come in’
- (7) a. \*Az jöhet be [aki kit ismer]?  
 that-nom come-pot-3sg in who who-acc knows
- b. ?(Csak) [aki kit ismer] jöhet be?  
 (only) who-rel who-acc knows come-pot-3sg in  
 ‘Who is such that those who know him can come in?’

If in overt syntax (single) *wh*-movement were merely focus-movement, then the obligatory overt movement in (7) is completely unexpected. It is all the more unsurprising if bona fide *wh*-movement is in fact overt, i.e. if [wh]-feature is checked overtly.

I turn now to the other component of the analysis, namely that of identifying non-final fronted *wh*-items (henceforth ‘high’ *wh*-phrases) as being fronted qua universal quantifiers. I demonstrate in Surányi (2002) that even though such a general account is able to derive a number of properties of MF constructions, inasmuch as the same properties can be derived in alternative ways, this constitutes no argument in favour of such an analysis. Let me restrict attention here to two types of arguments that in fact appear to go against this treatment.

The first type of argument comes from the interpretation of MF constructions that involve more than two fronted *wh*-elements, as in (3) above. If the interpretation of (3a) did correspond to the paraphrase in (3c), appropriate answers are expected to be ones that are exhaustive not only with respect to the set quantified over by WH<sub>1</sub> (appropriate answers are such), but that are also exhaustive with regard to the set quantified over by WH<sub>2</sub>—this is contrary to fact. (3a) is neither synonymous with Hungarian (8a), nor is its interpretation or its appropriate answer analogous to English (8b), both of which require exhausting the set of girls.

- (8) a. Mondd el, mindenki minden lánynak kit  
 tell-imp Pref everybody every girl-dat who-acc  
 mutatott be  
 introduced Pref  
 ‘Tell (me) who is it that everybody introduced to every girl?’
- b. What did every boy give every girl?

This questions treating the high *wh*-phrases as universal quantifiers. Further doubt is cast on such a treatment by distributional differences between high *wh*-phrases and *every*-QP-type quantifiers. Let me point out a few of these syntactic discrepancies.

First, while wide scope *every*-QPs typically appear above the preverbal focus site, they may also stay postverbal. The same is not available to high *wh*-items (9). Wide scope *every*-QPs may undergo long overt movement to a superordinate clause, but the same is impossible for high *wh*-phrases (10). Wide scope universals are separable by certain high adverbs and parentheticals, whereas high *wh*-expressions are not (11).

- (9) a. KÉT LÁNYT hívott fel minden fiú  
 two girls-acc called up every boy  
 ‘Every boy phoned TWO GIRLS’ (*every* > *two*)

- b. \*Kit hívott fel ki?  
whom called up who  
on the interpretation: *who* > *whom*, with *who*=sorting key
- (10) a. Minden lányt PÉTER szeretné, hogy  
every girl-acc P. like-cond-3sg that  
felhívjunk  
up-call-subj-1pl  
'For every girl, it's Peter that would like us to phone'
- b. \*Melyik lányt PÉTER kérdezte, hogy mikor  
which girl-acc P. like-cond-3sg that when  
hívjunk fel?  
call-subj-1pl up  
'Which girl is such that it's Peter that asked when we should phone her?'
- (11) a. Minden fiú szerintem minden lányt felhívott  
every boy in my opinion every girl-acc up-called  
'In my opinion, every boy phoned every girl'
- b. \*Ki szerinted kit mikorhívott fel  
who in your opinion whom when called up  
'In your opinion, who phoned whom when?'

It appears justified to draw the following two conclusions in view of these observations. First, the fronted *wh*-element in single questions as well as the linearly last fronted *wh*-element in MF do not undergo further covert *wh*-movement. Second, MF does not result from quantifier fronting, i.e. high *wh*-phrases are fronted by some other movement operation. I briefly examine next whether this movement could be identified as syntactic topicalization.

### 2.3 Multiple topicalization

I argued above that high *wh*-phrases, in contrast to the linearly last, immediately preverbal fronted *wh*-element in MF, are not focused. Two questions arise. The first is related to another syntactic pattern of multiple *wh*-interrogatives also found in Hungarian (as well as in several Slavic languages), which appears to be analogous to English-type multiple *wh*-interrogatives, with one *wh*-element fronted, further *wh*-elements apparently in situ (henceforth English-type questions). The question is whether in situ *wh*-phrases in English-type interrogatives are also focused or not. I return to this in Section 3 below. Topic/focus structure is central to the second issue as well, to which I turn first.

Given the heavy use of the syntactic topicalization in Hungarian (cf. É.Kiss 1994, 2002), it could be claimed that high *wh*-items in MF are in fact topics, and undergo topic-movement. This may appear *prima facie* justified, since topics also occupy a (recursive) position above the focus site, as (12) illustrates.

- (12) A lányt a fiúnak JÁNOS mutatta be  
the girl-acc the boy-dat J.-nom introduced Pref  
'As for the girl, as for the boy, it's John who introduced her to him'



by the *every*-quantifier is possible in (a), but the *pro* in the first fronted *wh*-phrase cannot be bound by the second *wh*-operator in (b).

- (16) a. A fia minden apának büszkeséget jelent  
 [the his.son [every actor-dat pride-acc means  
 ‘Every father takes pride in his son’  
 b. \*Melyik gyereke melyik férfinek jelent büszkeséget?  
 [which his.child [which man-dat means pride-acc  
 ‘Which man takes pride in which of his children?’

I conclude that high *wh*-phrases cannot be collapsed syntactically with topics: their fronting cannot be put down to topicalization.

In the foregoing I have demonstrated, rejecting relevant alternatives—especially treatments by É.Kiss (1993, 1994, 2002) and Lipták (2001)—that the Hungarian MF construction is not brought about either by multiple focusing, or by quantifier fronting, or by topicalization. In Section 3 I propose a syntactic analysis of the MF construction as well as the English-type pattern in Hungarian, taking their focus structure into account, to which I presently turn.

### 3. Topic–focus structure and the structure of multiple *wh*-questions

#### 3.1 Topic–focus structure

I have adopted the view from the pertinent literature that the linearly last fronted *wh*-element in MF is focused, and occupies [Spec,FocP]. This is confirmed not only by its complementary distribution with preverbal focus, but also by the fact that it corresponds to (immediately) preverbal focus in the appropriate answers, as well as by the fact that it bears pitch accent. I have contended in the preceding section that high *wh*-phrases in MF cannot have been moved by topicalization, or by (universal) quantifier fronting, or by focusing. The latter assumption was justified in Section 2.1 simply by reference to the fact that Hungarian does not allow multiple preverbal foci. I add to that now that high *wh*-elements are interpreted at the interfaces as topics (and not as foci).

This appears to be the case given that high *wh*-expressions invariably quantify over presupposed sets (whereas the immediately preverbal *wh*-phrase may not). Furthermore, constituents that correspond in appropriate answers to a high *wh*-element in the question must appear in a topic position, cf. (17).

- (17) a. Ki mit látott?  
 who-nom what-acc saw  
 ‘Who saw what?’  
 b. Péter a Terminátor 3-at látta,  
 P.-nom the Terminator 3-acc saw  
 és János a Mátrix 2-t (látta)  
 and J.-nom the Matrix 2-acc (saw)  
 ‘Peter saw Terminator 3, and John (saw) Matrix 2’  
 c. #A Terminátor 3-at látta Péter, . . .  
 the Terminator 3-acc saw P.  
 ‘Peter saw Terminator 3, etc.’ (unacceptable as an answer to (a))

In short, high *wh*-elements are not syntactically topicalized, nevertheless, they have the discourse semantic status of topic.<sup>1</sup>

I examine next the discourse functional status of *wh*-in-situ in English-type multiple questions in Hungarian, i.e. whether or not they are focused, similarly to the immediately preverbal *wh*-element.

As a consequence of the picture I have offered of the focus status of *wh*-phrases in MF, *wh*-phrases cannot bear [+foc] as a lexical feature, rather, this property must be an optional feature assigned to them in the Numeration (NUM, cf. Chomsky 1995; or in the relevant Lexical Array, LA, cf. Chomsky 2000)—just like in the case of ordinary foci. In these terms, the common assumption of the parallelism of *wh*-operators and focus, which I have also adopted here, holds that the *wh*-pronoun in single constituent questions must be assigned [+foc] in the NUM/LA in order to function and be interpreted as a question operator. Transposing this to multiple questions, it should follow that at least one *wh*-item<sup>2</sup> must be focused there too. I demonstrated above that in Hungarian MF, exactly one *wh*-pronoun must be [+foc]: namely the linearly last one in the fronted cluster.

Given that [+foc] is not an inherent feature of *wh*-pronouns, if it is sufficient to have one *wh*-phrase functioning as focus in a (multiple) question<sup>3</sup>, the second *wh*-item in English-type multiple interrogatives a priori may or may not be assigned [+foc]. Indeed there is empirical evidence that both options are realized.

Focused constituents undergo obligatory syntactic fronting and are immediately followed by the verb in Hungarian, both in root and in embedded clauses. Of interest now is to construct English-type bi-clausal multiple interrogatives that have a *wh*-phrase in (the focus position of) the matrix clause, and a second *wh*-phrase in the complement clause. What can be witnessed in such cases is that the second *wh*-element only *optionally* fronts within the embedded clause to the immediate left of the embedded verb.<sup>4</sup>

- (18) a. Melyik fiú állítja, hogy felhívta melyik lányt?  
 which boy claims that up-called which girl-acc  
 b. Melyik fiú állítja, hogy melyik lányt hívta fel?  
 which boy claims that which girl-acc called up  
 ‘Which boy claims that he phoned which girl?’

This contrasts with the patterning of an analogous sentence with foci, where the focused constituent in the embedded clause *must* raise to focus position:

- (19) a. \*CSAK ÉN állítom, hogy felhívta Péter  
 only I-nom claim that up-called-3sg P.-nom  
 CSAK MARIT  
 only M.-acc  
 b. CSAK ÉN állítom, hogy CSAK MARIT hívta  
 only I-nom claim that only M.-acc called-3sg  
 fel Péter  
 up P.-nom  
 ‘It’s only me who claims that Peter phoned only Mary’

The apparent optionality in (18), then, derives from the optional assignment of [+foc] to the in situ *wh*-element in the NUM/LA.

In this subsection I have shown that in MF high *wh*-phrases have a topic status instead of focus (though they are not syntactically topicalized, as argued in the previous section), and exactly one *wh*-phrase (the linearly last one) is [+foc]. On the other hand, in E-type multiple questions the in situ *wh*-phrase bears [+foc] as a free option, as determined in the NUM/LA.

### 3.2. Focusing, *wh*-saturation and the structure of multiple questions

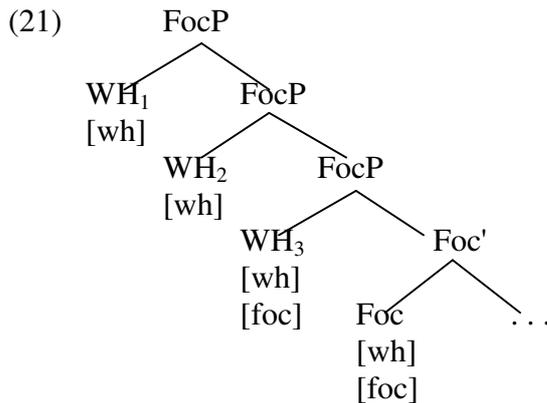
Having argued against potential alternatives advocated in the literature in Section 2, and taking into account the fact that fronted *wh*-elements form a non-disruptable cluster, the obvious remaining candidate producing MF is bona fide overt multiple *wh*-movement to a multiple specifier configuration, triggered by strong [wh].

Given that in English-type double questions, the second *wh*-element does not overtly raise, one might be tempted to conclude that [wh] is weak on the *wh*-items themselves, and strong only on the attracting functional head Foc. Then, Slavic-type MF and English-type multiple questions in Hungarian could be distinguished by assuming that Foc could either have a single-[wh] feature, or a multi-[wh] feature (overtly attracting an indefinite number of *wh*-elements), in the manner entertained in Chomsky (1995), and Bécs (2000) (see also Bécs 2000). However, such an analysis is not only conceptually unattractive in that it postulates lexical ambiguity in the Foc element (which serves merely to capture the problematic patterns), but it is also empirically unworkable. This is because Hungarian allows multiple questions with both MF and an in situ *wh*-phrase, cf. (20).<sup>5</sup> Such sentences cannot be generated in such a bifurcated system of [wh]-features on Foc.

- (20) a. (Mondd el) melyik filmben ki öl meg kit?  
 (tell-impPref) which film-in who kills Perf whom  
 ‘(Tell me) who kills who in which film?’
- b. (Mondd el) ki mit tévesztett össze  
 tell-imp Pref who what-acc confused Pref  
 mivel?  
 what-with  
 ‘(Tell me) who confused what with what?’

This supports the alternative of the lexically ambiguous Foc head analysis: in MF [wh] is strong on the moved *wh*-pronouns themselves (cf. also Lasnik 1999, Chomsky 2000 for relevant discussion of ‘Attract’ vs. ‘Move’, i.e. the location of offending features).

The structure and feature composition I am assuming for the MF construction is given schematically below.



Multiple [wh]-specifier structures (vs. single [wh]-specifier structures) are generally implicationally related to an obviation of *wh*-island effects, as well as to the availability of long multiple *wh*-movement constructions, as for instance in Bulgarian (cf. Rudin 1988 and 1995; Rizović 2000) and Hungarian (cf. Rizović 2000). In this regard, as expected.

Now English-type multiple questions in Hungarian stand out as special in that even though the in situ *wh*-pronouns also bear strong [wh], they do not overtly raise. I adopt the view that Hungarian *wh*-pronouns are bare indefinites (cf. Cheng 1991, Nishigauchi 1990; Lipták 2001 for Hungarian), and I assume they carry a [wh]-feature, which is checked in MF in [Spec,FocP] against Foc. I propose to treat English-type Hungarian multiple interrogatives, following Reinhart (1998), as involving binding of choice function variables.

In motivating this treatment, it is of significance to observe that English-type multiple questions in Hungarian in general cannot involve adverbial in situ *wh*-phrases, as exemplified below.

- (22) a. \*Ki jött el miért?  
 who-nom came along why  
 ‘Who came along why?’  
 b. \*Ki viselkedett hogyan?  
 who behaved-3sg how  
 ‘Who behaved how?’

Exceptions to this generalization are specific/referential (D-linked) adverbials as in the following example.

- (23) Melyik érkezett melyik módon?  
 which-nom arrived-3sg which way  
 ‘Which one arrived in which way?’

Adapting Reinhart’s account of a similar dichotomy between nominal and specific/referential adverbial *wh*-phrases on the one hand, and non-referential adverbials on the other (cf. also Tsai 1994), this difference can be related to the presence or absence of a D head (the syntactic locus of reference/specificity). In particular, non-referential adverbials arguably lack such a D projection. This is significant given that Reinhart suggests that choice function (variable)s in in situ *wh*-elements are a type of

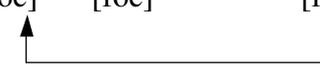
determiner. Thus, non-referential adverbials cannot combine with a choice function (variable), lacking an appropriate syntactic position.<sup>7</sup>

I propose that the syntactic reflex of combining a bare *wh*-pronoun with a D head filled by a choice function (variable) in Hungarian, is that the [wh] feature of the *wh*-pronoun will be checked. For concreteness, assume that choice function variables combining with *wh*-pronouns carry [wh]. This means that the [wh]-property of the bare *wh*-pronoun will be able to get checked locally within the full *wh*-phrase, plausibly, via head-movement to D.<sup>8</sup> This derives why non-referential adverbials cannot appear as in situ *wh*-elements in English-type multiple questions at all, lending initial plausibility to a choice function analysis.

Choice function variables associated with *wh*-elements are bound long-distance, are quantified existentially, and by definition they ‘choose’ (i.e. output) an individual from a set (Reinhart 1998). The mechanism entails that island boundaries or quantificational interveners (e.g. Beck 1996, Chang 1997, Cheng and Rooryck 2000) will not disrupt the dependency, which is indeed the case; see (a) and (b) below, respectively.

- (24) a. Melyik fiú lett ideges miután felhívta  
 which boy became angry after up-called  
 which girl-acc  
 melyik lányt?  
 ‘Which boy got angry after he phoned which girl?’  
 b. Ki mutatott meg mindenkinek kit?  
 Who showed Pref everybody-dat who-acc  
 ‘Who showed everybody who?’

Recall from Section 3.1 that I established that the in situ *wh*-elements in English-type questions may optionally be associated with [+foc]. In that case, an English-type question that involves a [+foc] in situ *wh*-phrase (English-type<sub>focused</sub> for short) is essentially analogous to a sentence with multiple foci. I will follow Brody (1990) and Szabolcsi (1997) here in taking in situ foci in Hungarian to raise to the preverbal focus covertly. Notice then, however, that two kinds of English-type questions are being entertained in Hungarian, sharing the same surface pattern: one involves covert movement, the other does not.

- (25) [<sub>FocP</sub> WH Foc [ ... f – WH ... ]] [English-type<sub>non-focused</sub>]  
 [wh] [wh] [wh] [wh]  
 [foc] [foc]  
 (26) [<sub>FocP</sub> WH Foc [ ... f – WH ... ]] [English-type<sub>focused</sub>]  
 [wh] [wh] [wh] [wh]  
 [foc] [foc] [foc]  


In brief, if the reasoning concerning the optionally focused status of in situ *wh*-phrases above is on the right track, then the empirical consequence is that the in situ *wh*-expressions may or may not be associated syntactically (by a movement dependency) with the preverbal *wh*-operator.

Having established what patterns of focus structure materialize in the Slavic- and English-type multiple *wh*-interrogatives, and having proposed that they are respectively

characterized as involving true multiple *wh*-movement on the one hand, and as involving the option of covert focus movement<sup>9</sup> or simple binding of choice function variables on the other, in the next section I turn to consider what predictions are made now for how these syntactic setups match with answerhood conditions.

#### 4. Syntactic structure and answerhood conditions

In general, a multiple interrogative can be answered either with a single pair (SP) or a list (typically a pair-list, PL). More specifically, certain multiple interrogative constructions may allow both of these answer types as appropriate, others may be expected to be answered only by SP, or only by PL. I demonstrate now that the distribution of the SP and PL interpretations across the constructions identified above are straightforwardly derived on the basis of the structural descriptions I have posited.

Here I will adopt Higginbotham and May's (1981) proposal, also maintained in Barss (2000), that Absorption is a necessary and sufficient condition for a PL reading to obtain. Absorption is a rule of the syntax/semantics interface that requires structural adjacency of the relevant A-bar elements. Practically, this entails that if Absorption is to take place, it requires the *wh*-phrases to raise to the same FocP, the checking position of *wh*-operators. If correct, this assumption directly explains a prominent fact about Hungarian MF questions: they can only receive PL answers, but not SP answers. For instance, a question like (4a), repeated here as (27a), can be answered with a list, as in (27b=4b), but not with a single pair of a person and a subject taught (27c).

- (27) a. Ki melyik tárgyat tanítja?  
 who which subject-acc teaches  
 'Who teaches which subject?'  
 b. Pál a szintaxist tanítja, Márk a szintaxist és a morfológiát, . . .  
 'Paul teaches syntax, Mark teaches syntax and morphology. . .'  
 c. #Pál a szintaxist tanítja  
 'Paul teaches syntax'

English-type<sub>non-focused</sub> questions do not have the surface in situ and the preverbal *wh*-phrase in structurally adjacent positions, hence only an SP reading is expected. On the other hand, English-type<sub>focused</sub> questions do have the surface in situ *wh*-element as structurally adjacent to the preverbal *wh*-phrase in covert syntax<sup>10</sup>, hence a PL reading is predicted. That is, for the English-type surface pattern it is predicted that either a SP or a PL reading should be available. All sources on Hungarian describe English-type questions as allowing a SP reading. However, it has gone unnoticed that they also license a PL answer.<sup>11</sup>

- (28) a. Ki nézett rá kire?  
 who-nom looked on who-on  
 'Who looked at who?'  
 b. János nézett rá Marira  
 'John looked at Mary'  
 c. János nézett rá Marira, Pali Gabira, . . .  
 'John looked at Mary, Paul looked at Gaby, . . .'

Example (a) can be asked either in the context of a single looking event (b), but also in the context of attempting to reconstruct what looking events occurred during a group game which is based on silent eye-gestures (c). What is remarkable is that although both MF questions and (28a)-type (i.e. English-type<sub>focused</sub>) questions can be answered with a list, this list strictly *must* involve individuals as second members of the pairs (*n*th members of the *n*-tuples) in the case of (28a)-type (i.e. English-type<sub>focused</sub>) interrogatives ('matching questions'), whereas an answer to MF questions can also have sets of individuals as second (*n*th) members (see for instance (27b) above). Thus, (29) is not felicitous as an answer to (28a).

- (29) János nézett rá Marira és Sárára, Pali Gabira, . . .  
'John looked at Mary and Sarah, Paul looked at Gaby, . . .'

In fact, the analysis I have proposed already explains this restriction with respect to PL answers to English-type questions. English-type questions involve the application of a choice function variable to a *wh*-pronoun. In English-type<sub>focused</sub> questions (like (28a)), the (determiner of the) in situ *wh*-item undergoes Absorption with the (determiner of the) preverbal *wh*-operator, hence the list reading. Given that choice functions by definition output individuals only, the list will contain individuals as second members. This is suggestive evidence of the role played by choice functions in such 'matching' questions.

A further correct consequence of the account developed here is the following. Given that Absorption requires movement of the in situ *wh*-phrase in English-type questions, in contexts where this movement is not conceivable—for instance due to locality restrictions—it is predicted that such English-type questions cannot expect a PL answer, only an SP answer. Thus, (30a), repeated from (24a), which involves an island, should allow only for a SP answer. Similarly, (30b), involving a quantificational intervener between the preverbal and the in situ *wh*-phrases, is expected to be incompatible with a PL reading. These predictions are indeed verified:

- (30) a. Melyik fiú lett ideges miután felhívta  
which boy became angry after up-called  
melyik lányt?  
which girl-acc  
'Which boy got angry after he phoned which girl?'  
b. ~~Melyik~~ ~~szervező~~ ő mutatta be minden jelöltnek  
Which organizer introduced Pref every candidate-dat  
melyik opponensét?  
which opponent-his-acc  
'Which organizer introduced every candidate  
which of his opponents?'

Recall now the discussion of bi-clausal English-type double questions from Section 3.1, where I demonstrated that the second *wh*-expression either undergoes local focus movement within the complement clause (when it bear [foc]) or it does not (when it does not bear [foc]); (31)=(18).

- (31) a. Melyik fiú állítja, hogy felhívta melyik lányt?  
 which boy claims that up-called which girl-acc  
 b. Melyik fiú állítja, hogy melyik lányt hívta fel?  
 which boy claims that which girl-acc called up  
 ‘Which boy claims that he phoned which girl?’

I have established that English-type<sub>non-focused</sub> questions must receive a SP answer. This correctly holds of (31a) as well. On the other hand, I have demonstrated that English-type<sub>focused</sub> questions may also receive a PL answer (of a restricted kind). (31b) on the present account is an English-type<sub>focused</sub> question. However, given that the second *wh*-element moves to FocP of the lower clause, no structural adjacency obtains, hence, in turn, Absorption cannot apply. Thus for (31b) only a SP reading is generated, once again, the right prediction: (31b) is indeed incompatible with a PL answer.

On the other hand, if the second *wh*-element in (31) can be made both [+foc] and associated with the preverbal *wh*-phrase in the matrix clause, then a list reading is expected to re-appear, exceptionally. The relevant case is (32):

- (32) ~~Amint azt a televízióknézők megismerik~~ ólhgyavén  
 már nem tudtam követni...  
 ‘They broadcasted reports about so many sportsmen and so many old sports events that in the end I was unable to follow...’  
 ... melyik sporty dicsekedett, hogy hol végzett  
 which sportsman boasted that where finished  
 melyik versenyen  
 which competition-at  
 ‘...which sportsman boasted of which place he finished at in which competition’

Here the matrix verb embeds an interrogative itself. This interrogative clause has its own *wh*-operator *hol* ‘where’ in [Spec,FocP]. This allows the construal of the in situ *wh*-phrase as [+foc], which then can be syntactically associated with the *wh*-operator of the matrix clause (characteristically of such ‘*wh*-triangle’ situations), via covert movement. In this case, a PL interpretation is predicted to be induced by the matrix and the in situ *wh*-phrases. Indeed, this is the fact: (32) can be answered as (33).

- (33) JÁNOS dicsekedett, hogy hol végzett a VB-n  
 J. boasted that where finished the World Cup-at  
 PÁL dicsekedett, hogy hol végzett az Olimpián...  
 P. boasted that where finished the Olympics-at  
 ‘It’s John who boasted of where he finished at the World Cup, it’s Paul who boasted of where he finished at the Olympics...’

Let us take stock of the results of this section. The findings regarding the proper structural description and the focus structure of such interrogatives, and the application of choice functions were exploited in systematically deriving answerhood conditions of the discovered three syntactic patterns of multiple *wh*-questions, relying on Higginbotham and May’s (1981) Absorption approach to pair-list readings. I showed that the account of the answerhood conditions naturally and correctly extends to some more complex types of multiple *wh*-interrogatives as well.

In the remainder of the paper, I demonstrate that the treatment of the PL/SP distinction defended here can be supported in a typological context.

## 5. A typology of interpretations in multiple *wh*-questions

### 5.1 Single pair and pair list readings in East European MF

Let us consider the typological implications of our proposals, situating Hungarian first within East European MF languages.<sup>12</sup> Following Higginbotham and May (1981), I have maintained that the list reading in Hungarian MF is a consequence of Absorption, a rule of the syntax–semantics interface, conditioned by structural adjacency of the absorbed operators.<sup>13</sup> Then the expectation is that other MF constructions in East European languages should also invariably receive a PL reading. That expectation, however, is not borne out. As I will show directly, this is unsurprising if, as is standardly assumed, *Wh*-Absorption applies not just to any two adjacent *wh*-phrases, but to two *wh*-operators in their *wh*-operator position.

Bulgarian (BG) is a language in which *wh*-phrases overtly to CP (CP is taken to be the locus of [wh]-feature checking; not all *wh*-elements are moved overtly in order to check a [wh]-feature). Indeed, Bulgarian MF receives a PL reading (cf. Rizzi 2000). Rumanian (RO) is similar to Bulgarian in this regard.

Serbo-Croatian (SC), on the other hand, is unlike Hungarian/Bulgarian/Rumanian in that in simple matrix clauses MF is both PL and SP (cf. Rizzi 2001). Rizzi (1997) argues that in such syntactic contexts SC *wh*-items undergo focus-driven movement to a position lower than CP, from where *wh*-movement to CP takes place in covert syntax (and in this sense, fronted *wh*-elements count as *wh*-in-situ). Now, according to the picture developed in the foregoing sections, *wh*-in-situ can be related to a C<sup>0</sup> housing [wh] via either of two mechanisms: movement or binding of a choice function variable. Conceptually, to the extent that movement and variable binding are both well-motivated and independently existing mechanisms in the syntax of *wh*-in-situ, both should be available for a given *wh*-element, unless further restrictions apply.<sup>14</sup> That means that in a double question in SC, the two fronted *wh*-elements are each expected to be able to relate to C<sup>0</sup> either by movement or by binding (of a choice function variable). That in turn predicts that when both *wh*-elements move to C<sup>0</sup>, Absorption results in a PL reading; in other scenarios the question should receive a SP interpretation. This prediction is borne out, since such questions in SC may receive either a PL or a SP reading.

On the other hand, as Rizzi (2000) points out, SC MF in long and embedded contexts only receives a PL answer. That in such syntactic setups SC MF involves *wh*-movement to CP is shown independently of the PL/SP interpretation issue in Rizzi (1997). In these terms, inasmuch as such long and embedded MF involves true *wh*-movement to CP, the PL interpretation is predicted: Absorption takes place in (multiple) [Spec,CP].

Rizzi is also correct in saying (1998) that SC is a ‘low-fronting’ language (according to Stepanov, *wh*-elements undergo focus fronting); and the same extends to Polish along the lines of this genre of analysis. That means that Russian and Polish display what SC exhibits in simple clauses: no overt [wh]-checking movement. *Wh*-movement, as in SC simple clause short MF too, may or may not happen covertly to all *wh*-elements, resulting in the same PL/SP ambiguity (cf. Stepanov 1998).<sup>15</sup>

## 5.2 Consequences for a wider typology

Let us look beyond East European MF languages. Pesetsky (2000) argues that English is what he terms a C-multi-spec language. Grossly simplifying here, that means that in multiple questions English C<sup>0</sup> requires multiple *wh*-movement to it, where ‘multiple’ stands for ‘minimally two’. Bulgarian is demonstrated to also strictly require (at least) two *wh*-phrases (overtly) in its specifier (cf. Pesetsky 2000), and English is taken to be like Bulgarian in its covert structure. I will adopt this analysis of English C<sup>0</sup> here. If English C<sup>0</sup> attracts both *wh*-elements in a double question, then on our account only a PL reading is generated—correctly, since English (ordinary) multiple *wh*-questions are known to be interpreted in-situ (Beck 1996). The in-situ *wh*-phrase is located in a strong island, unexpectedly, only a SP reading is obtainable (cf. first pointed out in Surányi 2002 for Hungarian, and in Dayal 2002 for English). In the present terms, this is accounted for, since the island-internal *wh*-element cannot be related to C<sup>0</sup> by movement (a prerequisite for PL), only by binding of a choice function variable. A similar observation, noted in Pesetsky (2000), is that certain quantificational interveners (cf. Beck 1996) have an identical effect on the interpretation of English multiple questions: only a SP reading is produced. This is analogous to the previous case: again, the in situ *wh*-phrase cannot use the movement strategy, hence instead of PL, SP is produced.

Further, it is well-known that one context where English can (apparently) violate Superiority is when a lower *wh*-phrase crosses over a structurally superior D-linked *wh*-in-situ, as in (34).

(34) Which girl did which boy invite?

Barss (1990, 2000) notes that in such sentences only an SP reading is available. Assuming, as I did above for Hungarian *wh*-in-situ, that the choice function variable (a determiner) checks [wh] off the *wh*-in-situ in English, it follows that no Superiority violation per se occurs here: given that [wh] on the *wh*-subject is not visible externally (being checked off internal to the *wh*-expression), it is the structurally highest *wh*-phrase bearing an unsaturated [wh] feature that is attracted. This would explain why an apparent Superiority violation can occur here. At the same time, this accounts for why only a SP reading is generated: this is because the in-situ *wh*-phrase in Superiority-violating cases does not undergo movement to CP, but is saturated via binding of a choice function variable—an approach essentially analogous to Barss’s (2000).

Evidence for this analysis of *wh*-in-situ in Superiority-violating cases comes from an observation made in Pesetsky (2000). Pesetsky observes that such in-situ *wh*-phrases—in contrast to ordinary English *wh*-in-situ, cf. (35a)—do not license Antecedent Contained Deletion (ACD), cf. (35b). Since ACD resolution requires (category) movement (May 1985, Larson and May 1990) (here of the containing *wh*-expression marked by underlining in (35)), ACD is not licensed in the *wh*-in-situ headed by *which boy* in (35b), given that such an in situ *wh*-phrase does not undergo covert movement at all: it must be interpreted via binding of a choice function variable for the apparent Superiority-violation to have taken place.<sup>16</sup>

(35) a. Which girl [<sub>VP</sub> invited [which student that John (also) did [<sub>VP</sub> *e* ] ] ]?

- b. \*I need to know which girl<sub>i</sub> Sue [<sub>VP</sub> ordered [which boy that Mary (also) did [<sub>VP</sub> e ]] to congratulate t<sub>i</sub> ]

German appears to be reducible to the English case, along the same lines, including the SP effect of quantificational intervention (Pesetsky 2000, p.c. to S. Beck). In contrast to English, however, apparently Superiority-violating German multiple questions still receive a PL reading. This can be explained if apparently Superiority-violating questions in German can be reduced to the case of regular multiple *wh*-interrogatives. Precisely this is what obtains if the Superiority violations are not real—which then is the reason why they are routinely possible in German in the relevant contexts. Assuming that the patterns at hand involve scrambling or some other re-ordering prior to *wh*-movement (cf. Fanselow 1991, 2001) suffices to make this reduction step: then Superiority is not in fact violated at all.<sup>17</sup>

French is similar to English and German when it overtly exhibits the English pattern of *wh*-phrases—hence it is prone to the same analysis. On the other hand, French binary questions, besides exhibiting the English pattern, are known to optionally have both *wh*-phrases in-situ. French in-situ *wh*-questions have been analyzed by Cheng and Rooryck (2000) as involving an intonational(ly realized) particle in the CP projection. If French C<sup>0</sup> has the [multiple] value in multiple questions, then having one particle in CP does not suffice: one of the in situ *wh*-phrases needs to move to CP too. As for a second in situ *wh*-phrase, similarly to the case of Serbo-Croatian simple clauses, it may be related to C<sup>0</sup> either via movement (resulting in PL) or via binding of a choice function variable (resulting in SP). Hence, if French C<sup>0</sup> is like English C<sup>0</sup>, then French binary in-situ questions are predicted to optionally receive either a PL or a SP reading. This appears once again to be a correct prediction.

I will conclude this brief typological outline with a pure in situ language: Japanese. Recall that Serbo-Croatian simple clauses and Russian/Polish have been taken to be masked in situ languages. Mutatis mutandis, the analysis I proposed for them should hold for a par excellence *wh*-in-situ language like Japanese as well: either multiple movement or binding of choice function variables may apply. Indeed, analogously to the masked in-situ languages, in Japanese, multiple questions may receive both a PL and a SP answer (Hagstrom 1998).

Interestingly, as Kitagawa, Roehrs and Tomioka (2003) show, if two *wh*-phrases are located inside a *wh*-island, or in the focus of a cleft (which may be taken to be an island itself too, Mamoru Saito, p.c.), then the PL reading is lost. Brody (1995), building on an important insight in Longobardi (1991), clearly demonstrates that the *wh*-phrase of single questions and the ‘primary’ *wh*-operator of multiple questions obey Subjacency (e.g. a *wh*-phrase embedded in *two* CED islands is ungrammatical). Then Kitagawa et al.’s finding is not unexpected: it can be assimilated to the facts cited from English above, i.e. the *wh*-island and the focus of clefts allows only the binding strategy, hence only SP.

Significantly, Kitagawa et al. note that an interpretive additional *wh*-effect arises when one *wh*-element is outside the *wh*-island, and the other is inside: in this scenario the PL reading (besides SP) becomes available again. Richards (1998) has analyzed such constructions (and ones discussed in Longobardi 1991 and Brody 1995) as a reflex of the Principle of Minimal Compliance: if the first (primary) *wh*-item obeys Subjacency (pays the ‘Subjacency tax’), then a further *wh*-element moving to the same projection (‘secondary’ *wh*-element, in Brody’s terms) is exempted from obeying it. In

the present context this means that the secondary *wh*-item in such constructions is free to be related to matrix  $C^0$  via movement, hence PL is correctly expected to be available again.

It has been argued in this section that the approach to the PL/SP distinction advocated on the basis of Hungarian in terms of presence versus absence of multiple movements is indeed justifiable from a typological perspective.

## 6. Conclusion

In this paper I hope to have substantiated four general points: (i) true multiple *wh*-movement exists, and is realized in Hungarian, (ii) focus structure plays a crucial role in determining answerhood conditions of multiple questions in Hungarian, (iii) multiple movement correlates with list interpretations in multiple *wh*-interrogatives, and (iv) binding choice function variables and covert movement are both necessary in the grammar of *wh*-in-situ.

## Notes

1. Bolinger (1978) calls the *wh*-phrase in a multiple question that contributes the sorting key (cf. Kuno 1982) the ‘topic’ of the multiple question. Note that in English-type languages, the sorting key can be provided either by the fronted or by the surface in situ *wh*-elements. See also Grohmann (2000, this volume), Boeckx and Grohmann (2004), and Wu (1996, 1999) for discussion of topicality of *wh*-phrases, and *wh*-topicalization in Chinese. Jaeger (2003) argues that topicality is a crucial factor responsible for the ordering of fronted *wh*-elements in Bulgarian.
2. Or one *wh*-cluster if in a given language *wh*-elements adjoin to each other to form a complex phrase, as in Rudin (1988), or more recently in the work of Grewendorf (2001) and Sabel (2001).
3. As suggested in Krifka (2001), even a *multiple* interrogative can only question *one* entity (though this one object can be internally complex).
4. Though (18a) may be also construed as an echo-question, it need not appear in an echo context. When used as an echo question, the *wh*-in-situ must have a rise-fall intonation with the fall on the last syllable. The in situ *wh*-phrase in (18a), however, can receive the normal intonation associated with English-type double questions in Hungarian: one with an initial rise on the first syllable of the *wh*-phrase followed by a continuous fall in the remainder of the *wh*-expression. Some speakers prefer (18a) with pitch compression from after the first *wh*-element up to the in-situ *wh*-phrase. Japanese also requires pitch compression up to an embedded *wh*-in-situ element when that takes matrix scope; see Deguchi and Kitagawa (2002) and Ishihara (2002).
5. In fact Hungarian also allows one *wh*-phrase to be fronted, and two (or more) *wh*-phrases to be left in situ (this contrasts Hungarian with Bulgarian, where such patterns are ungrammatical, cf. Pesetsky 2000).
6. A *wh*-island violation is illustrated in (i), and multiple long *wh*-movement is exemplified in (ii).

- (i) Kit kérdeztél, hogy mit mondott?  
 who-acc ask-past-2sg that what-acc say-past-3sg  
 ‘Who did you ask said what?’
- (ii) Ki kinek gondolod, hogy bajt okozhat?  
 who who-dat think-2sg that trouble-acc cause-pot-3sg  
 ‘Who do you think can cause problems for whom?’

Moreover, variants of (i) with a cluster of *wh*-elements either in the matrix or in the embedded clause (or in both) are also grammatical.

On the present analysis, Hungarian is a minimal pair of Bulgarian if Bošković's (1998, 2000) analysis of Bulgarian is correct. Bošković claims that in Bulgarian exactly one *wh*-phrase is fronted to check [wh] (and [foc]), and further *wh*-phrases check only [foc], while in Hungarian exactly the reverse is true.

7. (22) involves truly adverbial *wh*-in-situ, in contrast to quasi-argumental 'when'/'where', which are admissible as *wh*-in-situ in appropriate contexts, similarly to the situation in English.
 

Reinhart (1998) builds on Higginbotham (1985) in taking true adverbials to lack an index argument, for Reinhart, an N-set. By assuming true adverbials to lack D, as I do here, several of their properties other than inability to stay in situ in languages like English and Hungarian can be derived, once they are related syntactically to the absence of a D head and D projection: non-presuppositionality/non-topicalizability (D being responsible for referentiality), lack of Superiority violations (choice function variables are D heads), inability to escape weak islands (only DPs/topicalizable elements can escape weak islands), lack of adverbial resumptives (resumptive pronouns are determiners). See Rullmann and Beck (1998), who decompose D-linked *wh*-phrases into a definite determiner, a descriptive restriction and a *wh*-component; and also Boeckx and Grohmann (2004), who capitalize on Rullmann and Beck (1998) in deriving radical reconstruction effects regularly arising with D-linked *wh*-phrases—as well as a number of other properties shared by D-linked *wh*-phrases as scrambled elements—by assuming (sub)movement to extract material from below a (stranded) D head. See also Rizzi (2001) for a proposal that non-local, weak island escaping A'-chains must involve DPs, given that only DPs can form binding chains, entering a genuine referential dependency.
8. For example, in [DP  $f_{[wh]}$  [NP *who*<sub>[wh]</sub> ]], the N *who* checks against D, occupied by *f*.
9. Note that I am assuming that the in situ *wh*-phrase containing a choice function determiner can (covertly) raise to FocP. This is similar to what Hagstrom (1998) assumes for pure *wh*-in-situ languages like Japanese, with the difference that according to Hagstrom, there an existential quantifier over choice functions (coined Q) raises alone, stranding *wh*-in-situ phrases.
10. If such covert movements are instances of pure Agree (Chomsky 2000), then Agree with the relevant functional head (here: Foc) brings the second *wh*-element to a structurally adjacent position (in the sense relevant for Absorption) to the first one by establishing a syntactic relation with the same position. Nevertheless, there is evidence (e.g. from ACD contexts) that such secondary movements may involve not only Agree, but also category-movement (e.g. Pesetsky 2000). See Section 5.2 for related discussion.
11. As such, clauses with an English-type pattern can be arguments of verbs like 'list' or 'enumerate', cf. (i) below. This property is used to control for PL reading of multiple interrogatives in Surányi (2002) and in Kitagawa, Roehrs and Tomioka (2003).

- (i) Sorold fel, ki nézett rá kire  
 list-imp Pref who looked on who-on  
 'Please list who looked at who'

12. The cross-linguistic distribution of the availability of PL and SP readings is investigated in much recent work. Hagstrom (1998) suggests that a Q morpheme, interpreted as an existential quantifier over choice functions, is moved in *wh*-in-situ languages to the C-domain (see also Note 9). Depending on whether Q is generated low on a low *wh*-element, or high, i.e. above all *wh*-elements, we get a PL or an SP reading, respectively. Bošković (2001) extends this analysis to languages with overt *wh*-movement. He assumes that *wh*-elements and the Q morpheme are members of the same class for Relativized Minimality. As a consequence, in singular *wh*-fronting languages like English, the independently required movement of a *wh*-phrase across a high Q-morpheme is ruled out, which in turn derives the unavailability of a SP reading in the basic case. Grohmann (2000) adapts the Hagstrom–Bošković account to his domain-driven

framework. Barss (2000), assuming as I do here that Absorption is responsible for PL readings, derives the loss of PL interpretation in Superiority-violating cases in English (and several other interpretive effects of Superiority violations) by proposing that the superior *wh*-phrase that is crossed over does not move at all, but is interpreted via choice function variable binding. See Pesetsky (2000) for an alternative analysis of Superiority violations, and their interpretation. Dayal (2002) shows for English what Surányi (2002) shows independently for Hungarian: the PL reading is lost if the *wh*-in-situ in the English-type multiple *wh*-interrogative is within an island. For reasons of space, I will not attempt to evaluate/compare these accounts to the present one, I only note that my approach is consonant with Dayal's and Barss's treatment of English in assuming that multiple movement is necessary for a PL reading to obtain.

13. Structural adjacency in present terms means specifiers of the same feature (i.e. [wh]).
14. Reinhart (1998) takes binding of choice function variables to be the sole mechanism for in situ *wh*-interpretation. Pesetsky (1987) also assumes (unselective) binding to be the *only* mechanism available for D-linked *wh*-in-situ. It is not clear however why such an apparently stipulative restriction should hold. The descriptive coverage in Pesetsky's and Reinhart's papers is in fact left undiminished if this stipulation is dropped.
15. Czech, as reported in Meyer (2002), is a real odd one out among the East European MF languages reviewed so far: MF in Czech receives only a SP reading. Meyer argues that Czech MF is different from Polish/Russian in one crucial regard: the cluster of fronted *wh*-elements form a constituent (cf. Rudin 1988), which cluster-formation can arguably happen prior to the last movement step which takes the cluster to CP (cf. Grewendorf 2001, Sabel 2001). This may well be the reason for the unavailability of a PL interpretation if the absorbed *wh*-interpretation requires *distinct wh*-elements in the specifier of a head bearing a [wh]-feature. This is because the cluster creates an island already below  $C^0$  for movements of the individual *wh*-elements that would take them to [Spec,C] (which would be excorporation).
16. In a minimalist approach that incorporates both covert category movement and covert feature movement (or pure Agree) (as Pesetsky's), the obvious alternative to the account of the contrast in (35) that I have provided is to claim that the in situ *wh*-element undergoes pure feature movement, which does not suffice to license ACD. This is the explanation given in Pesetsky (2000).
17. Sabel (1998) credits Grohmann (1997) with a pre-*wh*-A-movement solution for German Superiority violations. Grohmann (2000) sharply differs in his account of German multiple *wh*-interrogatives from the present one: he proposes that German fronts all its *wh*-elements to the CP-domain, thereby assimilating German to the Bulgarian case.

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