

**Multiple Questions South, West, and East: A Government-Binding
Approach to the Typology of *wh*-Movement in Slavic Languages***

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1. Introduction.

The study of “*wh*-movement” constructions – those involving fronting of a relative or interrogative pronoun (*who*, *what*, *which*, and so on, in English)—has been of central importance to the development of generative grammar. The non-canonical word order of *wh*-questions provided impetus for syntactic transformations in the earliest versions of generative grammar (Chomsky 1957 and much work by him and others in the 1960s). Thus, if (1) is derived from an underlying *you (did) see what*, the sentence fits the usual English pattern of Subject-Verb-Object word order and there is a verb phrase consisting of *see* plus its object.

(1) What did you see?

Restrictions on the positions from which *wh* words can be “extracted” (moved to the beginning of the clause) were instrumental in developing the (Revised) Extended Standard Theory of the 1970s and the extremely important notion of universal constraints on the operation of transformations, first articulated by Ross 1967. An example of such a restriction is the Complex NP Constraint (CNPC), which prevented movement of anything, including a *wh*-phrase, from inside a clause contained in an NP, as in (2a). In contrast, extraction from a clause contained in another clause, as in (2b), is fine.¹

- (2) a. *What do you like [_{NP} the man [_{CP} that took ____]]?
b. What do you think [_{CP} Mary said [_{CP} John took ____]]?

In Government-Binding theory, a development of the Generative Grammar paradigm, this notion of constraints was taken to its logical conclusion. As one of the major instantiations of Move- α (the single remaining, universal, transformation), *wh*-constructions have been a focus of interest for the investigation of principles controlling its application.²

In a series of papers (1988a, b) I investigated one particular type of *wh*-construction, the multiple question, in several Slavic and East

European languages, from the “principles and parameters” point of view. Multiple questions in Polish, Czech, and Serbo-Croatian differ in a number of ways from the same construction in Bulgarian and Romanian. I analyze these differences as being due to a single difference in the structural position of fronted *wh* phrases at S-structure. This in turn is due to a setting of a general parameter (a variable constraint) that prohibits anything from being adjoined to the Specifier position of CP at specified levels of grammar. This parameter, which will be presented in more detail below, also accounts for various properties of *wh* constructions in other, non-Slavic, languages.

The present paper extends this analysis to include Russian and Ukrainian. Section 2 introduces multiple questions and summarizes the evidence for two distinct structures for this construction in South and West Slavic. In section 3 I examine some East Slavic data and conclude that Russian and Ukrainian multiple questions have the same structure as those of Polish, Czech, and Serbo-Croatian. Section 4 is a discussion of the importance of this analysis for grammatical theory.

2. Multiple questions in GB theory.

A multiple question is one which includes two or more interrogative words; simple examples in English and Russian are given in (3) with the *wh* words highlighted:

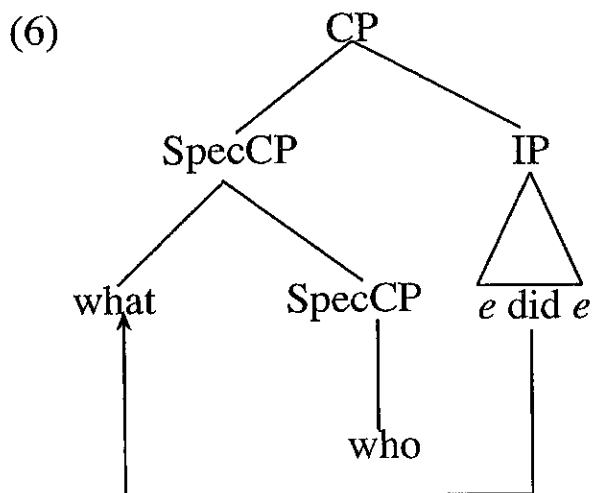
- (3) a. **Who** did **what**?
 b. **Kto** **čto** sdelal?

Such questions have been of interest to scholars working on English and other Germanic or Romance languages, because they provide evidence for certain aspects of Logical Form (LF), the level of the grammar at which semantic interpretation takes place. In particular, they support the idea that Move- α can apply at LF. Multiple questions are one of the very few constructions in English in which a *wh*-word is “in situ”, i.e. not fronted. (For instance, *what* in (3a) occupies the normal postverbal object position, instead of being placed at the front of the sentence.) Many linguists, following Huang (1982), believe that *wh*-in-situ is moved at LF, so the LF structure of (3a) is (4),³ derived from the S-structure (5).

(4) [_{CP} [_{Spec} CP **who**_i] **what**_j] [_{IP} *e*_i did *e*_j]

(5) [_{CP} [_{Spec}CP **who**_i] [_{IP} *e*_i did *what*]]

In other words, *what* moves and adjoins to SpecCP, as indicated by the arrow in tree (6):



This analysis has both semantic and syntactic advantages. It makes *who* and *what* one constituent at LF, a desirable result since this accounts for the “paired” interpretation of the two *wh* words; it also makes *who*, not *what* the head of SpecCP, which makes it possible to account for “superiority” phenomena. Both of these issues are dealt with in somewhat more detail in Franks and Rudin (this volume).

3. Slavic Multiple Questions: A Typology.

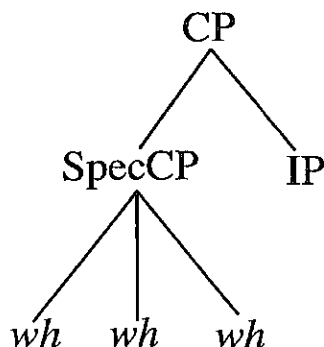
Given the above analysis of the LF structure of multiple questions in languages like English, (3b) and similar Slavic questions take on obvious significance. All *wh* words are fronted in the Slavic languages, as well as other Central/East European languages like Romanian and Yiddish. There is no *wh*-in-situ in languages of the “Multiple *wh*-fronting” group. At least superficially it seems that the hypothetical LF structure in (4) is given concrete, visible and audible form in these languages. If true, this would provide interesting confirmation of structure (4), and indirect support for the concept of Logical Form as a syntactic level. However, it is not at all clear that sentence (3b) actually does have structure (4). There is at least one other plausible analysis of (3b), namely, that shown in (7):



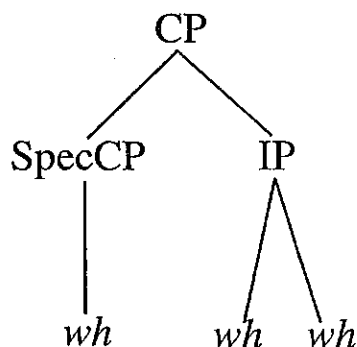
Here *čto*, instead of adjoining to SpecCP, has adjoined to IP. The linear order of words is the same as in (4), but the hierarchical structure is very different. *Kto* and *čto* are not a constituent and *čto* is in a different structural relation to its trace than *what* in (4). My claim in earlier work has been that both structures exist: some languages have one and some have the other. Within Slavic, Bulgarian multiple questions are of type (4), while those of Serbo-Croatian, Polish and Czech are of type (7). Some non-Slavic languages of Eastern Europe also belong to type (4).

For ease of reference I label these two types the “+MFS” (Multiply Filled Specifier) and “-MFS” structures. The two structures are shown as schematic trees in (8) and (9), where *wh* stands for a fronted interrogative word or phrase.

(8) **+Multiply Filled Specifier**
(Bulgarian; also Romanian
and probably Yiddish)



-Multiply Filled Specifier
(Serbo-Croatian, Polish
and Czech)



Thus, although sentences like the Bulgarian and the Serbo-Croatian questions in (10) are superficially similar, I claim that their structures differ, as indicated by the bracketings.

- (10) a. [SpecCP *koj kakvo*] pravi? (Bulgarian)
 b. [SpecCP *ko*] šta radi? (Serbo-Croatian)
 ‘Who is doing what?’

A series of dissimilarities in syntactic behavior provides evidence for this difference in structure, and serves as diagnostic in deciding to which group a given language belongs. The first of these is the resistance or openness of the *wh*-word sequence to intervening material such as clause-second clitics, adverbs, particles, or parenthetical phrases. In the +MFS languages nothing can split up the *wh*-word sequence, while in the -MFS languages clitics, parentheticals, and other material may follow the first of several *wh* words. This indicates that the *wh* words are an indivisible unit in Bulgarian but not in Polish, Czech or Serbo-Croatian, and further indicates that the first *wh* word in the -MFS languages has a special status. The examples in (11) illustrate clitic placement, and those in (12) show possibilities for placement of parentheticals. In these as in the remaining examples in this section I cite only one example from either Czech, Polish, or Serbo-Croatian; in each case the other two -MFS languages are the same in all crucial respects.⁴

- (11) a. **Koj kakvo** ti e dal?/ ***Koj** ti e **kakvo** dal? (Bulgarian)
 ‘Who gave you what?’
 b. **Kdo ho kde** viděl je nejasné./ ***Kdo kde** ho viděl je nejasné.
 ‘Who saw him where is unclear.’ (Czech)
- (12) a. ***Koj**, spored tebe, **kakvo** e kazal? (Bulgarian)
 ‘Who, in your opinion, said what?’
 b. **Ko**, po tebi, **šta** pije? (Serbo-Croatian)
 ‘Who, in your opinion, drinks what?’

A second diagnostic is the possibility or impossibility of movement of multiple *wh* words out of a clause. Multiple *wh* words can be extracted from a clause in Bulgarian and other +MFS languages, such as Romanian, but no more than one can in the –MFS languages Polish, Serbo-Croatian, and Czech; compare the possible and impossible word orders in (13) and (14).

- (13) a. **Koj kŭde** misliš če e otišŭl? (Bulgarian)
 b. ***Koj** misliš če e otišŭl **kŭde**?
 c. ***Kŭde** misliš če **koj** e otišŭl?
 ‘Who do you think went where?’
- (14) a. **Ko** želite da vam **šta** kupi? (Serbo-Croatian)
 b. **Šta** želite da vam **ko** kupi?
 c. ***Ko šta** želite da vam kupi?
 ‘Who do you want to buy you what?’

Given an analysis of *wh* movement in which a *wh* word must move through SpecCP of the lowest clause in order to move to the specifier position of a higher clause, as is standard in GB, this is evidence that all of the *wh* words in +MFS languages are in SpecCP, while only one is in SpecCP in –MFS languages. To see why, consider (15), the S-structure of (13a). The two question words originate as the subject and adjunct of *e otišŭl*. They both move into the SpecCP of the lower clause, leaving traces e_i and e_j in their original positions. From here they move to the higher SpecCP, again leaving coindexed traces in the position from which they move:

- (15)
 $[_{\text{SpecCP}} \text{Koji kŭde}]_j [_{\text{IP}} \text{misliš} [_{\text{CP}} [_{\text{SpecCP}} e_i e_j] [_{\text{C}} \text{če} [_{\text{IP}} e_i e \text{ otišŭl } e_j]]]]]?$

It is necessary for the *wh* words to pass through and leave a trace in the lower SpecCP because of subjacency. In order to move directly from its position of origin to the upper SpecCP, a *wh* word would have to cross two IP boundaries, and since IP is a universal bounding node, this is impossible. By moving into the lower SpecCP first, the *wh* words cross only one IP node in each jump. In –MFS languages like Serbo-Croatian, where only one *wh* word could move into the lower SpecCP node, a second *wh* word is blocked from being moved out of the clause.

Related to the difference in multiple extraction from a clause is the fact that +MFS and –MFS languages differ in whether or not “*wh* islands” hold. As can be seen from the sentences in (16), for example, extraction of a *wh* word from inside a *wh* question is possible in Bulgarian, but in the –MFS languages (represented here by Czech) it is not.

- (16) a. čoveka, **kojto** ne znaeš [kakvo e kupil ____] ... (Bulgarian)
 ‘the man who you don’t know what (he) bought ...’
 b. *To je ten, **kdo** jsem ti řekl, [co dělá ____]. (Czech)
 ‘This is the one who I told you what (he) does.’

Again, given that *wh* words must pass through SpecCP in order to be extracted from a clause, this is evidence that in Bulgarian (but not in Serbo-Croatian, Czech, or Polish) SpecCP of the lower clause must be able to contain more than one *wh* word. Consider (17), the S-structure of (16a). Just as in (15), the *wh* word in the highest SpecCP has moved twice, leaving two traces. SpecCP of the lower clause contains two *wh* elements; *kakvo* and the trace of *kojto*. This configuration is not allowed in –MFS languages, so (16b) is ungrammatical.

- (17)
 čoveka, [_{CP}[_{SpecCP} **kojto**_i]_{IP} ne znaeš [_{CP}[_{SpecCP}^{e_i} **kakvo**_j]_{IP}^{e_i} e kupi e_j]]]

Another similar diagnostic is the ability to have a relative pronoun and an interrogative pronoun fronted in the same clause. There is a tendency for the –MFS languages to allow this configuration (as in the Polish example in (18)) while the +MFS languages do not. This is exactly what the two structures (8) and (9) predict: in (8) it should be impossible for relative and interrogative elements to cooccur in the specifier position: both would have scope over the entire clause and the clause would have to be interpreted as simultaneously interrogative and non-interrogative, which makes no sense. In structure (9), on the other hand, since the *wh* elements do not form a constituent and have different scope, it might be possible for the one in specifier position to be relative and for the clause to contain an interrogative *wh* word.

- (18) a. *Poznavaš čoveka, **kojto** kakvo e napravil? (Bulgarian)
 ‘What do you know the man who did?’
 b. Spotkałeś mężczyznę, **który** kogo zabił? (Polish)
 ‘Did you meet the man who killed whom?’

A final trait which seems to correlate with the other characteristics of the two types of Multiple *Wh* Fronting languages is the order of the fronted *wh* words. In Bulgarian and other +MFS languages the order is relatively strict, and in particular, nominative always precedes accusative. But in the –MFS languages order of *wh* words tends to be relatively free, as can be seen in the Serbo-Croatian example in (20)). Both nominative > accusative and accusative > nominative are possible, although for at least some speakers of some of the languages nominative > accusative is preferred. It may be possible to attribute this difference to the difference between structures (8) and (9),⁵ however, as we shall see below, it is not certain that it is desirable to do so.

- (19) a. **Koj** kakvo pravi? (Bulgarian)
 b. ***Kakvo** koj pravi?
 ‘Who is doing what?’
- (20) a. **Ko** šta radi? (Serbo-Croatian)
 b. **Šta** ko radi?
 ‘Who is doing what?’

To sum up the arguments and data presented so far, there are several diagnostic criteria which separate languages with multiple *wh* fronting into two types, one which places all fronted *wh*-words in SpecCP, and one which allows no more than one *wh*-word in SpecCP; in this second type, the second and subsequent *wh* words are placed at the beginning of IP (see structures (8) and (9)). It is claimed that the two groups of languages, the +MFS and –MFS groups, differ from each other in a single parameter – the possibility or impossibility of multiple *wh*-words in SpecCP – from which all of the surface differences in multiple *wh* constructions follow automatically. These surface differences (the diagnostic criteria) are as follows:

	+ <u>Multiply Filled</u> <u>SpecCP</u>	- <u>Multiply Filled</u> <u>SpecCP</u>
A. clitics follow first <i>wh</i> -word	no	yes
B. multiple extraction from a clause is not permitted	no	yes
C. <i>wh</i> -islands hold	no	yes
D. <i>wh</i> -word order is free (?)	no	yes

In addition, individual languages sometimes provide further arguments for or against one of the possible structures for multiple questions. I will mention only a single case here,⁶ choosing one which additionally shows one advantage of the phrase structure system used in this study, with CP → SpecCP [C IP] rather than $\bar{S} \rightarrow \text{Comp S}$ as the basic structure of a clause. In Polish, sentences with a complementizer preceding a *wh* word are grammatical; an example is sentence (21), from Lasnik and Saito (1984),

- (21) Maria powiedziała że **kto** odwiedza Janka?
 ‘Who did Maria say visits Janek?’
 (literally: Maria said that who visits Janek)

Since complementizers are in C⁰ (Comp), the structure of the subordinate clause must be as in (22); it is totally impossible for *kto* to be in SpecCP, since *kto* comes after, not before Comp position. The order *kto że* does not occur, indicating that in Slavic languages (as in English) Comp and Spec CP cannot both be filled at the same time.

- (22) [_{CP}[_{SpecCP}] [_{C¹} [_{C⁰} że]] [_{IP} **kto** odwiedza Janka]]

Thus we prove that at least certain fronted *wh* words are within IP in Polish. In –MFS languages like Bulgarian, this construction is not grammatical, just as expected given that all fronted *wh* words in these languages are in SpecCP. This proof would not have been possible under the more traditional phrase structure system, in which fronted *wh* words landed in COMP; an account of the facts would have required ad hoc stipulations that complementizers and *wh* words do not cooccur in Bulgarian and that complementizers precede *wh* words in Polish.

Other types of evidence available in individual multiple fronting languages all point in the same direction—namely, toward the structure shown in (8), with all *wh* words in SpecCP at S-structure, for Bulgarian, and that shown in (9), with one *wh* word in SpecCP and the others in a different position at the beginning of IP, for Serbo-Croatian, Polish, and Czech.⁷ An explanation for this split in S-structures will be offered in the

last section of this article. But first, let us turn to the question of how the two major East Slavic languages fit into the descriptive typology.

4. Multiple questions in East Slavic.

Both Russian and Ukrainian, like the rest of the Slavic family, are clear multiple-*wh*-fronting languages. In both, all *wh* words must be fronted to form a true multiple question. Failure to front one of two *wh* words results in an “echo” question, as in (23b) and (24b) (marked with #). Such a construction could be used only to express surprise or perhaps as a request for the previous statement to be repeated for clarification, not as a true question seeking information. The oddness of (24d) makes this distinction in status clear: since only a true multiple question can be embedded in a matrix like “I don’t care ...”, only (24c) is acceptable.

- (23) a. **Kto kogo** udaril? ‘Who hit whom?’ (Russian)
 b. #**Kto** udaril **kogo**?

- (24) a. **Xto koho** vdaryv? (Ukrainian)
 b. #**Xto** vdaryv **koho**?
 c. Mene ne obxodyt’ **xto koho** vdaryv. ‘I don’t care who hit whom.’
 d. *Mene ne obxodyt’ **xto** vdaryv **koho**.

But should the sentences in (23) and (24) be analyzed as having the +MFS structure (8) or the –MFS structure (9)? Are the fronted *wh* words both in SpecCP, as in Bulgarian, or is one of them in SpecCP and the other merely fronted within IP, as in the other Slavic languages considered so far? The two possibilities are diagrammed in (25a, b) for (23), and of course the same choice exists for (24):

- (25) a. [_{CP}[_{SpecCP} [_{SpecCP} **kto**_i] **kogo**_j] [_{IP} *e*_i udaril *e*_j]]
 b. [_{CP}[_{SpecCP} **kto**_i] [_{IP} **kogo**_j [_{IP} *e*_i udaril *e*_j]]]

In reality there are two conceptually distinct issues which must be addressed in order to answer this question, although in practice we will not keep them separate. The first of these is the issue of whether Russian and Ukrainian in fact bear out the hypothesis that a given language allows one of two distinct structures for multiple fronting languages. Recall that the setting of a single parameter is claimed to account for all of the differences between –MFS and +MFS languages. If this is true, it should not be possible for any language to pattern with one type of language in some ways and with the other type in other ways. Each language either places all *wh* words in SpecCP at S-structure or else does not, and from this choice the whole array of characteristics we saw in section 3 follows auto-

matically. Assuming Russian and Ukrainian do not upset the hypothesis with some type of mixed behavior, we then confront the second issue: to which group—the +MFS or the –MFS languages—do they belong? As we shall see, the evidence available suggests that they are of the –MFS type.

4.1 Russian. Let us start by looking at Russian, considering in turn each of the diagnostic characteristics discussed in section 3 of this article (clitic and parenthetical position, multiple extraction, *wh*-islands, and word order) as they apply to Russian.

The clitic position test unfortunately does not apply, since Russian does not have any second-position clitics. However, there are some other clause-second elements in Russian which may serve our purpose. One of these is the conditional *by*, which can occur in either postverbal or clause-second position:

- (26) a. Ja s udovol'stvie**m** pošel **by** v teatr.
 b. Ja **by** s udovol'stvie**m** pošel v teatr.
 'I would gladly go to the theater.'

When *by* occurs in a multiple question, it follows the first *wh*-word, not the *wh*-word group, as shown in (27). This is convincing evidence that the sequence *kuda kto* is not a constituent, that is, presumably *kuda* but not *kto* is in SpecCP.

- (27) a. **Kuda by kto** pošel?
 'Who would go where?'
 b. ***Kuda kto by** pošel?

Further evidence for the constituent structure of a sequence of *wh*-words is available from parentheticals, such as the phrase *vy mne skazali* in (28a-b).

- (28) a. Tak **kto**, vy mne skazali, **kogo** udaril?
 b. Tak **kto kogo**, vy mne skazali, udaril?
 'Who, did you tell me, hit whom?'

Both of these are acceptable in spoken Russian. The fact that (28a), with the two *wh*-words separated by the parenthetical phrase, is grammatical, indicates that Russian patterns with the –MFS languages Polish, Czech, and Serbo-Croatian. In +MFS languages nothing, including parenthetical material, can intervene between two fronted *wh*-words. That (28b) is also good is irrelevant; parentheticals can normally appear in various positions in the sentence, particularly at major constituent breaks.

It is somewhat difficult to test the second diagnostic, the possibility of multiple extraction of *wh*-words, in Russian, since in standard Russian extraction of any *wh*-word from a finite indicative clause is not allowed. Movement of even a single *wh*-word from a clause introduced by complementizer *čto*, as in (29)⁸ produces a less than acceptable sentence:

- (29) ?? ***Kogo** ty skazal, čto on ljubit?
 ‘Whom did you say that he loves?’

The same is true in Polish, for the most part, but in Polish single extraction from certain non-finite or tense-dependent clauses is possible. Multiple extraction is not possible even from these clauses, as shown in (30b).

- (30) a. **Co** Maria chce, żeby Janek kupił?
 ‘What does M. want J. to buy?’
 b. ***Co komu** Maria chce, żeby Janek kupił?
 ‘What does M. want J. to buy for whom?’

Similar facts hold for Russian as well. Extraction of a single *wh*-word from *čtoby* clauses and infinitives is grammatical:

- (31) a. **Čto** vy xotite, čtoby ja prinesla?
 ‘What do you want me to bring (literally: that I bring)?’
 b. **Komu** ženščina xotela napisat’?
 ‘To whom did the woman want to write?’

However, extraction of multiple *wh*-words even from these types of clauses is impossible. Examples (32a-b) correspond to (31a-b), but with two *wh*-words moved out of the lower (*čtoby* or infinitive) clause. The fact that this multiple extraction makes the sentences ungrammatical is strong evidence that Russian belongs to the –MFS group of languages. Sentence (32c) shows that a *wh*-word extracted from a lower clause (*o čem* in this case) cannot be placed in the same SpecCP position as a *wh*-word from the matrix clause (*kto*); this too is evidence that Russian does not allow multiple *wh*-words in SpecCP, that is, that it is a –MFS language.⁹

- (32) a. ***Čto kogda** vy xotite, čtoby ja prinesla?
 ‘What do you want me to bring when?’
 b. ***Čto komu** ženščina xotela napisat’?
 ‘What did the woman want to write to whom?’
 c. ***Kto o čem** xotel by pisat’?
 ‘Who wanted to write about what?’

Sinicyn [Yadroff] (1982) claims that multiple extraction is acceptable “in colloquial Russian”, giving (33a) as an example; however, here *ty dumaeš’* is properly analyzed as a parenthetical phrase, not a matrix clause. Like *vy mne skazali* in (28), it has no complementizer. Sentence (33b), with complementizer *čto* indicating that the clause is not simply parenthetical, is impossible in any style of Russian, and even an analogous example with an infinitive instead of the *čto* clause is not acceptable (33c).

- (33) a. **Čto, komu, ot kogo, ty dumaješ’, on peredal?**
 ‘What do you think he delivered to whom from whom?’
 b. ***Čto, komu, ot kogo ty dumaješ’, čto on peredal?**
 c. *?**Čto, komu, ot kogo ty xočeš’ peredat’?**

In short, true multiple *wh* extraction from a clause is impossible in Russian, even in those cases where extraction of a single *wh*-word is possible. As we have seen, this is a strong argument for analyzing Russian multiple questions as having structure (9), the –MFS structure.

Wh islands also provide evidence that Russian is a –MFS language. *Wh* extraction from inside a clause with a fronted *wh*-word is impossible. In (34a-b), neither relative *kotoryj*, nor interrogative *kto* can be extracted from the *gde* clause.

- (34) a. ***Èto tot čelovek, kotoryj ja ne znaju, [gde ___ živet].**
 ‘That is the man who I don’t know where (he) lives.’
 b. ***Kto ty ne znaeš’, [gde ___ živet]?**
 ‘Who don’t you know where (he) lives?’

The same is true even when the *wh* island is a *čtoby* clause, which normally permits extraction; compare (35a), with *on* and (35b), with *kto*.

- (35) a. **Kogo vy ne xotite, [čtoby on videl ___]?**
 ‘Whom don’t you want him to see?’
 b. ***Kogo vy ne xotite, [čtoby kto videl ___]?**
 ‘Whom don’t you want who to see?’

This once again indicates that Russian multiple questions have the –MFS structure (9). As a –MFS language, Russian does not allow a *wh* word and a trace in SpecCP together, so structure (36), with a *wh*-word and a trace in SpecCP of the lower clause, is correctly predicted to be impossible. If Russian were a +MFS language, the structure would be possible, and the sentences in (34) and (35) would be grammatical.

- (36) ...[_{CP}[_{SpecCP} **Wh_i**] ... [_{CP}[_{SpecCP} **Wh_j** *e_i*] ... *e_i* ... *e_j* ...].

Turning to the final diagnostic criterion, *wh* word order, we find that in Russian the order of fronted *wh*-words is strictly nominative before accusative in main clauses:

- (37) a. **Kto kogo** udaril?
 ‘Who hit whom?’
 b. ***Kogo kto** udaril?

This is somewhat surprising given that strict *wh* word order is typical of +MFS languages. However, word order is less clearly diagnostic than the other traits that distinguish the two structures for multiple questions. Unlike the ability to extract multiple *wh*-words from a clause, to violate *wh*-islands, or to interrupt the sequence of *wh*-words with clitics or other material, all of which have a clear causal connection to the difference between the +MFS and –MFS structures, strictness or looseness of *wh*-word order is not linked to the difference in structure in any obvious way. It may well be that the apparent correlation of +MFS structure with strict word order in South and West Slavic is simply coincidental. In fact, as mentioned earlier, nominative-before-accusative is the preferred or neutral order even in clearly –MFS languages like Polish. Perhaps in Russian (and in Bulgarian) this preference is just very strong. Furthermore, the strictness of *wh*-word order in Russian seems to be limited to main clauses: accusative > nominative order in a subordinate clause, as in (38), is quite acceptable at least to some speakers.

- (38) ?Ja ne znaju kogo kto udaril.
 lit: ‘I don’t know whom who hit.’

To summarize this section, in spite of the lack of evidence from clitics and the questionable significance of *wh*-word order, those diagnostics that are available in Russian strongly indicate that it patterns with Polish, Serbo-Croatian, and Czech. I therefore conclude that Russian is a –MFS language, and Russian multiple questions have structure (9), not (8).

4.2. Ukrainian. Let us now turn to Ukrainian, again considering each diagnostic in turn. Like Russian, Ukrainian has no second-place clitics, nor, to the best of my knowledge, does it have other obligatorily clause-second elements, so evidence of the constituent status of the sequence of *wh*-words is difficult to obtain. Parentheticals following the first *wh*-word, as in (39b), are possible, although some speakers find (39a) preferable. While not very strong evidence, this does point toward the conclusion that Ukrainian, like Russian, Polish, Czech, and Serbo-Croatian, belongs to the –MFS group of languages. Sentence (39b) presumably has structure (40), with one *wh*-word in SpecCP and the other in IP.

- (39) a. **Xto koho**, na vaš pohľad, vdaryv?
 b. **Xto**, na vaš pohľad, **koho** vdaryv?
 ‘Who, in your opinion, hit whom?’

- (40) a. [_{SpecCP} **xto**] na vaš pohľad [_{IP} **koho** vdaryv]

Extraction of *wh*-words from a clause, unlike Russian, is possible, not only from infinitive and subjunctive clauses, but also from finite indicative clauses like that in (41c).

- (41) a. **Komu**, vony skazaly za telefonuvati?
 ‘Whom did they tell you to call?’
 b. **Ščo** ty xotila b ščob ja kupyv?
 ‘What would you like me to buy?’
 c. **Xto**, vony skazaly, ščo vdaryv kohos’?
 ‘Who did they tell you (that) hit someone?’

However, extraction of multiple *wh*-words from a clause is impossible: compare (41) and (42).

- (42) a. ***Xto ščo** ty xotila b ščob kypyv?
 ‘Who would you like to buy what?’
 b. ***Xto koho** vony skazaly, ščo vdaryv?
 ‘Who did they tell you hit whom?’

As we have seen for the other –MFS languages, this is one of the strongest kinds of evidence for structure (9) as opposed to (8), indicating as it does that the language does not permit two *wh*-traces in SpecCP of the lower clause. Given that *wh*-words must move from the lower to the higher SpecCP in order to be extracted from a clause, (42a) would have to have the S-structure shown in (43), and the fact that the sentence is ungrammatical shows that this configuration of traces is not possible in Ukrainian.

- (43)
 [_{SpecCP} **Xto_i ščo_j**] [_{IP} ty xotila b [_{CP} [_{SpecCP} *e_i* *e_j*] [_{C'} ščob [_{IP} *e_i* kupyv *e_j*]]]]

With respect to *wh*-islands, Ukrainian once again follows the pattern expected for a –MFS language. Extraction of a *wh*-word (in this case a relative pronoun) from the *de* ‘where’ clause in (44a) produces an ungrammatical sentence. As we have seen, sentences of this type are predicted to be grammatical in +MFS but not –MFS languages, since

grammaticality requires a *wh*-word and a trace together in SpecCP of the lower clause; see (44b). Relativization into *wh*-islands is possible using a different construction, with *ščo* ‘that’ and a pronoun corresponding to the head of the relative NP (*vona* corresponding to *žinka* in (44c)); this construction does not involve any extraction from inside the *de* clause, and thus avoids the *wh*-island effect.

- (44) a. *Tse ta žinka, **kotra** ja tobi kazav, [**de** ____ žyve].
 ‘That is the woman who I told you where lives.’
 b. ... [_{SpecCP} **kotra**_i] ja tobi kazav, [_{CP} [_{SpecCP} **de**_j *e*_i] *e*_i žyve *e*_j]
 c. Tse ta žinka, *ščo* ja tobi kazav, [**de** *vona* žyve].
 ‘That is the woman that I told you where she lives.’

Turning finally to the *wh*-word order, we find that the situation in Ukrainian is identical to that in Russian. Word order is strictly nominative > accusative in main clauses, but relatively free in embedded clauses. Thus, (45b) is bad, but (45d) is quite acceptable. As in Russian, the interpretation of this fact is an open question. While not providing direct confirmation of the –MFS status of Ukrainian, it poses no major problem either. Since strict word order is limited to main clauses, it must not be due to the structure of SpecCP, which is the same in all types of clauses.

- (45) a. **Xto koho** vdaryv?
 ‘Who hit whom?’
 b. ***Koho xto** vdaryv?
 c. Ja ne znaju **xto koho** vdaryv.
 ‘I don’t know who hit whom.’
 d. Ja ne znaju **koho xto** vdaryv.

4.3 Conclusions Some of the tests that distinguish +MFS and –MFS status in the South and West Slavic languages do not apply in the East Slavic languages: second position clitics are lacking, extraction of *wh*-words from a clause is limited in Russian, and the evidence from *wh*-word order is ambiguous and probably irrelevant in both languages. However, several other tests do apply, and all of these point to the conclusion that both Russian and Ukrainian are –MFS languages, languages which place only one of a group of fronted *wh*-words in SpecCP. Among the tests that do apply are (a) the possibility of placing parentheticals and clause-second elements like *by* after the first of two *wh*-words; (b) the lack of multiple extraction even from clauses which allow extraction of a single *wh*-word; and (c) the lack of *wh*-island violations.

I conclude, then, that all the major Slavic languages other than Bulgarian have the structure in (9) for multiple questions: in this as in so many other ways Bulgarian follows what might be considered a Balkan rather than a typically Slavic pattern.

5. Importance for grammatical theory.

What we have seen so far is that languages which place all *wh*-words at the beginning of the clause (the “Multiple Wh-Fronting languages,” including all of the Slavic languages as well as some others¹⁰) fall into two groups with respect to the syntactic behavior of multiple questions. One of these groups, which includes Bulgarian and Romanian, allows extraction of more than one *wh*-word from a clause, does not respect *wh*-islands, and does not allow the sequence of fronted *wh*-words to be interrupted by clitics, parentheticals, or other material. The second group, comprising the rest of the Slavic languages, allows no more than one *wh*-word to be extracted from a clause, does respect *wh*-islands, allows parentheticals to break up the fronted *wh*-word sequence, and places clause-second clitics immediately after the first *wh*-word. The fact that the characteristics of each group cluster together, that there are two distinct “packages” of characteristics, indicates that the individual characteristics follow from a single underlying difference between the two groups of languages. That is, a given language does not choose whether or not to respect *wh*-islands and then separately decide whether to allow multiple extraction; rather, each language makes only one “choice”, and the whole array of characteristics of a +MFS or –MFS language follows automatically. As we have seen, this single underlying choice is between two S-structure positions for *wh*-words other than the first one in a multiple question: they can either be in SpecCP, as in (46a), or in IP, as in (46b).

- (46) a. [_{SpecCP} *wh wh wh*] [_{IP} ...]
 b. [_{SpecCP} *wh*] [_{IP} *wh wh ...*]

This result is interesting in and of itself, but it is only a first step. The next step—and from the GB point of view the more important step—is to discover WHY the result holds. Rather than simply stipulating that two groups of languages have different S-structures, it would be much more satisfying to derive the two S-structures as a necessary consequence of some other, more general feature of the two types of multiple *wh*-fronting languages.

Such an explanation can be provided, based on the idea (supported in detail in Rudin (1988b)), that the two groups of languages differ in the setting of a parameter originally proposed by Adams (1984) to account for quite different facts in languages which do not have multiple *wh*

fronting. The parameter, which we may call the principle of Adjunction to SpecCP, can be stated simply as (47):

(47) Nothing can be adjoined to SpecCP.¹¹

where by “adjoined to” we mean “moved and attached to.” This principle applies at different levels of the grammar in different languages, with different effects. A language in which (47) applies at the level of Logical Form will not allow any multiple questions, since the *wh*-words in a multiple question, whether they are in situ or fronted at S-structure, must end up in SpecCP at LF to be interpreted properly (see discussion of (4) above). A language in which (47) applies at S-structure will not allow any *wh*-island violations, since these result in a trace adjoined to SpecCP, as we saw in (17) above.

Thus, in a language like English, or Chinese, which allows multiple questions but not *wh*-island violations, the principle of Adjunction to SpecCP applies at S-structure but not at LF. In a language like Italian, which allows *wh*-island violations but has no multiple questions, the reverse is true: the principle of Adjunction to SpecCP applies only at LF, not at S-structure. In Modern Irish, which has neither *wh*-island violations nor multiple questions, the principle applies at *both* LF and S-structure. Extending this typology to include the Slavic languages and others with multiple *wh*-fronting, it is clear that principle (47) does not apply at all, at any level, in the +MFS languages: as we have seen, they do have multiple questions and do allow *wh*-island violations. The –MFS languages, which have multiple questions but no island violations, must obey principle (47) at S-structure only.

(48) Level(s) at which the Principle of Adjunction to SpecCP applies:

	<u>S-structure</u>	<u>LF</u>
+MFS (Bulgarian, Romanian)	no	no
–MFS (Serbo-Croatian, Polish, Czech, Russian, Ukranian)	yes	no
English, Chinese	yes	no
Italian	no	yes
Modern Irish	yes	yes

Thus the whole array of differences in multiple *wh* constructions between Bulgarian on the one hand and the other Slavic languages on the other reduces to a difference in the level at which one constraint applies—a constraint which is independently needed at various levels to account for other differences among other groups of languages. The

difference between the –MFS languages, which front all *wh*-words, and English or Chinese, which do not, is presumably due to another parameter which disallows *wh*-in-situ in some languages. Similarly, differences among the –MFS languages are attributable to other general parameters. For instance, the fact that even single *wh*-words cannot be extracted from a finite clause in Polish and Russian (see (27), (28) above) is due to the existence of more or stronger bounding nodes in these than in the other Slavic languages. Parameterization of bounding nodes is well known to be needed for other languages as well.

Table (48) and the rest of the facts and analysis presented in this paper constitute a good example of the way Government-Binding theory predicts language differences should work: one simple principle has wide and diverse ramifications, interacting with other general principles as well as language specific facts and parameter settings to produce an array of distinct but overlapping language types.

In addition, the data and analysis presented here are a good illustration of the value of a well-articulated theoretical framework for making sense of apparently chaotic linguistic patterns. Raw, unanalyzed “facts” can tell us very little. Without the concept of moving *wh* to SpecCP as opposed to fronting it within IP the differences among multiple fronting languages would remain mysterious. It is the framework provided by \bar{X} -theory, Move- α , and the concept of parameters that allows us to see what would otherwise look like a grab-bag of minor differences in clitic positions, *wh*-island violations, and multiple extractions as instances of a unified phenomenon, and to formalize this phenomenon in terms of a single parameterized constraint.

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Notes

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¹Abbreviations used in examples in this article are as follows:

CP = Comp Phrase (=S̄; a clausal category headed by Comp)

IP = Infl Phrase (=S; a clausal category headed by Infl)

SpecCP = Specifier of CP

e = empty category (*wh*-trace)

subscripts *i, j* = coreference (coindexing)

The terms IP and CP replacing the more traditional S and S̄ are due to Chomsky (1986). In the earlier system S and S̄ were anomalies; categories that did not clearly fit into the \bar{X} system. Now S (IP) and S̄ (CP) are normal maximal projections, Comp and Infl are heads, and *wh*-words move to SpecCP rather than Comp. We will see some consequences for multiple questions below. For more information on \bar{X} theory and empty categories, see Franks and Rudin (this volume).

²See Franks and Rudin, in this volume, for a more detailed discussion of the “Principles and Parameters” GB approach to cross-language differences. For details of earlier developments in the theory, see Battistella (this volume).

³Actually most scholars have assumed that the object *wh* attaches to the left of the subject *wh*: [SpecCP *what*_i [SpecCP *who*_i]]. This difference in linear order has no crucial consequences; I prefer the order given in (4) because it makes the parallel with Slavic S-structure clearer.

⁴For more copious examples from all three –MFS languages, see Rudin (1988a, 1988b).

⁵One proposal, deriving the requirement for strict *wh*-word order from the Empty Category Principle interacting with the +MFS structure, is put forward in Rudin 1988b; however, it depends on a particular formulation of the ECP, and may well prove untenable.

⁶Several other cases are discussed in Rudin (1988b).

⁷Some of these are discussed in Rudin (1988a, 1988b).

⁸Examples (29) and (31a) are from Comrie (1973). Speakers vary on just how bad they find sentence (29) to be.

⁹Such sentences are often improved by adding a conjunction, as for example *Kto i o čem xotel by pisat*?. ‘Who wanted to write, and about what?’. This construction is probably irrelevant to the question of ±MFS structure, since conjoined phrases are always a single constituent and are quite different from adjoined structures.

¹⁰As has been mentioned, Romanian is a multiple *wh*-fronting language of the +MFS type. Yiddish and Romany also have multiple *wh*-fronting, but I have not investigated them in enough detail to classify them with confidence.

¹¹Adams originally formulated this principle as a constraint on adjunction to Comp, assuming that fronted *wh* words were placed in Comp. Revising it to refer instead to SpecCP preserves the insight that multiple questions and island violations are related, while actually avoiding some problems of the original formulation. Middle English clauses with a *wh* word and a complementizer (like Chaucer’s famous “*When that April...*”) would falsely predict that Middle English should have no *wh* islands if *when* is adjoined to Comp (which contains *that*), but make no prediction if *when* is in SpecCP.

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