

THE *WH*-CRITERION IN HUNGARIAN

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Abstract

The aim of this paper is to show how the *wh*-criterion, a well-formedness condition on the movement of *wh*-phrases (Rizzi 1991) applies to Hungarian, a so-called non-configurational language. The application of the *wh*-criterion to Hungarian at S-Structure will be shown to account for the restrictions on the movement of *wh*-phrases in this language. We will see that the *wh*-criterion is compatible with Hungarian data provided that we adopt a structure including a specifier position distinct from spec CP which can host the *wh*-phrase. The criterion will thus also show, as a side-effect, that, given the correct analysis, there is some configurational structure in Hungarian.

The paper is organised as follows: sections 1.1 and 1.2 give a short account of *wh*-movement cross-linguistically and section 1.3 discusses the *wh*-criterion. Section 2 gives a description of Hungarian and the general properties of word-order in this language. Section 3 studies various analyses of Hungarian structure. Those proposed by Horváth (3.1), Kiss (3.2) and Brody (3.3) will be shown to be incompatible with the *wh*-criterion, as far as the position of the *wh*-phrases is concerned; section 3.4 gives an alternative approach, in which I propose a structure compatible both with the *wh*-criterion and the movement of *wh*-phrases. This approach argues for a V-to-I-to-F movement, where F is the head of a functional category FP and carries the feature +focus. It will also be shown that *wh*-phrases move to the specifier of FP. Section 4 discusses in detail the application of the *wh*-criterion in Hungarian, both in simple questions (4.1) and in multiple questions (4.2), as well as the cases of extraction (4.3). Section 5 raises the problem of *yes-no* questions. Finally section 6 gives further evidence for a structure as proposed in 3.4, i.e. resulting from a V-to-I-to-F move-

ment, as well as for the position of *wh*-phrases, namely through the study of constructions involving subcategorised complements and adverbials (6.1) and of negation (6.2).

1. *Wh-movement*

In current work based on Chomsky (1986), *wh*-movement is widely accepted as a process of substitution. Substitution allows the movement of a maximal projection to a specifier position. Various arguments lead to the selecting of spec CP as the landing site of *wh*-phrases. Following May (1985), it is generally accepted that *wh*-phrases move at LF to a scope position higher than IP. In the light of *wh*-movement as substitution, this position cannot be a position adjoined to IP itself. The specifier of CP, on the other hand, is an available position. Besides, in some languages, like West Flemish, movement of *wh*-phrases results in a sequence WH - COMP - NP..., where the *wh*-phrase appears to the left of the complementizer, that is, in spec Cp¹. Thus, the specifier of CP appears to be the landing-site of *wh*-movement.

1.1. *Wh-movement in English and Chinese*

Wh-movement applies at S-structure in English:

- (1) a. What did John see?
b. *John saw what?

In (1a), *did* sits in C° and *what* occupies the specifier position. (1b) is ruled out because the *wh*-phrase has not moved.

Chinese, on the other hand, does not have overt *wh*-movement:

- (2) a. ni xihuan shei?
 you like who
 "*who do you like?*"
 [Huang 1981:370]
- b. [Zhangsan zhidao [shei mai-le shu]]
 Zhangsan know who bought books
 a. "*who does Z. know bought books?*"
 b. "*Z. knows who bought books*"
 [Huang 1981:371]

In (2a), the *wh*-phrase *shei* appears in-situ, and the interpretation is that of a *wh*-question. The glosses of (2b) show that the sentence is ambiguous. This ambiguity comes from the different scopes of the *wh*-phrase: it may either take scope over the whole sentence (a) or only over the embedded one (b). So, although (2b) shows no overt movement of the *wh*-phrase, the two possible interpretations result from the movement of the *wh*-phrase at LF. Huang (1981) also shows that Chinese displays *wh*-island effects. He argues that languages do not differ in whether they have or do not have move-WH, but that they differ in the level at which the rule applies. Thus, *wh*-movement applies at LF in Chinese whereas in English, it applies as early as S-Structure. So the general assumption stated in Chomsky (1986) is that movement may apply at any level and that "certain operators including *wh*-phrases (...) must be in the specifier position of CP at LF" (p. 88).

1.2. Wh-movement in Hungarian

In Hungarian, the movement of *wh*-phrases applies at S-Structure. However, embedded *wh*-questions do not seem to involve spec CP. Consider the example in (3):

- (3) Kérdeztem hogy mit látott János
Ask-3sg-PAS that what-ACC see-3sg-PAS John-NOM
I asked what John saw

The *wh*-phrase *mit* occurs to the right of the obligatory complementizer *hogy*. It occupies the position on the immediate left of the verb. This position is the structural focus position, i.e. the position to which focus is obligatorily assigned if it is lexically filled.

In this paper, I would like to show that in Hungarian, *wh*-phrases move to a position distinct from the specifier position of CP. Using Rizzi's *wh*-criterion (Rizzi 1990b & 1991) and assuming that it holds universally, I will pose the following questions:

- how can the *wh*-criterion be compatible with the movement of *wh*-phrases to the structural focus position in Hungarian?
- at what level does it apply?

We shall see that Rizzi's *wh*-criterion applies to Hungarian provided we assume that there is a functional head distinct from C° whose specifier can host the *wh*-phrase. I will argue that this head is F° whose projection FP is the complement of C° . F° carries the feature +focus and the verb moves to it in order to get focus. Thus, I will argue

that the structure of the embedded question in (3) is as in (4), and that the movement of *wh*-phrases to spec FP satisfies both the well-formedness criterion and the requirement that in Hungarian, *wh*-phrases be stressed.

(4) [CP [C' hogy [FP mit [F' látott János...]]

1.3. The *wh*-criterion

Rizzi (1990b & 1991), based on May (1985), proposes a unified account of the movement of *wh*-phrases. The occurrence and the position of *wh*-elements at LF is determined by the *wh*-criterion:

- (5) a. Each *wh*-operator must be in a Spec-Head relation with a +*wh* X°
b. Each +*wh* X° must be in a Spec-Head relation with a *wh*-operator

This well-formedness condition, which holds universally at LF, expresses the fact that any *wh*-phrase that is an operator must be in the required configuration with a head carrying the feature +*wh*, and that a head which carries this feature requires a *wh*-operator in the given configuration. Although the criterion holds universally at LF, it is subject to parametric variation. The contrast between English and Chinese (1a and 2a above) is accounted for by the fact that the *wh*-criterion applies already at S-Structure in English, whereas in Chinese its application is delayed until LF.

The licensing of the *wh*-feature follows two distinct mechanisms. In subordinate clauses, it is obtained by the "classical" device of selection: some verbs, like "wonder", select a +*wh* C°, triggering the movement of the *wh*-phrase to spec CP (examples from Rizzi 1990b)

- (6) a. I wonder [who C° John saw t]
 +*wh*
b. *I wonder [C° John saw who]
 +*wh*

In the grammatical (6a), *who* moves to spec CP; (6b) is ruled out by clause (5b): since C° is marked +*wh*, the *wh*-phrase must move to the specifier position.

For main clauses, Rizzi suggests that the main inflection, which already contains other independently licensed specifications, also contains the feature +*wh* "whose interpretation is 'the carrier of this feature designates as question'" (Rizzi 1990b:378).

In a pair like:

- (7) a. *who Mary saw t
 b. who did Mary see
 +wh

(7a) is ruled out because clause b of the criterion is violated at S-Structure: the +wh I° is not in the required configuration with the *wh*-operator. In (7b), it has moved to C°, (as attested by the presence of *do* + inflection preceding the subject), fulfilling clause b of the criterion.

Rizzi gives the following functional definition of *wh*-operator, holding at S-Structure:

- (8) *wh*-operator = a *wh*-phrase in an A' position

This definition solves the problems raised by examples as in (9) below (examples Rizzi (1991)):

- (9) a. *You gave what to whom?
 b. What did you give t to whom?

As seen in (1b) above, *wh* in-situ is impossible in simple questions in English². However, it is possible in multiple questions, provided that one of the *wh*-phrases moves to spec CP, as in (9b). In this example, *to whom* receives its theta-role from the verb, it is an argument. The second internal theta-role is assigned to the trace of *what*, since it is generally accepted that variables are arguments. As *what* cannot also receive a theta-role, it is a non-argument. So in (9b), *to whom*, being in an A position does not qualify as a *wh*-operator and hence does not violate clause a of the *wh*-criterion; *what*, sitting in an A' position, fulfills the clause as a *wh*-operator. However, the definition in (8) needs refining. Rizzi observes that certain adverbials in French, for example, can be left in-situ:

- (10) il a parlé comment?
 he has spoken how

In (10), *comment* occupies an A' position. This apparently violates the *wh*-criterion since *wh*-operators (i.e. in an A' position) should be in a spec-head relation with a +wh head. Therefore, to account for examples like (10), Rizzi reformulates the definition as (Rizzi 1991 (11)):

(11) *wh*-operator = a *wh*-phrase in a scope position

where a scope position is "a left-peripheral A' position (either a spec or an adjoined position). This excludes right-peripheral positions and the base-generated position of VP adverbials" (p. 11). Clearly, this definition accounts for the grammaticality of (10) where *comment*, although sitting in an A' position as adjunct, does not qualify as a *wh*-operator. For a more detailed account, the reader is referred to Rizzi (1991).

2. *Properties of Word-order in Hungarian*

Hungarian has for some time been considered as a non-configurational language as it shows a certain freedom in its word-order, at least with respect to some categories of constituents.

2.1. *A "Free" word-order language*

Data about simple Hungarian sentences show a wide range of possibilities in the ordering of the constituents. The examples under (12) (from Kiss 1987a) show that the two NPs, subject and object, can appear on either side of the verb and in different orders. All the sentences are grammatical, their interpretations differ slightly with respect to what counts as "topic"³.

- (12) a. János Mária-t szereti
John-NOM Mary-ACC love-3Sgn-PRES
John loves Mary
b. Mária-t János szereti
c. János szereti Mária-t
d. Mária-t szereti János
e. szereti János Mária-t
f. szereti Mária-t János

I will come back to the various interpretations of these sentences in section 2.3. In Hungarian, subordinate clauses are introduced by the complementizer *hogy*⁴. They show the same set of possibilities:

- (13) a. Hallottam hogy Reka Pétert irigyli
hear-1 Sgn-PAS that Reka-NOM Peter-ACC envy-3Sgn-PRES
I heard that Reka envies Peter

- b. Hallottam hogy Pétert Réka irigyli
- c. Hallottam hogy Réka irigyli Pétert
- d. Hallottam hogy Pétert irigyli Réka
- e. Hallottam hogy irigyli Réka Pétert
- f. Hallottam hogy irigyli Pétert Réka

2.2. *Wh-questions*

Whereas in declarative sentences word-order is extremely free in Hungarian, *wh*-questions do not display the same range of variations, as shown by the examples in (14) and (15). Here again, in main clauses and subordinate clauses, the restrictions on the position of the *wh*-phrase are the same:

- (14) a. mit látott János
what-ACC see-3Sgn-PAS John-NOM
what did John see?
- b. János mit látott
- c. *mit János látott
- d. *János látott mit
- (15) a. nem tudom hogy mit látott János
NEG know-1Sgn-PRES that what-Acc see-3Sgn-PAS John-NOM
I don't know what John saw
- b. nem tudom hogy János mit látott
- c. *nem tudom hogy mit János látott
- d. *nem tudom hogy János látott mit

The *wh*-phrase *mit* cannot stay in-situ, as shown in (14d) and (15d). It has to move obligatorily to a position in front of the verb, and immediately to the left of it (14a,b) and (15a,b). No other phrase can be inserted between the *wh*-phrase and the verb, as shown in (14c) and (15c). The subject NP *János* can appear either after the verb, as in (14a) and (15a), in a position it can also occupy in declarative sentences (12d), or in a fronted position, in front of the *wh*-phrase (14b) and (15b). So the *wh*-phrase does not have to move to the beginning of the sentence, as opposed to other languages which do not have *wh* in-situ.

The examples in (14) and (15) above show that, contrary to other phrases, *wh*-phrases have a very restricted possibility of movement: they can only appear on the

immediate left of the verb, a position which is identified as the structural focus position and is described in section 2.3 below.

2.3. *Focus and Topic*

The different analyses of Hungarian structure in the literature agree on the existence of a specific position - let's call it FOCUS, following Horvàth, Kiss⁵ and others - which is assigned focus, or primary stress. The constituents which surface in this position immediately precede the verb and must receive primary stress. The FOCUS position will be signalled with a ' when relevant (examples from Kiss 1987a):

- (16) a. János 'Màriàt szereti
John-NOM Mary-ACC love-3Sgn-PRES
As for John, it is Mary that he loves
b. 'Màriàt szereti János
It is Mary that John loves

The FOCUS position can be preceded by one or several positions called TOPIC⁶, usually glossed "as for...". In (16a), *János* occupies this unstressed TOPIC position, of which the interpretation would correspond approximately to "we have already said something about John" or "we know who John is". (16b) has no TOPIC position and the FOCUS is filled with *Màriàt*.

When no lexical element appears in the FOCUS position, the verb itself carries the stress. But in this case, the accent is felt to be less prominent than when it is carried by another lexical element in the FOCUS position (see Kiss 1981):

- (17) a. János Màriàt 'szereti
As for John, he does love Mary
b. 'szereti János Màriàt
John loves Mary

In (17a) both *János* and *Màriàt* are TOPIC and, the FOCUS position being empty, the stress is realized on the verb. In (17b), there is no TOPIC position, the FOCUS is empty and again, the verb carries the stress. Here, the two NPs *János* and *Màriàt* are in an unstressed, "neutral" position.

As we saw in section 2.2 above, the *wh*-phrase appears always in the FOCUS position to the left of the verb. It carries the stress. It cannot appear anywhere else:

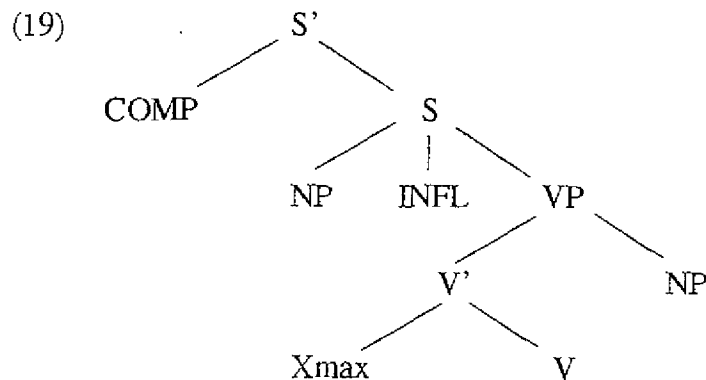
- (18) a. 'mit látott János
 what-ACC see-3Sgn-PAS John-NOM
what did John see?
 b. *mit 'János látott

3. The Structure of the Hungarian Sentence

The analyses of Hungarian word order formulated in the generative framework all refer to the notions of TOPIC and FOCUS. Using Rizzi's *wh*-criterion, I will look at three of the most prominent ones (sections 3.1, 3.2 and 3.3), and will then propose a new approach (3.4) which takes into account both the *wh*-criterion and the focus requirement of *wh*-phrases.

3.1. The configurational analysis (Horváth 1986)

Horváth assigns a configurational structure of the type (19) below to the Hungarian sentence:



Her analysis assumes that the verb and its "immediate" complement in the FOCUS position form a constituent of the type V', which sub-categorises for and theta-marks complements within what can form a VP. On the basis of tests similar to VP-deletion, Horváth argues for a strictly configurational structure including a full VP-constituent⁷.

In Hungarian, most categories of phrases can optionally appear to the left of the verb, in the position identified as FOCUS. However, for some elements, the unmar-

ked order is the one in which they occupy this position; these elements include, among other, verb particles, some subcategorised complements and adverbs:

- (20) a. **el**aludt a gyerek
PART-sleep-3s-PAS the child-NOM
the child fell asleep
b. *aludt el a gyerek
c. 'késön aludt el a gyerek
It was late when the child fell asleep
- (21) a. János **hozzà** fordult
John-NOM towards him turn-3S-PAS
John turned towards him
b. *János fordult hozzà
c. 'János fordult hozzà
It is John who turned towards him
- (22) a. **lassan** olvas ez a gyerek
slowly read-3S-PRES this the child-NOM
this child reads slowly
b. *olvas lassan a gyerek
c. 'szándékosan olvas lassan ez a gyerek
It is on purpose that this child reads slowly

In (20a), the FOCUS position is occupied by the particle *el*, in (21a) by the subcategorized prepositional form *hozzà* ('towards him') and in (22a) by the adverb *lassan* ("slowly"). (20,21,22b), with the complements in post-verbal position, are ungrammatical, as the FOCUS position is empty. In (20,21,22c), FOCUS is occupied by another constituent, which needs focus for pragmatic reasons. In this case, the subcategorised elements can appear post-verbally.

Horvath argues that the verb and the type of complement exemplified in (20-22) form a constituent V' in which what she calls the pre-V complement is base-generated as left sister to the verb. Her major arguments in favour of a V' node excluding the other VP complements rest on the distribution of some VP adverbs and on the formation of *yes-no* questions. Adverbs like *gyorsan* ("quickly"), *hirtelen* ("suddenly") can appear at any major constituent break. However, they cannot appear between the pre-V complement and the verb (examples Horvath 1986:61-62 (72a,73)):

- (23) a. Kati elpirult, és a hátá mögé dugta **gyorsan** a kezeit
Cathy blushed and the back-her behind hid quickly the hands-her-acc
Cathy blushed and quickly put her hands behind her back.
b. *Kati elpirult, és a hátá mögé **gyorsan** dugta a kezeit
Cathy blushed and the back-her behind quickly hid the hands-her-acc

Here, the phrase *a hátá mögé* ("behind her back") occupies the pre-V node as subcategorised complement, and no adverb can separate it from the verb.

Hungarian has an (optional) fronting rule for *yes-no* questions:

- (24) Szereti János Máriát?
love-3-Sgn-PRES John-NOM Mary-ACC
Does John love Mary?

However, verbs with pre-V complements cannot be fronted without their complement (examples Horváth 1986:64 (76)):

- (25) a. Az asztalra tette Mari az edényeket?
the table-onto put Mary the dishes-acc
did Mary put the dishes on the table?
b. *Tette Mari az asztalra az edényeket?
put Mary the table-onto the dishes-acc

In (25a), the pre-V complement *az asztalra* is fronted along with the verb. In (25b), only the verb *tette* moves to the front, giving an ungrammatical result. Horváth argues that the rule of V-preposing in *yes-no* questions applies to the V' constituent rather than to the verb itself.

According to Horváth, the data above prove that there is a real constituent formed by the verb and its pre-V complement. She identifies the pre-V position as the one occupied by *wh*-phrases as well, since there is a "systematic strict complementary distribution between base-generated pre-V complements and preposed interrogative *wh*-phrases in pre-verbal position" (Horváth 1986:67). She suggests a movement rule which preposes the *wh*-phrase into the pre-V position, substituting it for the base-generated pre-V complement which is itself postposed to some position after the verb

- (26) a. Nem tudtuk hogy Mari mit tett az asztalra
not knew-1pl. that Mary what-acc put the table-onto
We didn't know what Mary put on the table

- b. *Nem tudtuk hogy Mari mit az asztalra tett
 not knew-1pl. that Mary what-acc the table-onto put
 [Horvath 1986:67(82)]

In (26a), *mit* precedes the verb and the pre-V complement appears after the verb. In (26b), both *mit* and *az asztalra* compete for the same position, namely the pre-verbal one, and this leads to an ungrammatical result.

"FOCUS-ed" phrases in Hungarian must also appear in the pre-V node. Focus assignment is subject to the FOCUS-parameter: focus can either be freely assigned to categories (like in English) or is "a syntactic feature inherent to the lexical category V" (Horvath 1986: 132). In this case, the case of Hungarian, claims Horvath, focus is an entity similar to case and can only be assigned by V. The assignment is subject to a Locality Condition on Feature Assignment which requires both government and adjacency⁸.

The problems that arise from this type of analysis are multiple. However, I will mention those which are the most relevant to the discussion of *wh*-movement.

a. Subject position

Horvath claims that Hungarian is an SVO language and that the subject is strictly preverbal in an unmarked interpretation. In (26a), for example, the subject-NP *Mari* occupies its D-Structure position to the left of the *wh*-phrase. However, questions of the type (27) below should clearly be interpreted with a subject in TOPIC. Compare with (28):

- (27) a gyerek mit evett?
 the child-NOM what-ACC eat-3Sgn-PAS
 as for the child, what did he eat?
- (28) *mindenki mit evett?
 everybody-NOM what-ACC eat-3Sgn-PAS

The substitution of a quantifier (*mindenki*) for the NP *a gyerek* gives an ungrammatical result. This suggests that *a gyerek* is in an A' position, the TOPIC position described in section 2.3. Note that some speakers find it difficult to accept a bare subject NP in the TOPIC position without a specific context:

- (29) (?) János mit evett?

The data above suggests, contrary to Horv ath, that the pre-V position is not the D-Structure position of the subject.

b. *Wh*-phrase substitution rule

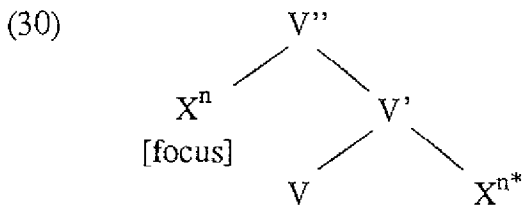
Horv ath's *wh*-phrase movement rule of substitution poses the problem of the nature of the pre-V node. If, as Horv ath claims, pre-V complements subcategorised for by the verb are base-generated in this position, one has to assume it is an A-position. However, movement of *wh*-phrases into the same position would rather identify it as an A'-position. Besides, the substitution of a *wh*-phrase into the pre-V node implies a lowering of the subcategorised constituents which can be problematic for the ECP: it is not quite clear how the trace of these constituents can be properly governed.

c. V'

Since we are looking for a structure that could be compatible with the *wh*-criterion, Horv ath's proposal as such does not seem to fit. The position of the pre-V node, as left sister to V, i.e. complement of the verb, cannot satisfy the spec-head relation required by the criterion.

3.2. The semi-configurational approach (Kiss 1981 and 1987a)

Kiss (1987a) analyzes the Hungarian sentence as a bipartite structure with a flat, non-configurational propositional component dominated by a configurational left peripheral structure. In Kiss (1987b), she proposes a re-actualized version of her structure (which she also adopts in Kiss 1990), where the F position is assigned to the specifier of V'':



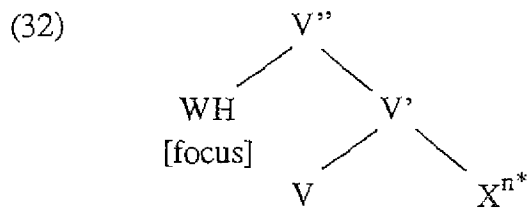
Kiss' flat V' is motivated by the absence, at some level at least, of subject-object asymmetries; coreference restrictions of subjects and objects are compatible with Binding Theory only if the nominative and accusative NPs are sisters (examples Kiss 1987b (56)):

- (31) a. *János_i anyja szereti őt/pro_j
John's mother loves him
 b. *Ő/pro_i szereti János_i anyját
 he loves John's mother-acc
he loves John's mother

The variable coindexed with the subject in TOPIC position (*jános anyja* in (31a) and *ő* in (31b)) is a sister to the object-NP inside the VP. Thus, in both cases, the lexical NP *János* is c-commanded by the pronominal and their co-reference is excluded by Binding Principle C.

Kiss also observes (Kiss 1987a:164-165) the lack of asymmetry between subject and non-subject question words in long *wh*-movement, long relativization and other long movements⁹.

As for the movement of *wh*-phrases, Kiss argues that it is triggered by a rule of scope interpretation which applies at S-Structure and requires that "each operator c-commands and precedes its scope" (Kiss 1987a:55). So *wh*-phrases move to an operator position at S-Structure. However, the principle does not specify the landing site of the operators. *Wh*-phrases have to receive focus, since there is a (universal?) requirement that "interrogative *wh*-phrases be associated with the semantic attributes of focus function" (Kiss 1987a:61). The slot F being the one to which the verb assigns focus (see also Horvath 1986), it is the only possible landing site for *wh*-words:



For multiple questions, Kiss proposes Chomsky-adjoined positions. All *wh*-phrases receive stress, as, for Kiss, the leftmost major category dominated by V'' receives primary stress. In her revised version (30), the F position is the specifier of V''. The *wh*-phrase moves into this position and gets the feature focus.

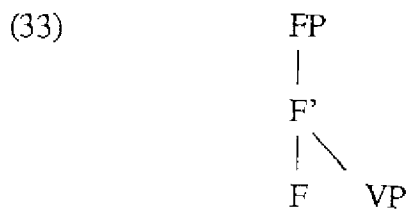
At this stage, the structure proposed by Kiss would be compatible with the *wh*-criterion. The *wh*-phrase, moved to the spec V'', displays the spec-head configuration

with a head at S-Structure. However, there is a major objection to the application of this criterion as adopted here, namely the status of inflection. One of Kiss' claims is that there is probably no INFL node as such in Hungarian: her arguments are based on the observation that there is no independent auxiliary and that the inflectional morphology is carried by the verb. Aside from the fact that the very presence of inflectional morphemes should be considered as attesting the presence of an IP node, this analysis raises two problems:

- a. in the light of the *wh*-criterion, V would be the head marked +*wh*. This does not seem plausible, as in other languages such features are carried by functional heads.
- b. negation in Hungarian shows that a projection NEGP higher than VP has to be postulated (see section 6.2). So there is at least one functional projection which dominates VP.

3.3. The FP approach

Brody (1990) gives a structure containing a functional head F° which takes as a complement the VP. The maximal projection FP headed by F° is only present in sentences containing a focussed element. Thus, the structure of a focussed sentence is as in (33):



Brody argues that a category which appears in spec FP must have a feature +*f*. The feature +*f* is assigned under government by the verb under F. The verb, which carries the feature +*f*, moves to F° in order to satisfy the condition expressed in (34) below (Brody 1990 (16a)):

- (34) At S-structure and LF the spec of an FP must contain a +*f*-phrase.

The condition in (34) guarantees that all focussed sentences contain a stressed element which precedes the verb¹⁰.

In Brody's analysis, *wh*-phrases move to spec FP to get the feature +f assigned to the position. He suggests that in embedded questions, the main verb selects a +*wh* FP which, as a +*wh* CP in English, must be filled by a *wh*-phrase at S-structure.

Brody's analysis raises several questions, among which two can be directly linked to the *wh*-criterion:

a. the motivation for the movement of *wh*-phrases is focus assignment. However, this does not seem to exclude sentences like:

- (35) *'János szeret kit?
John-NOM love-3S-PRES who-ACC
who does John love?

In (35) the requirement that the spec of FP be filled is met. Since Brody shows that focus can be assigned freely in other parts of the sentence, *kit* could receive this "free" focus. So this analysis does not exclude the ungrammatical (35).

b. The selection of a +*wh* FP can be problematic. Since embedded sentences always come with an overt complementizer, the main verb selects a CP. It is not quite obvious how the selection "skips" a head it does "*wh*-mark" in other languages and chooses a lower head, selecting a -CP + FP clause.

The problem of an IP-less clause is identical to the one discussed above (see section 3.2).

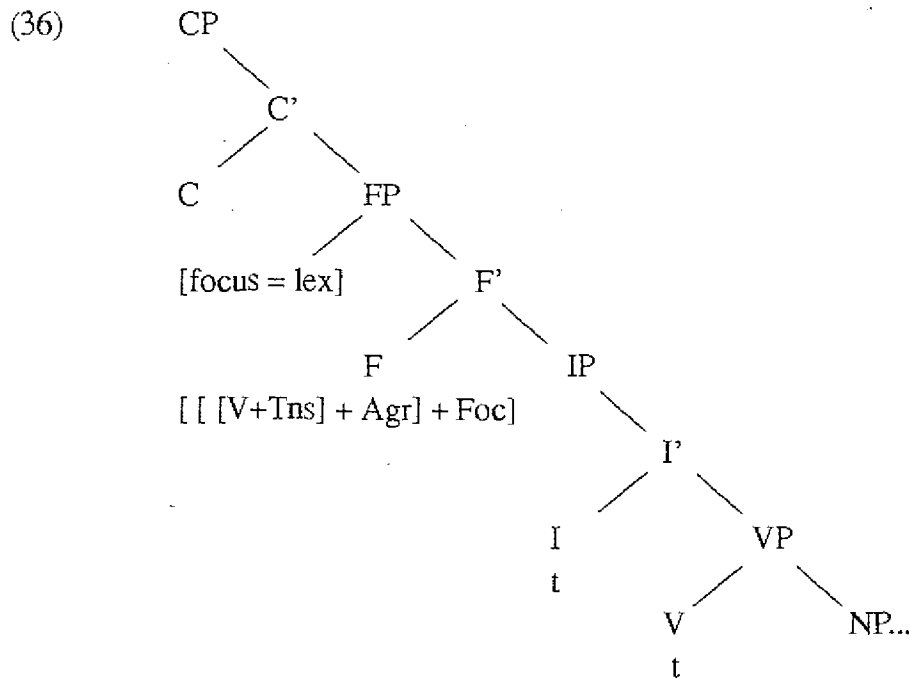
3.4. *V-to-I-to-F movement*

None of the above analyses accounts totally for the two conditions on *wh*-questions in Hungarian, namely the satisfaction of the *wh*-criterion and the assignment of focus to the *wh*-phrase. In this section, I propose another approach (3.4.1) which seems to meet both conditions (3.4.2).

3.4.1. *Functional heads and V-movement*

Choe (1989) analyzes non-configurational languages on two levels, a configurational D-Structure generated by PS-Rules and a flat one obtained by restructuring rules applied on the first level¹¹. On the basis of her analysis, and in parallel with Brody

(1990), I would like to suggest a structure containing a C° taking as a complement an FP headed by a functional head F° which in turn take an IP as a complement¹². The surface structure of a Hungarian sentence is then as in (36) below (the question of the VP is provisionally left aside, but see note 12):

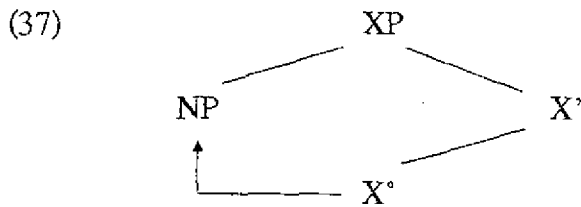


In (36), the verb moves first to I°, where it gets tense and agreement, realized as morphemes on the verb. It then raises to F°, where it receives the feature +focus. It is now able to assign +focus to spec FP if the latter is filled with lexical material. The feature +focus will be realised as a primary stress at PF.

The crucial point is to determine what triggers the movement to F°. Movement of V-to-I is motivated by the features tense and agreement present on the head (or heads¹³). In order to get tense and agreement, in languages in which these features are realized morphologically (i.e. have a "rich" inflexion), the verb moves up to I and acquires the features and whatever morphemes realize them.

In the same way, I would like to propose that Hungarian has a feature +focus on a functional head F°. This functional head is a necessary component of the structure in a language in which the realization of a primary stress is linked to a given position and

yields a restricted interpretation. I leave the question of the nature of this functional head open (see also Rizzi 1990b and note 12). At S-Structure, the feature +focus attaches to the verb: recall that when no lexical element fills the FOCUS position described above (section 3), the verb itself receives stress. So in order to get this feature, the verb raises to I°, where it gets tense and agreement, and then up to F°. It appears under F° as [[[V+TNS] + AGR] + FOC]¹⁴. If some lexical element fills the specifier position, the verb assigns +focus to it. I would like to suggest that the process is similar to that of case assignment under agreement, as described by Sportiche (1988) and Roberts (1990), that is in a strict configuration of the type:



Given this configurational restriction on focus assignment, no other position can receive the feature +focus.

The feature +focus is not realized morphologically in Hungarian¹⁵: at PF, it is realized as a primary stress, on the lexical element to which it was assigned. This means that the verb transmits its feature to the XP which satisfies the required assignment configuration described above. In case, and just in case there is no XP in spec FP, the feature cannot be assigned and is retained by the verb and realized on it as a stress at PF.

3.4.2. The *wh*-criterion

Assuming the structure in (36), we can come back to the *wh*-criterion. *Wh*-phrases can only land in spec FP since they have to be focused (see section 2). The required spec-head configuration can be realized only if the head marked +*wh* is F. How does F get the feature +*wh*?

Let us consider subordinate clauses first:

- (38) a. Kérdeztem [_{CP} hogy mit adott Peter a gyerekek]
 ask-1Sgn-PAS that what-ACC give-3Sgn-PAS Peter-NOM the child-DAT

I asked what Peter gave to the child

- b. Kérdeztem [_{CP} hogy Peter mit adott a gyerekeknek]
ask-1Sgn-PAS that Peter-NOM what-ACC give-3Sgn-PAS the child-DAT

In subordinate clauses, the matrix verb selects a +wh C°. But the data in (38) confirm that *wh*-phrases do not move to spec CP: they appear to the right of the obligatory complementizer *hogy* (38a) and topicalized constituents like *Peter* can appear between *hogy* and the *wh*-phrase (38b). So we conclude that spec CP is distinct from the landing-site spec FP.

Compare with the West Flemish examples below (from Haegeman (forthcoming):

- (39) a. k vinden **dan** (plur) die boeken te diere zyn
I find that those books too expensive are
'I think that those books are too expensive'
b. *k vinden **da** (sgn) die boeken te diere zyn

West Flemish shows a case of "head-to-head" agreement between C and I°. There is a process of agreement (co-indexing) between C-NP-I, which then allows to assign nominative case to the NP. The features under I are passed on to C.

In Hungarian, the feature +wh has to be present on F°, the head to which the verb moves. By a process of co-indexing, similar to West Flemish C-I agreement, the feature +wh is passed on to F°, the first head under C. I suggest that the motivation for the "head-to-head" agreement, i.e. the transmission of the feature +wh from C° to F° is precisely the satisfaction of the *wh*-criterion.

The licensing of the feature +wh in main clauses may be analyzed in two ways. Either the feature +wh is carried by I°, and then taken up by the verb along with morphological features of tense and agreement; or it is carried by F°, and attaches to the verb when the latter raises to it. It is difficult to take a decision on S-Structure evidence: whatever visible item appears under I° is always realized on the verb which surfaces under F°. In fact, I would like to propose that F° carries +wh in main clauses. In some languages, I° is described as a "rich" functional head, which contains enough material to trigger movement to it. It is this "rich" head which also carries the feature +wh. Hungarian, a language with a structural focus, has a "rich" functional head F° which contains, among others, the feature +focus. It is "rich" enough to trigger movement of the verb to it. So the same head can also carry the feature +wh, parallel to the functions of I° in other languages¹⁶.

4. *Wh-questions in Hungarian*

Adopting the structure proposed above (section 3.4), I shall now describe the movement of *wh*-phrases in Hungarian in more detail and attempt to answer the questions stated in section 1.2. In sections 4.1 and 4.2, I show that the *wh*-criterion works as a diagnostic of a configurational structure in Hungarian. Section 4.3 explores the level of application of the *wh*-criterion's principles.

4.1. *Simple wh-questions*

The data in (14) and (15) is repeated here for convenience:

- (14) a. mit látott János
 what-ACC see-3Sgn-PAS John-NOM
 what did John see?
 b. János mit látott
 c. *mit János látott
 d. *János látott mit
- (15) a. nem tudom hogy mit látott János
 not know-1Sgn-PRES that what-ACC see-3Sgn-PAS John-NOM
 I don't know what John saw
 b. nem tudom hogy János mit látott
 c. *nem tudom hogy mit János látott
 d. *nem tudom hogy János látott mit

In Hungarian, *wh* in-situ is ungrammatical. *Wh*-phrases have to move out of their basic position. The data shows that the landing site of *wh*-movement is the position immediately to the left of the verb. In terms of the structure in (36) and following the requirements of the *wh*-criterion, I have concluded that this position is spec FP. The prediction that the *wh*-phrase, and only the *wh*-phrase, gets focus is verified (see section 2, ex (18) above).

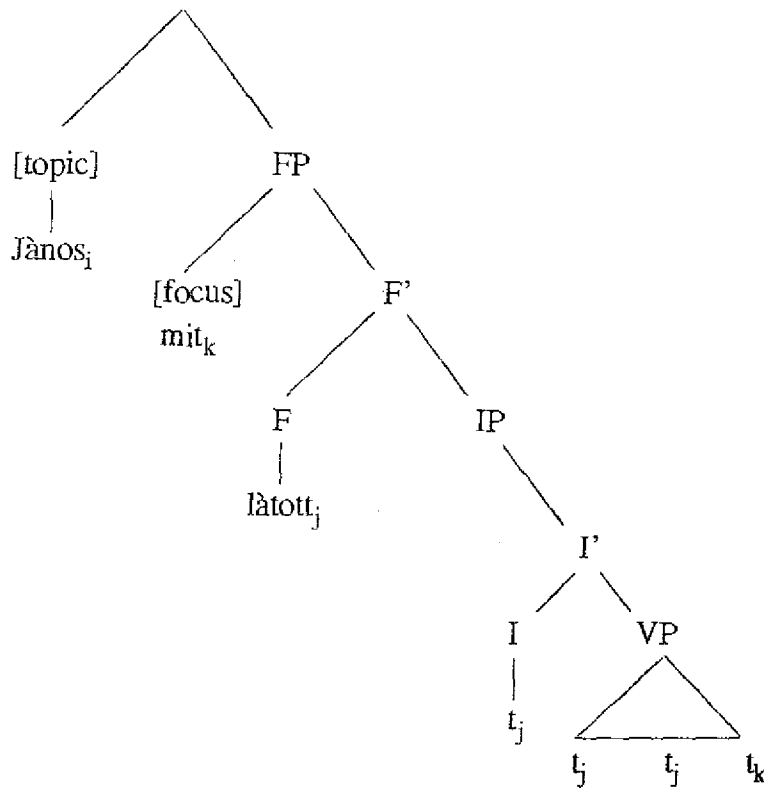
So the movement of *wh*-phrases leads to a spec-head configuration with the verb under F°:

- (40) a. [_{FP} mit [_{F'} látott [_{TP} [_{I'} t [_{VP} t János t]]]]]
 what-ACC see-3Sgn-PAS John-NOM
 what did John see?
 b. [_{FP} ki [_{F'} adta [_{TP} [_{I'} t [_{VP} t t ezt neked]]]]]

who-NOM give-3Sgn PAS this-ACC pron-2Sgn-DAT
who gave you this

Topicalized constituents are adjoined to FP (see also Kiss 1987b):

(41)



Embedded sentences show the same S-Structure configuration, with C° obligatorily filled by *hogy* and movement to spec FP:

- (42) a. ... [CP [C° *hogy* [FP *mit* [F' *látott* [IP [I' *t* [VP *t* *János* *t*]]]]]]]
 that what-ACC see-3Sgn-PAS John-NOM
 ... what John saw
- b. ... [CP [C° *hogy* [János [FP *mit* [F' *látott* [IP [I' *t* [VP *t* *t*]]]]]]]]
 that John-NOM what-ACC see-3Sgn-PAS

In embedded sentences, we get the correct configuration if F° carries the feature +*wh*. And this is possible if F° "inherits" the feature from C°, as discussed above.

4.2. Multiple questions

4.2.1. Multiple *wh*-movement

Consider the following examples:

- (43) a. *ki mit látott*
who-NOM what-ACC see-3Sgn-PAS
who saw what?
- b. *kinek mit hozott János*
who-DAT what-ACC bring-3Sgn-PAS John-NOM
what did John bring to whom
- c. *János kinek mit hozott*
- d. **kinek János mit hozott*
- (44) a. *kérdezte hogy ki mit látott*
ask-1Sgn-PAS that who-NOM what-ACC see-3Sgn-PAS
I asked who saw what
- b. *kérdeztem hogy kinek mit hozott János*
ask-1Sgn-PAS that who-DAT what-ACC bring-3Sgn-PAS John-NOM
I asked what John brought to whom
- c. *kérdeztem hogy János kinek mit hozott*
- d. **kérdeztem hogy kinek János mit hozott*

All the *wh*-phrases move out of their basic position. Topicalized elements like *János* move in front of both *wh*-phrases as in (43c) and (44c) and cannot sit between two *wh*-phrases (43d and 44d).

Wh in-situ is not possible with multiple questions: compare the grammatical example (45) in English with (46)¹⁷:

- (45) *who saw what?*
- (46) **ki látott mit?*
 who-NOM see-3Sgn-PAS what-ACC

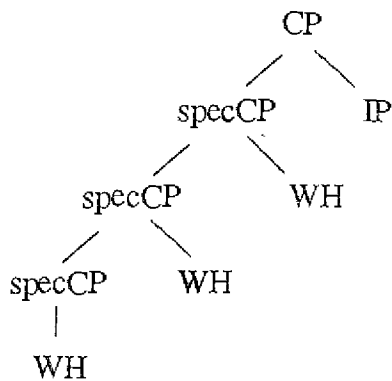
The ungrammaticality of (46) is not a result of the *wh*-criterion. As *mit* is in-situ, it occupies an A position and as such, does not qualify as a *wh*-operator (see section 1.3 above). So it does not violate clause a of the criterion. Besides, *ki* fulfills clause b, since it stands in a spec-head relation with the +*wh* head where the verb *látott* is.

Obviously, all *wh*-phrases move in Hungarian and the *wh*-criterion requires that they move to spec FP. The question is why they move. We have seen that the *wh*-criterion is not really the trigger since in multiple questions, at least one *wh*-phrase could stay in-situ, i.e. in an argument position, without violating it. The other motivation could be the focus requirement. Here, we have two possibilities. Either the primary stress assigned to spec FP is the only one with which *wh*-phrases can surface, and in this case, *wh*-phrases move because of the structural focus position¹⁸. Or, following Brody, focus can be assigned post-verbally. In this case, some version of "eagerness", as proposed in Pesetsky (1989) has to be adopted: as *wh*-phrases interpreted as operators at LF must occupy spec FP at LF, and since they can move at S-Structure, they have to move¹⁹.

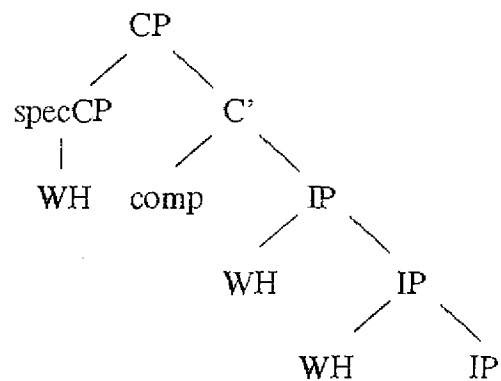
4.2.2. The position of multiple *wh*-phrases

Rudin's study of Slavic languages and Romanian (Rudin 1988) shows that these languages also have multiple fronting of *wh*-phrases. Rudin classifies these languages into two groups, depending on whether the *wh*-phrases either form one constituent (47a) or are adjoined separately to IP (47b):

(47) a.



b.



Rudin uses a set of tests which study the behaviour of *wh*-phrases in these languages. The tests are:

- extraction of *wh*-phrases from subordinate clauses
- presence of *wh*-islands
- possibility of inserting parentheticals between the *wh*-phrases
- the respective order of nominative-non nominative *wh*-phrases
- the position of clitics with respect to the *wh*-phrases

On the basis of these tests, Rudin shows that Bulgarian and Romanian form one group corresponding to (47a) whereas Serbo-Croatian, Polish and Czech belong to another group illustrated by (47b). As Hungarian also displays multiple fronting, each criterion of Rudin's study can be tested on it, with the exception of the last one, since there are no clitics in Hungarian.

(i) Extraction of more than one *wh*-phrase to a higher clause is impossible in Hungarian²⁰:

- (48) a. *Réka gondolta hogy Péter **kinek mit** hozott
 Reka-NOM think-3Sgn-PAS that Peter-NOM who-DAT what-ACC bring-3Sgn-PAS
Reka thought that Peter had brought what to whom
- b. *Réka **kinek** gondolta hogy Péter **mit** hozott
 Reka-NOM who-DAT think-3Sgn-PAS that Peter-NOM what-ACC bring-3Sgn-PAS
To whom did Reka think that Peter had brought what
- c. *Réka **kinek mit** gondolta hogy Péter hozott
 Reka-NOM who-DAT what-ACC think-3Sgn-PAS that Peter-NOM bring-3Sgn-PAS
- d. Réka **mit** gondolta hogy hozott Péter
 Reka-NOM what-ACC think-3Sgn-PAS that bring-3Sgn-PAS Peter-NOM
what did Réka think that Peter has brought?
- (49) a. Réka nem tudta hogy Péter **kinek mikor mit** hozott
 Reka-NOM not know-3Sgn-PAS that Peter-NOM who-DAT when what-ACC bring-3Sgn-PAS
Reka didn't know what Peter had brought when to whom
- b. Réka **kinek** nem tudta hogy **mikor mit** hozott Péter
 Réka-NOM who-DAT not know-3Sgn-PAS that when what-ACC bring-3Sgn-PAS Peter-NOM
To whom didn't Reka know what Peter had brought when

- c. Réka **mit** nem tudta hogy **kinek mikor** hozott Péter
 Reka-NOM what-ACC not know-3Sgn-PAS that who-DAT what-ACC
 bring-3Sgn-PAS Peter-NOM
what didn't Reka know to whom Peter had brought when
- d. *Réka **kinek mit** nem tudta hogy **mikor** hozott Péter
 Reka-NOM who-DAT what-ACC not know-3Sgn-PAS that when bring
 3Sgn-PAS Peter-NOM

In (48), the main verb *gondol* ("think") selects a *-wh* C°. Hence neither one or both of the *wh*-phrases can stay in the lower clause (48a,b). However, it is impossible to raise both *wh*-phrases to the main clause (48c). Only simple questions are possible (48d). In (49), the verb *nem tud* ("not know") selects a *+wh* C°. Extraction of one phrase is possible as shown in (49b and c). But multiple extraction is impossible, even when one of the *wh*-phrases stays in the lower clause to satisfy the *wh*-criterion.

Languages of the group illustrated under (47b), i.e. Serbo-Croatian etc. have the same restrictions:

- (50) a. SC. **ko** želite [da vam šta kupi _]
 who want-2p to you what buy-3s
 'who do you want to buy you what'
- b. ***ko šta** želite [da vam kupi _ _]
 who what want-2p to you buy-3s
 [Rudin 1988:454]

In Bulgarian, illustrated in (47a), all the *wh*-phrases have to move to the higher clause:

- (51) a. B. Boris **na kogo kakvo** kaza [če šte dade _ _]
 Boris to whom what said that will give-3s
What did Boris say that (he) would give to whom?
- b. B. *Boris **na kogo** kaza [**kakvo** šte dade _ _]
 Boris to whom said what will give-3s
 [Rudin 1988:451]

(ii) Hungarian is not subject to *wh*-island constraints. Relativization out of a *wh*-question is possible (52a). Although extraction of several *wh*-phrases is strictly ruled out, long extraction of one *wh*-phrase is fine (52b):

- (52) a. Ez az a fiù [**akinek**_j senki nem tudta [hogy Kati mit_j
this that the boy who-to nobody not knew that Cathy what-acc

vett t_j t_i ajàndékba] }
bought present-to

"This is the boy for whom nobody knows what Cathy had bought as a present" [Horvath 1986:221]

- b. János **melyik fiúnak**_j kérdezte [hogy ki tudja [hogy a
John which boy-to asked that who knows that the

hàzigazda kit mutatott be t_j] }
host who-acc showed in

"To which boy did John ask who knows whom the host had introduced"
[Horvath 1986: 225]

In Serbo-Croatian, e.g., neither questions nor relativization is possible:

- (53) a. SC. ***šta** si me pitao **ko** može da uradi?
what did you ask me who can do
[Rudin 1988:459]
b. SC. *...osoba, **koja** sam ti rekao **gde** (on) živi
the individual, who I told you where (he) lives
[Rudin 1988:459]

In Bulgarian, on the other hand, both are allowed²¹:

- (54) a. B. vidjah edna kniga, **kojata**_i se čudja [koj znae [koj prodava ____i]
saw-1s a book which wonder-1s who knows who sells
I saw a book which I wonder who knows who sells (it)
b. B. ?**Koja ot tezi knigi** se čudiš koj znae koj prodava
which of these books wonder-2s who knows who sells
which of these books do you wonder who knows who sells
[Rudin 1988:457]

(iii) In Hungarian, no parenthetical phrases can separate multiple fronted *wh*-phrases:

- (55) ***kinek**, ő szerinte, **mit** mondtál?
to whom, according to him, what say-2Sgn-PAS
to whom, according to him, did you say what?

Serbo-Croatian allows parentheticals (56a), while Bulgarian does not (56b):

- (56) a. SC. **ko**, po tebi, šta pije?
who, by you, what drinks
who, according to you, is drinking what?
[Rudin 1988:469]
b. B. ***koj**, spored tebe, **kakvo** e kazal?
who, according to you, what has said
[Rudin 1988:468]

(iv) In Hungarian, the order of nominative-non nominative *wh*-phrases is described as free, modulo interpretation differences²²:

- (57) a. H. Marinak **ki mit** adott nászajándékba
Mary-dat who what gave wedding-present to
"who gave what to Mary as a wedding present?"
b. Marinak **mit ki** adott nászajándékba
[Kiss 1987a:57]

These facts correspond to the Serbo-Croatian group:

- (58) a. S.C. **ko koga** vidi?
who whom sees
b. **koga ko** vidi?
[Rudin 1988:473]

However, when presented with two sentences as in (59) below, speakers tend to choose (59a) as the neutral, unmarked version, preferably to (59b):

- (59) a. **ki mit** látott
who what saw
b. **mit ki** látott
what who saw

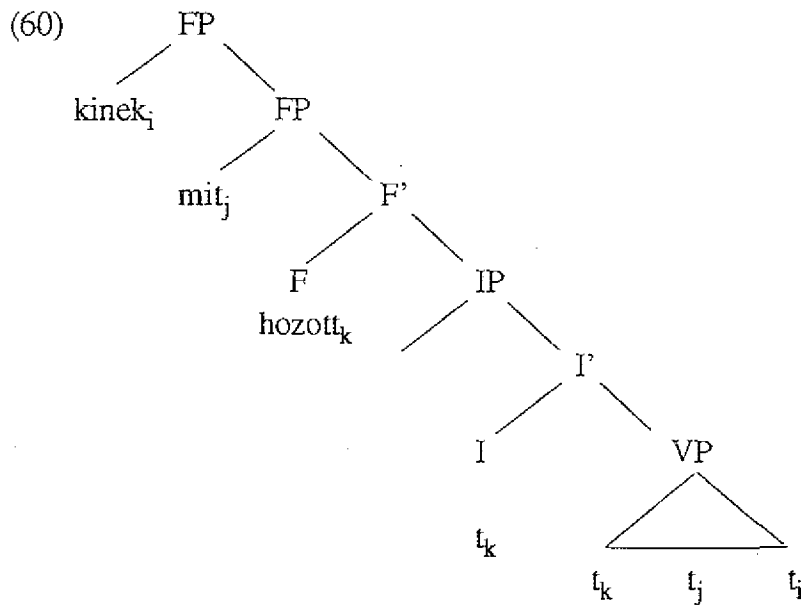
I have no explanation for the fact that there seems to be no strong superiority effect, but some kind of semantic preference, and will leave it for further investigation.

Given the data above, Hungarian does not seem to fit in either category defined by Rudin: it behaves like Bulgarian and Romanian with respect to *wh*-islands and parentheticals, but matches Serbo-Croatian, Polish and Czech with respect to extraction and nominative-non nominative order. In fact, the main difference between the languages studied in her article and Hungarian is the landing site of the *wh*-phrase. For all the Slavic languages and Romanian, one of the *wh*-phrases at least lands in spec CP. The others either adjoin to it or adjoin to a lower position. I have shown that in Hungarian, the landing site cannot be spec CP because of the constraints on focussing. The differences in the restrictions of *wh*-movement between the languages in Rudin's study and Hungarian can be accounted for by this fact.

In Hungarian, the *wh*-phrase(s) move to spec FP, so spec CP is empty. The extraction of one *wh*-phrase is fine, whereas multiple extraction is not. The conclusion is that the *wh*-phrase uses spec CP to move to a higher clause, and prevents other ones from moving up. Relativization or long extraction from a *wh*-island is allowed because, again, as spec CP is free, it can be used as an escape hatch²³. Here again, the movement of *wh*-phrases confirms the structure proposed in 3.4.

However, none of the above facts show clearly whether multiple *wh*-phrases form one constituent or distinct ones. The test on parenthetical phrases could suggest that they form some kind of constituent, similar to the Bulgarian-Romanian group. On the other hand, examples in (48) and (49) show that multiple extraction is impossible, so the phrases do not form one constituent. The acceptability of the orders nominative-accusative and accusative-nominative excludes an adjunction to spec FP as the coindexing of one of the phrases with spec FP would completely rule out the order nonsubject-subject.

As a whole, *wh*-phrases seem to behave like independent units except for parentheticals. I would like to suggest that iterative adjunction to FP is the most appropriate for Hungarian:



The feature +focus which is realized as a primary stress at PF is assigned to *mit* in (60) by agreement (see section 3.4.1).

The other adjoined *wh*-phrases get the feature +focus by a kind of "focus factorisation" similar to the negative concord interpretation in West Flemish as described in Haegeman and Zanuttini (1991) and Haegeman (1991)²⁴. The *wh*-phrases form a chain with a unique focus interpretation. Let us call it an operator chain. It is subject to strict adjacency requirements. The chain can only be composed of operators of the same kind, *wh*-operators in our case, which have a unique quantifier interpretation at LF. Such a chain cannot be obtained by adjunction of NPs, for example. This is how multiple focus of NPs in (61) below is excluded:

(61) *_[FP] János Marit _[F'] szereti...

I would like to suggest that it is the operator chain as such which is checked for the *wh*-criterion²⁵.

In a question with three *wh*-elements, one *wh*-phrase can move out through spec CP. The others form a chain in spec FP and the adjoined position of the subordinate clause:

- (62) kinek_i nem tudod [_{CP} t_i [_{C'} hogy [_{FP} mikor [_{FP} mit [_{F'} adjàl ...
 who-DAT NEG know-2Sgn-PRES that when what-ACC give-2Sgn-SUBJ
to whom do you wonder what to give when

However, consider the following contrast²⁶:

- (63) a. kinek nem tudod hogy mit hogyan mondjál?
 who-DAT not know-2S-PRES that what-ACC how say-2S-SUBJ
to whom don't you know what you should say how
 b. *hogyan nem tudod hogy kinek mit mondjál?
how don't you know what to say to whom

(63) shows that the extraction of *kinek* ("to whom") is fine whereas the extraction of *hogyan* ("how") leads to an ungrammatical result. The contrast clearly reveals a case of argument-adjunct asymmetry. I will adopt the analysis in Rizzi (1990a) and say that in (63a), *kinek*, being an argument, bears a referential index, which it shares with its trace. Thus, the *wh*-operator and the variable satisfy the required binding relation expressed in *Relativized Minimality* (Rizzi 1990a: 87).

- (64) X binds Y iff
 (i) X c-commands Y
 (ii) X & Y have the same referential index

As binding can hold at distance, extraction of *kinek* to the main clause is fine.

In (63b) on the other hand, *hogyan* ("how"), is an adjunct and does not carry a referential index. So the binding relation expressed above cannot hold and the relation between the *wh*-operator and the variable can only be government. If (63b) is ruled out, it means that some intervening position blocks the government relation. As *wh*-phrases move out through spec CP, the only intervening position is spec FP. The conclusion we reach is that *wh*-phrases do not adjoin to spec FP when moving out of the subordinate clause. This observation corroborates the claim that +focus is assigned to the whole chain formed by the adjoined *wh*-phrases. The *wh*-phrase which moves to the main clause does not get a feature +focus in the lower clause: it could not be assigned one in the higher spec FP²⁷.

4.3. Extractions

In sections 4.1 and 4.2, we have seen that the *wh*-criterion applies at S-Structure in Hungarian, maybe as a result of the "focus requirement" on *wh*-phrases. In this section, I will show that clauses a and b of the criterion apply at S-Structure in Hungarian, independently of the "focus requirement". To do this, I will look at long movement of *wh*-phrases. Consider the following data:

- (65) a. *mit gondolsz hogy hozott neked*
what-ACC think-2Sgn-PRES that bring-3Sgn-PAS pron-2Sgn-DAT
what do you think that he brought to you?
- b. **gondolod hogy mit hozott neked*
think-2Sgn-PRES that what-ACC bring-3Sgn-PAS pron-2Sgn-DAT
- (66) **mit_i szeretne tudni hogy t_i csinált János t_i*
what-ACC like-3Sgn-SUBJ know-INF that do-3Sgn-PAS John-NOM
what would he like to know that John did?

In (65a), the *wh*-phrase *mit* moves to the higher clause. The movement is not triggered by the focus requirement: in (65b), *mit* sits in a focussed position and still the sentence is ruled out. As (65) is a question, the verb *akar* carries the feature +*wh*, and *mit* moves to the specifier of the higher FP to satisfy clause a of the *wh*-criterion.

In (66), *mit* is again in a position which is assigned focus. Besides, long movement of *wh*-phrases is possible in Hungarian (see section 4.2). The sentence cannot be ruled out on the grounds of the "focus requirement". In fact, *szeretne tudni* selects a +*wh* C, so *csinált* under the F° of the subordinate clause is marked +*wh*. As *mit* does not occupy its specifier position, the sentence is ruled out because it violates clause b.

The obligatory movement of *wh*-phrases which are not subject to the "focus requirement" shows that both clauses of the *wh*-criterion apply at S-Structure.

4.4. Summary

We have taken as an assumption that the *wh*-criterion holds universally. Given that *wh*-phrases move at S-structure in Hungarian, they move within the constraints of the criterion. On the basis of a configurational structure including a structural focus position, spec FP, to the head of which the verb moves, I have shown that *wh*-phrases always land in spec FP because of the focus constraint on *wh*-phrases in Hungarian.

Looking at the *wh*-phrases with respect to the *wh*-criterion allowed me to show that in Hungarian, the criterion applies at S-structure, or rather that movement triggered by the focus requirement does not violate the *wh*-criterion. The last section on long extractions shows that in fact, the *wh*-criterion is met independently of the focus requirement. The analysis shows that the Hungarian data are compatible with the *wh*-criterion as formulated in Rizzi (1991) It confirms the configurationality of the Hungarian sentence and the movement of the verb to the head of FP.

5. *Yes-no questions*

Consider the following examples:

- (67) a. *tàncolt János a lányal?*
 dance-3S-PAS John-NOM the girl-INSTR
did John dance with the girl?
 b. *a lányal tàncolt János?*
 c. *'a lányal tàncolt János?*
Is it with the girl that John danced?
- (68) a. *szeretném tudni hogy tàncolt-e János a lányal*
 wonder-1S-PRES that dance-3S-PAS John-NOM the girl-INSTR
I wonder whether John danced with the girl
 b. *szeretném tudni hogy a lányal tàncolt-e János*
 c. *szeretném tudni hogy 'a lányal tàncolt-e János*
I wonder whether it is with the girl that John danced

Yes-no questions have the same word-order variations as declarative sentences. Main clauses have no overt question marker, and verb fronting is not obligatory (67b). In (67c), *a lányal* sits in the focus position and receives stress. (68) shows that selected contexts have the same distribution, but have an (optional) question marker, the suffix *-e* which attaches onto the verb²⁸. This suffix could be interpreted as the realization of the feature +*wh* on the verb. With respect to the *wh*-criterion, the crucial point is to check whether there is an element which is marked +*wh* and satisfies the configuration required by the criterion.

In (67, 68a), the verb is adjacent to the complementizer *hogy*, and in (67, 68b), *a lányal* sits in the TOPIC position. None of these structures shows an overt element which can satisfy the *wh*-criterion. However, as the FOCUS position is not filled with

lexical material, it is reasonable to assume that spec FP is occupied by an empty operator marked +*wh*. This null *wh*-operator enables the *wh*-criterion to be satisfied at S-Structure both in main and subordinate clauses, on a par with *wh*-questions.

At a first sight, (67, 68c) seem to contradict this analysis: as I said above, *a lányal* sits in spec FP and receives focus. As the *wh*-operator cannot occupy the same slot, (67, 68c) apparently violate the *wh*-criterion. However, as suggested to me by L. Rizzi, the interpretation of (67, 68c) differs from e.g. that of (67, 68a) and seems to indicate that we are in fact dealing with two different types of questions. Consider the following sentences which are extensions of (68a, c):

- (69) a. szeretném tudni hogy táncolt-e János a lányal, vagy elment
I wonder whether John danced with the girl, or left
b. *szeretném tudni hogy 'a lányal táncolt-e János, vagy elment
I wonder whether it is with the girl that John danced, or left

(69a) shows that the *yes-no* question bears on the subordinate clause as a whole. The same result does not obtain in (69b). Here, the scope of the *yes-no* question is strictly limited to the constituent in the FOCUS slot. In fact, the empty operator can be associated with the FOCUS position, as a kind of "constituent operator". This process of association of an operator or affective marker is also observed in other cases: the negative marker can also be associated to the FOCUS slot, yielding a constituent negation (see section 6.2). In (68c), I will assume that the whole NP in spec FP, to which the empty *wh*-operator is associated, is then marked +*wh* - and satisfies the *wh*-criterion at S-Structure²⁹.

6. Word-order and focus

Section 4 shows that a movement of the verb to a position F°, which has properties specific to "structural focus" languages must be postulated in the case of sentences containing *wh*-phrases. If this approach is correct, the prediction is that if there are other lexical elements which have the same focus requirement as *wh*-phrases, they should be incompatible with *wh*-phrases, at least in the unmarked case.

6.1. Pre-verbal categories

Recall that some categories, among which subcategorised complements and adverbials must occupy the focus position in "neutral" contexts (see section 3.1). Here are some examples:

- (70) a. 'hozzà fordult János
towards him turn-3S-PAS John-NOM
John turned towards him
b. *fordult hozzà János
- (71) a. 'fât vâgott Zoltàn
wood-ACC cut-3S-PAS Zoltàn-NOM
Zoltàn cut some wood
b. *vâgott fât Zoltàn

In (70a) and (71a), the focus slot is occupied by *hozzà* ("towards him") and *fât* ("wood") respectively. (68a) and (69b) show that in regular declarative sentences, these constituents have to sit in this position and receive stress. As expected, *wh*-questions and these types of subcategorised phrases cannot combine:

- (72) a. *ki hozzà fordult?
who-NOM towards him turn-3S-PAS
who turned towards him?
b. ki fordult hozzà?
- (73) a. *ki fât vâgott?
who-NOM wood-ACC cut-3S-PAS
who cut some wood?
b. ki vâgott fât?

Only one lexical element can fill the spec FP position, as shown by the ungrammaticality of (72a) and (73a). In the case of (72b) and (73b), since F has the feature +*wh*, *ki* has to move to the spec FP to satisfy the *wh*-criterion, and *hozzà*, respectively *fât*, stays behind.

6.2. The negative element *nem*

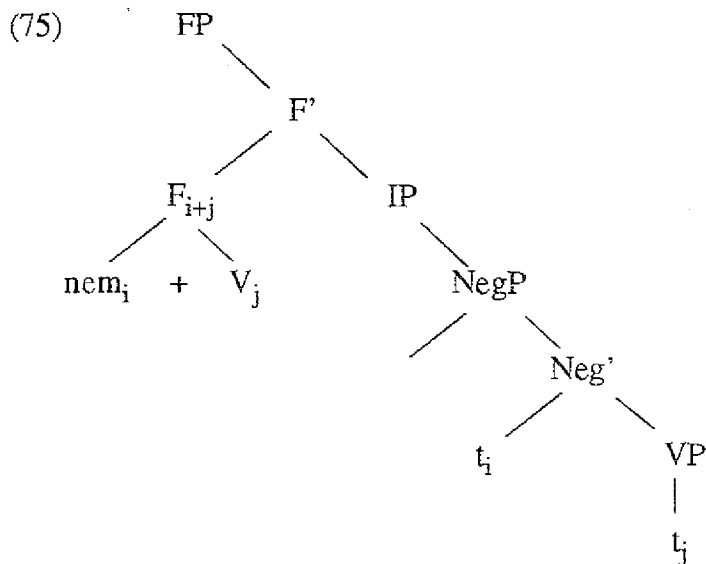
The negative element *nem* can appear in the following positions:

- (74) a. 'nem láttam Pétert
 NEG see-1Sgn-PAS Peter-ACC
I didn't see Peter
 b. 'Pétert nem láttam
It is Peter I didn't see
 c. 'nem Pétert láttam
It is not Peter I saw

In (74a), *nem* seems to bear the focus and occupy the FOCUS position. (74b) has *Pétert* in the FOCUS position and *nem* stays next to the verb. (74c) has *nem (+Pétert)* in the FOCUS position.

I would like to make a distinction first, and postulate that there are two particles *nem* in Hungarian, which happen to have the same phonological form: a sentential negation and a constituent negation. I will leave aside the question of constituent negation illustrated by (74c).

At a first glance, sentence negation seems to be either stressed (74a) or not (74b). The problem is that in (74b), where the negation is not stressed, it seems to violate the regular pattern in which no element can be inserted between the FOCUS position, occupied here by *Péter*, and the verb. To solve this contradiction, I would like to propose, following Belletti (1990b), that the sentence negation *nem* is base-generated as the head NEG° of a projection NegP³⁰. It then incorporates to the verb which has moved to F°. So, in Hungarian the head *nem+V* sits under F°:



I will also adopt the proposals by Moritz (1989) and Belletti (1990b) that the complex head (here under F°) bears a complex index which properly governs the traces of both the negation and the verb (see Belletti 1990b).

In this light, both (74a) and (74b) become compatible with the focus theory. In (74a), the spec.FP is empty, and the feature +focus is realized on the head under F° , i.e. *nem*+verb. In (74b), *Pétert* sits in spec.FP and +focus is passed on to it, leaving the *nem*+verb in F° unstressed.

The regular sentence negation is (74a). The head *nem*+verb under F° carries the focus. (74b) can only be interpreted as strongly focussing the object *Pétert*. When the sentence contains the negation *nem*, the FOCUS position can host a lexical unit only in marked cases. Recall that some subcategorised complements normally appear preverbally (see section 3.1):

- (76) a. *kezet mosott*
 hand-ACC wash-3S-PAS
 he washed his hands
 b. *nem mosott kezét*
 he didn't wash his hands
 c. *'kezet nem mosott*
 it is his hands he didn't wash

In (76a), the verb *mosott* ("washed") takes as a complement *kezet* ("hand"), an inalienable body part. In the regular form, *kezet* appears in the FOCUS position. The regular sentence negation is (76b), where *kezet* appears post-verbally. (76c) can only be interpreted as strongly focussing *kezet*, i.e. in a context where it is opposed to other parts, the feet for example. However, in cases where an element cannot move to any other position, because of focus constraints, it is accepted in the focus position. This is the case for *wh*-phrases:

- (77) a. *kit nem látál?*
 who didn't you see?
 b. *kivel nem beszéltél?*
 with whom didn't you speak?

The adjacency of *kit*, shown in section 4 to move obligatorily to spec.FP and of *nem*+verb shows that indeed, the verb and *nem* move to the same position, namely F° .

The *neg*-criterion, developed in Haegeman & Zanuttini (1990), requires that a spec-head configuration should also hold for negative phrases and negative heads (Rizzi 1991, Haegeman & Zanuttini 1990:36):

- (78) a. Each negative operator must be in a spec-head relation with a +neg X°
b. Each +neg X° must be in a spec-head relation with a negative operator

I assume that the negative head in Hungarian is the complex head *nem*+verb, since *nem*, the head of NegP, incorporates to the verb sitting under F°. If the *neg*-criterion applies at S-Structure, we expect that negative phrases should appear in the preverbal focus position. Consider the following examples:

- (79) a. *semmit nem látott Balázs*
nothing-ACC not see-3S-PAS Balázs-NOM
Balázs didn't see anything
b. **semmit Balázs nem látott*

In (79a), *semmit* ("nothing"), the negative phrase, occupies the pre-verbal position which is also the focus position - and satisfies the *neg*-criterion. (79b) shows that negative phrases cannot move to a higher position. So the criterion applies at S-Structure (see Puskás (1991) for a detailed study of the *neg*-criterion in Hungarian). The prediction is then that *wh*-phrases should not be able to co-occur with negative phrases. Consider the data below:

- (80) a. **ki semmit nem látott?*
who-NOM nothing-ACC not see-3S-PAS
who didn't see anything?
b. *ki nem látott semmit?*

In (80a), *ki* and *semmit* compete for the same position and the sentence is ruled out. In (80b), *ki* sits in spec FP as it has to satisfy the *wh*-criterion and it is the only position where it can do so. Assuming a structure where NegP is lower than FP, the *neg*-criterion can be satisfied at the level of NegP: *semmit* sits in its specifier position.

7. Conclusion

The starting point of this paper is the observation that in Hungarian, *wh*-phrases move to a position distinct from spec CP. The basic assumption is that the *wh*-criterion holds universally. The aim of this study is to investigate how the above observa-

tion could be compatible with this assumption. I have formulated the following two questions:

- how can the *wh*-criterion be compatible with other constraints in Hungarian, namely the movement of *wh*-phrases to the structural focus position?
- at what level does it apply?

The spec-head relation required by the *wh*-criterion is not satisfied at the level of CP; so some other part of the structure had to offer the required configuration. But this other part should also account for the fact that *wh*-phrases always receive focus. I have shown that the two conditions could be met if we assume that Hungarian has a functional projection (in addition to CP) which can also be the place where focus is assigned. The structure I proposed for Hungarian sentences contains a functional projection FP whose head F^o is endowed with the feature +focus and where the verb moves to get the feature; this head also carries the feature +*wh* carried by other functional projections in other languages. I have shown that *wh*-phrases move systematically into the specifier position of FP where they receive focus from the verb and satisfy the *wh*-criterion. I also argue that in multiple *wh*-questions, the *wh*-phrases move to spec FP and adjoined positions and that spec CP is used as an escape hatch for the extraction of one *wh*-phrase or relative pronoun. Thus, we can give an answer to the first question: the *wh*-criterion is compatible with other constraints of Hungarian if we assign the above structure to the sentence.

The next move is to check if the *wh*-criterion is always met automatically, as a consequence of the focus requirement. However, the data in section 4.3 show that in some cases, when the focus assignment is satisfactorily carried out, the *wh*-phrases still show independent movement; this has been explained in the light of the *wh*-criterion. So the answer to the second question is that the criterion applies at S-Structure in Hungarian, independently from any other constraint.

I have then looked at *yes-no* questions and observed that the *wh*-criterion does not seem to apply as straightforwardly as for *wh*-questions. The two possibilities point either towards an account in terms of null operators with given properties or towards a revision of the structure of *yes-no* question sentences in Hungarian. Obviously, this still needs investigating.

Finally, I have discussed the occurrence of some other (obligatorily) focussed elements. The prediction that they should be incompatible with the *wh*-phrases is

verified. Whenever these elements compete with the *wh*-phrases, it is always the latter which appear in spec FP. The double constraint of focus and *wh*-criterion forces them to appear in this position.

Thus, using the *wh*-criterion, I have shown that through an approach based on functional projections - maybe specific to structural focus languages - it is possible, and even desirable, to give a configurational analysis of Hungarian on purely syntactic grounds.

Acknowledgments

I wish to thank Adriana Belletti, Liliane Haegeman and Luigi Rizzi for their very fruitful comments, as well as Michael Brody, Nadia Golaz, Corinne Grange, Teresa Guasti, Katalin E. Kiss and Manuela Schönerberger for their numerous suggestions on various versions of this paper.

Notes

¹ In West Flemish, for example, we have:

- (i) kweten nie **wat dan** d'joengers geeten een
I know not **what that** the children eaten have
"I don't know what the children have eaten"
[Haegeman (forthcoming) ;

² (1b) is acceptable as an echo question. But, as noted by L. Rizzi, echo questions do not seem to involve the *wh*-criterion. In fact, echo *wh*-phrases might be considered as having a D-linked interpretation in the Pesetsky sense and hence would not have to move to an operator position at LF (see Pesetsky 1989).

³ As early as 1860, Brassai, a Hungarian scholar, has proposed a division of the sentence into two structural units: an "inchoactivum" which has a preparatory function and consists of one or more VP complements, and a "bulk", including the V, which conveys new information. This corresponds to the modern structure of topic-comment (see also Kiss 1987a:36).

⁴ The complementizer in +*wh* and -*wh* subordinate clauses is *hogy*; in relative clauses, C° is empty and spec CP is occupied by a relative pronoun.

⁵ In fact, Kiss calls the position itself F.

⁶ Note that this TOPIC position is weaker than a topicalisation in English, for example:

- (i) John, I don't know

- (ii) János nem ismerem
 John-acc NEG know-1 Sgn-Pres
I don't know JOHN

Whereas in English the sentence has to be uttered with a pause after *John*, it is not the case for its Hungarian counterpart.

⁷ Horváth uses a "VP-anaphora" test to isolate the VP, which contains the pre-V complement (Horváth 1986: 55):

- (i) Mari az asztalra tett néhány tányért, és Attila ugyancsak [az asztalra
 Mary the table-onto put a-couple-of plates-acc, and Att likewise the table-onto
 tett néhány tányért]
 put a-couple-of plates-acc
 "Mary put a couple of plates on the table, and Attila did too"
- (ii) *Mari az asztalra tett néhány tányért, és Attila ugyancsak a polcra
 Mary the table-onto put a-couple-of plates-acc, and Att. likewise the shelf-onto

Horváth claims that a VP-Rule of discourse grammar interpreting empty VPs can reconstruct everything within a VP (i). However, it cannot reconstruct less than a complete VP: the ungrammaticality of (ii) confirms the existence of a VP-constituent *az asztalra tett néhány tányért*.

⁸ Horváth gives the following Locality Condition on Feature Assignment:

In a configuration [... α ... β ...] or [... β ... α ...] where
 $\alpha = X^0$, α can assign a syntactic feature γ to β only if

- (i) α governs β , and
 (ii) α and β are adjacent

which she adapts from Stowell's case-assignment rule.

⁹ Other data show asymmetries (examples from Choe (1989:284-85):

- (i) a. *János szereti János apját
 John loves John's father
 b. János apja szereti Jánost
 John's father loves John
- (ii) a. János szereti magát
 John loves himself
 b. *maga szereti Jánost
 himself loves John

The question of a non-configurational VP is still open. It is widely accepted that subject-nonsubject asymmetries should be treated syntactically: a flat VP is not necessarily the best analysis.

¹⁰ Brody's condition on focussed phrases, very much in parallel with the *wh*-criterion, requires an S-Structure application of some "focus-criterion". It also suggests that constituents are marked +f very much like *wh*-phrases are marked +wh. However, the presence of the stress on the verb when spec FP is empty seems to violate this condition.

¹¹ I will not enter in the discussion of Choe's Restructuring Rules as it is not relevant here. For more details about the RR, see Choe (1989).

¹² In the light of recent proposals of a split CP, (Rizzi, Lectures in comparative syntax, Université de Genève, 1991) and U. Shlonsky (talk given at Université de Genève, Nov. 1991)), FP could be in fact a component of the type C, as T is a projection of the type I. Rizzi (1990b) proposes that functional heads are also characterized in terms of features: +C is "propositional, i.e. a category designating a proposition; +I is "predicational", i.e. a category expressing a subject-predicate relation and designating an event. Thus, functional heads are classified as follows:

$\begin{bmatrix} -C \\ -I \end{bmatrix}$ = DP

$\begin{bmatrix} +C \\ -I \end{bmatrix}$ = CP

$\begin{bmatrix} -C \\ +I \end{bmatrix}$ = IP

$\begin{bmatrix} +C \\ +I \end{bmatrix}$ = CP in V2 languages

¹³ The division of IP into two distinct projections AgrP and TP (as proposed by Pollock (1989) or Belletti (see e.g. Belletti 1990a)) and the respective order of the projections is not relevant here. However, in case of V climbing, Hungarian morphology would favour Belletti's proposal:

- (i) szeret -t -em
love -tns -agr
I loved [him/her]

Belletti suggests that the morphology of the verb should reflect its syntactic derivation. Thus in (i), the tense affix *-t*, being closest to the root, has attached first, forming a V+T stem to which the agr affix *-em* attaches. So, in Hungarian, IP consists of an AgrP which takes a TP as a complement; TP in turn selects VP.

¹⁴ Brody (1990) alternatively suggests that the movement of the verb is motivated by the requirement that spec FP must receive focus. This, however, does not explain why, when no focussed element sits next to it, the verb receives the stress.

¹⁵ Horváth (1986:146) notes that Aghem, a language spoken in Cameroon, also has morphological devices to mark focus.

¹⁶ In this case, maybe we would have to say that the attribution of such features to functional heads has to be parametrized according to the cross-linguistic availability of functional heads.

¹⁷ Some speakers seem to accept *wh* in-situ in multiple questions. However, the reading is echoic. Brody (p.c.) also notes that *wh* in-situ is acceptable if it is D-linked.

¹⁸ At first sight, the requirement that *wh*-phrases be focussed seems to be sufficient to guarantee the correct movement. However, examples like (49a) (section 4.3) show that principle A of the *wh*-criterion does apply in Hungarian as well. The fact that *wh*-phrases have to move to FOCUS position could be related to the fact that it is the obligatory focus assignment place. Other languages may have stress in-situ, as a realization of focus. In the French sentences below, falling intonation at the end of the sentence is fine in (i) but sounds awkward in (ii):

- (i) qui tu as vu
 'who you saw'
- (ii) ?*tu as vu qui
 you saw who

Maybe there is some universal focus requirement, realized in some cases by a stress, linked to the interpretation of *wh*-questions. See also Kiss (1987a:59) for a discussion on the focus of multiple questions.

¹⁹ In future research, I would like to investigate a third, tentative approach. If again, following Brody, we say that "free" stress can be assigned post-verbally, it may be that it can be assigned only to constituents that have moved out of VP, possibly to some intermediate functional position.

The fact that stress may be a diagnostic for movement out of the VP was suggested to me by the following data on negation from Katalin E. Kiss (p.c.):

- (i) senki nem evett 'semmit
 nobody-nom not eat-3s-pas nothing-acc
 nobody ate anything
- (ii) senki nem evett semmit
 nobody ate nothing

The example (i), in which there is a stress on *semmit*, is interpreted as "negative concord". The negative elements form one negation. The example (ii), on the other hand, is interpreted as a double negation, each of the negative elements contributing its own negative force to the sentence. It is reasonable to think that in (i), *semmit* has moved to spec NegP, i.e. out of the VP, and can thus form one negation with the negative marker *nem* (see also section 6.2 on negation).

If we assume that *wh*-phrases must get stress, they have to move out. However, if they do move out, they can only move to spec FP, otherwise they violate the *wh*-criterion. Other constituents, like negative phrases, can move to lower positions (see section 6.2 for more details). Under this analysis, the two constraints, namely the *wh*-criterion and the focus requirement combine to exclude (46).

²⁰ E-Kiss (p.c.) notes the following grammatical example:

- (i) kinek mit akarsz hogy mondjunk?
 who-DAT what-ACC want-2s-PRES that say-1Pl-SUBJ
 what do you want that we say to whom

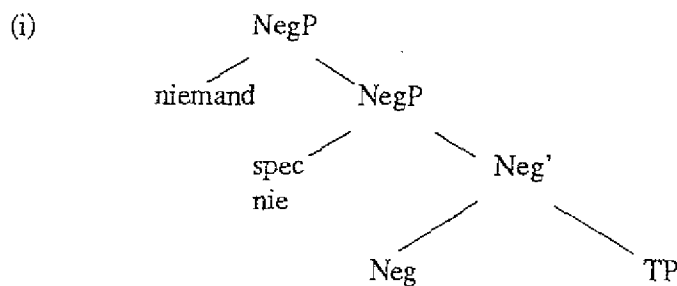
However, constructions involving the subjunctive mood might have different properties.

²¹ In fact, Rudin signals that in Bulgarian, extraction of a *wh*-word is "less normal" than relativization, but it is acceptable with heavy *wh*-phrases. However, the same movement is perfectly fine in Romanian.

²² Interpretation differences are rather subtle, but definitely felt by speakers of the languages which allow the two possibilities. A Slovene informant confirmed that the difference is also clear in his language. *Ki mit látott* can be interpreted as focussing primarily on the subject *ki*, i.e. who is the person who saw what; whereas *mit ki látott* emphasizes the object *mit*, i.e. what is the thing that was seen by whom. A good illustration would be the context of an accident. Asking *ki mit látott* would mean that you are looking for the eyewitnesses, whereas *mit ki látott* would mean that you would like to understand what happened. Ultimately, the result is information about the accident, but the point of view is different.

²³ In a different context, Horváth reaches the same conclusions (see Horváth 1986:220-235)

²⁴ In West Flemish, negative elements are adjoined to NegP and form a negative chain with one negative value (example Haegeman 1991):



Haegeman (1991) assumes that the "negative concord" interpretation of multiple negative constituents is "the result of the stacking of negative operators on one NegP. (...) a rule of Neg absorption factors out the negation of these multiple negative constituents" (Haegeman 1991:53). see also Haegeman & Zanuttini (1991).

²⁵ Another possible analysis would be that the *wh*-phrases adjoin to spec FP. However, although this approach would account quite adequately for the parentheticals, it does not seem to be able to account so straightforwardly for the absence of superiority effects. However, this still needs to be investigated.

²⁶ Although the speakers are not unanimous about the judgements on these sentences, they all see a contrast between the two examples, with a clear degradation of (63b) versus (63a).

²⁷ This is very similar to case-assignment where a constituent cannot receive two cases. A constituent which already has a feature +focus can probably not get a second one.

²⁸ The suffix *-e* as a marker for *yes-no* questions was generally used in Hungarian, both in main and subordinate clauses:

- (i) látta-d-e?
did you see him/her/it?

By now, it has practically disappeared in main clauses and tends to be omitted in subordinate clauses as well.

²⁹ Another case which does not seem to satisfy the *wh*-criterion straightforwardly is the *wh*-phrase *miért* ("why"). It appears in the regular FOCUS position, but can also sit before a focussed element:

- (i) miért sirt Réka
why cry-3sgn-pas Réka
why did Reka cry?
(ii) miért Réka sirt
why Reka cry-3sgn-pas
why is it Reka who cried?

Embedded sentences also show interesting facts:

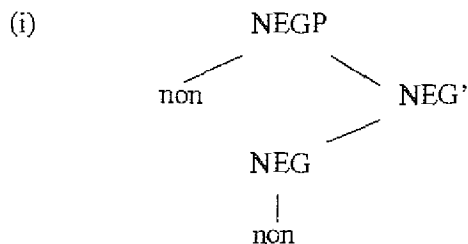
- (iii) miért mondta János hogy sirt Réka
why say-3s-pas John-nom that cry-3s-pas Reka nom
why did John say that Réka cried?
(iv) miért János mondta hogy sirt Réka?
why is it John who said that Réka cried?

In (iii), *miért* can question either the main or the subordinate clause. It is easily disambiguated through intonation. However, in (iv), the presence of *János* in the focus position blocks the construal with the lower clause. The only interpretation is the question on the NP *János*.

When *miért* is not in the focus position (examples (ii) and (iv)), it cannot have scope over the whole sentence; it can only be construed with the NP it precedes. Here again, it seems to have the property of being associated with the FOCUS position, yielding a "constituent question". Thus, *miért* behaves in a way very similar to the empty *wh*-operator involved in *yes-no* questions. Note that *miért* is the only *wh*-phrase which shows this property.

On the discussion of empty operators, see also Haegeman (1992).

³⁰ I assume, following Belletti, that *nem* sentential negation is the head of NEGP. Constituent negation might originate under spec NEGP (Belletti proposes a distinction between the two *non* negations in Italian (Belletti 1990b):



The position of NEGP has been discussed recently for various languages in Belletti (1990b), Haegeman & Zanuttini (1991), Moritz (1989), Pollock (1989), Puskás (1991). The reader is referred to these works for more details.

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