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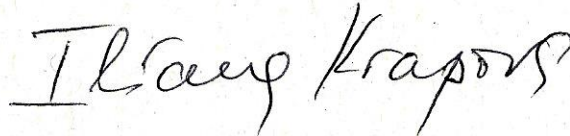
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INDIVIDUALE NEI LAVORI CON PIU' AUTORI IN CUI ESSA NON SIA
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Io Sottoscritta, Iliana Krapova, nata a Plovdiv, Bulgaria, il 17/12/1960, residente a Venezia (VE), in via Lungomare G. Marconi 76, 30126, codice fiscale KPRLNI60T57Z104Q, DICHIARO di essere autrice, con Guglielmo Cinque, del seguente articolo: "On the Order of wh-Phrases in Bulgarian Multiple wh-Fronting". In: GERHILD ZYBATOW; LUKA SZUCSICH; UWE JUNGHANNS; ROLAND MEYER. *Formal Description of Slavic Languages: The Fifth Conference*, pp. 318-336, Frankfurt am Mein: Peter Lang, 2008. ISBN: 9783631551608

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(EDS.)

FORMAL DESCRIPTION OF SLAVIC LANGUAGES

PETER LANG

Internationaler Verlag der Wissenschaften

GERHILD ZYBATOW/LUKA SZUCSICH
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Iliyana Krapova and Guglielmo Cinque, Venice

On the Order of *wh*-Phrases in Bulgarian Multiple *wh*-Fronting*

1. Introduction

This paper is more an attempt to enlarge the empirical basis of multiple *wh*-questions in Bulgarian than to present a new analysis of the quite complex issue of Superiority (only in the last section we briefly discuss some implications which the data seem to point to).

Bulgarian, as opposed to other Slavic languages, is known to display a rather rigid ordering of *wh*-phrases in (non-echo) multiple *wh*-fronting, a consequence, it is generally assumed, of Superiority (Rudin 1988; Bošković 1997, 1998a, 2002, Richards 1997/2001, Pesetsky 2000, Grewendorf 2001, among others). See, e.g., (1) and (2):

- (1) a. Koj kakvo pravi? (Rudin 1988, 481)
who what does 'Who is doing what?'
b. *Kakvo koj pravi? (Rudin 1988, 482)
what who does 'What is who doing?'
- (2) a. Kogo kak e tselunal Ivan? (Bošković 1997, 234)
whom how is kissed Ivan 'How did Ivan kiss who?'
b. *Kak kogo e tselunal Ivan?
how whom is kissed Ivan

The literature, nonetheless, reports cases of apparently freely ordered multiple *wh*-phrases (in fact, with one of the two orders preferred over the other). Cf., e.g., (3)-(7). Moreover some of the possible orders even appear to violate Superiority (see in particular (6b), where a *wh*-direct object precedes the *wh*-subject and (7b), where a *wh*-adjunct precedes the *wh*-subject):

- (3) a. Kogo kâde ste videli? (cf. Bošković 1997, 234)
whom where were-you seen 'Who have you seen where?'
b. (?) Kâde kogo ste videli? (cf. Bošković 1997, 234)
where whom were-you seen 'Where have you seen who?'
- (4) a. ?Kakvo kâde ŝte složiŝ?
what where will put-you 'What will you put where?'
b. Kâde kakvo ŝte složiŝ?
where what will put-you 'Where will you put what?'
- (5) a. ?Kakvo na kogo mu xaresva? (Billings and Rudin 1996, 40)
what to whom to-him appeals 'What appeals to whom?'
b. Na kogo kakvo mu xaresva? (Billings and Rudin 1996, 40)
to whom what to-him appeals 'What appeals to whom?'

* We thank Željko Bošković, Steven Franks, and Luigi Rizzi for their comments on an earlier draft of this paper, as well as the audiences of FDSL-5 and the Geneva workshop on (Multiple) *Wh*-movement: structures and derivations for their questions and valuable suggestions.

- (6) a. *?(?) Kakvo kogo e spoletjalo?* (cf. Billings and Rudin 1996, 38)
 what whom is stricken 'What struck whom?'
 b. *Kogo kakvo e spoletjalo?* (cf. Billings and Rudin 1996, 38)
 whom what is stricken 'What struck whom?'
- (7) a. *? Kakvo kâde raste?* (Billings and Rudin 1996, 42, and fn. 10)
 what where grows 'What grows where?'
 b. *Kâde kakvo raste?* (Billings and Rudin 1996, 42, and fn. 10)
 where what grows 'What grows where?'

Despite appearances, we will try to show that the free ordering of *wh*-phrases is only apparent and that there may be no real Superiority violations. A *wh*-phrase will turn out to occupy different positions as a consequence of its internal makeup and interpretation, arguably in compliance with (a generalized version of) Superiority (see section 7).¹

¹ We leave aside cases with more than two *wh*-phrases, which are said to allow free ordering of all but the first *wh*-phrase (Bošković 1997, 1999, 2002; Richards 1997, 2001; Pesetsky 2000, among others). The reason we do that is that there are exceptions to this freedom, a fact which clearly requires further investigation. So, for example, while (ia) and (ib) are equally acceptable (cf. Bošković 1997, 239), our informants do not seem to allow free ordering of the second and third *wh*-phrase in cases like (ii), (iii) and (iv), among others:

- (i) a. *Koj kogo kak e tselunal?*
 who whom how is kissed 'Who kissed whom how?'
 b. *Koj kak kogo e tselunal?* (cf. (2)b)
- (ii) a. *Koj kogo po kakâv naçin e tselunal?*
 who whom in what way is kissed 'Who kissed whom in what way?'
 b. **Koj po kakâv naçin kogo e tselunal?*
 who in what way whom is kissed
- (iii) a. *Koj kâde kolko e poxarçil?*
 who where how much is spent 'Who spent how much where?'
 b. **Koj kolko kâde e poxarçil?*
 who how much where is spent
- (iv) a. *Na kogo koga kak šte pomogneš?*
 to whom when how will help-you 'To whom will you help when how?'
 b. **Na kogo kak koga šte pomogneš?*
 to whom how when will help-you

We also leave aside embedded contexts, which seem to rescue some of the orderings which are excluded (or dispreferred) in matrix questions. For example, while (19b) in the text below is quite marginal as a matrix question, it improves considerably as an embedded question:

- (v) *Iskam da mi kažeš koga kogo šte posreštaš utre.*
 want-I *da* me tell-you when whom will meet-you tomorrow
 lit. 'I want you to tell me when whom you will be meeting tomorrow.'

Our first piece of evidence for this conclusion comes from the relative order of wh-adjuncts.

2. The order of wh-adjuncts

As shown by (8) and (9), the order of wh-adjuncts appears to be very strict: *koga* 'when' necessarily precedes *kâde* 'where', and *kâde* 'where' necessarily precedes *kak* 'how'. If transitivity holds, *koga* 'when' should also precede *kak* 'how'. (10) shows that this is precisely the case, which in turn suggests that the overall order of the wh-adjuncts is: *koga* > *kâde* > *kak*.

- (8) a. Koga kâde šte xodiš tova ljato?
when where will go-you this summer
'When will you go where, this summer?'
- b. *Kâde koga šte xodiš tova ljato?
where when will go-you this summer
- (9) a. Kâde kak si se dâržal?
where how are-you refl.cl behaved 'Where did you behave how?'
- b. *Kak kâde si se dâržal.
how where are-you refl.cl behaved
- (10) a. Koga kak si se dâržal?
when how are-you refl.cl behaved 'When did you behave how?'
- b. *Kak koga si se dâržal?
how when are-you refl.cl behaved

3. The order of wh-objects with respect to wh-adjuncts

The rigid ordering of wh-adjuncts proves instrumental in revealing the distribution of wh-arguments. As we will see, a wh-argument bearing a certain grammatical relation (say, direct object), does not occupy one and the same position w.r.t. the wh-adjuncts, but comes to occupy different positions depending on its internal makeup (w.r.t. such features as [human] and [D-linked]).

Consider first prepositional indirect objects (similar facts hold for other prepositional objects). The examples below show that *na kogo* 'to whom' must precede all of the adjuncts, while *na kolko* N 'to how many N' phrases occupy a lower position – they follow *koga* 'when' and *kâde* 'where', but precede *kak* 'how':²

The contrast between (v) and (19b) may have to do with the fact that in Bulgarian, a separate contrastive focus position above the interrogative wh-phrase is available in embedded contexts but is quite marginal in root contexts, cf. (vi). (Note that in (v) above, *koga* is pronounced with heavier stress than *kogo*):

- (vi) a. ?? UTRE kogo da izpitam?
Tomorrow (focus) whom da examine-I 'TOMORROW, who should I examine?'
- b. Nikoj ne mi kaza UTRE kogo da izpitam.
nobody not me told tomorrow (focus) whom da examine-I
'Nobody told me TOMORROW whom I should examine.'

² We come back later to the (quite) marginal, rather than totally ungrammatical, status of (12b)/(13b).

- (11) a. Na kogo kak šte prepodadeš tozi urok?
to whom how will teach-you this lesson
'To whom will you teach this lesson how?'
b. *Kak na kogo šte prepodadeš tozi urok?
how to whom will teach-you this lesson
- (12) a. Na kogo kâde si daval podarâci?
to whom where are-you given presents
'To whom did you give presents where?'
b. ???Kâde na kogo si daval podarâci?
where to whom are-you given presents
- (13) a. Na kogo koga šte se obadiš?
to whom when will call-you 'Who will you call when?'
b. ??Koga na kogo šte se obadiš?
when to whom will call-you
- (14) a. Koga / kâde na kolko xora si pomagal?
when / where to how many people are-you helped
'How many people did you help when/where?'
b. *?Na kolko xora koga / kâde si pomagal?
to how many people when/ where are-you helped
- (15) a. Na kolko xora kak možeš da pomogneš?
to how many people how can-you Mod.prt help-you
'How many people can you help how?'
b. *Kak na kolko xora možeš da pomogneš?
how to how many people can-you Mod.prt help-you

Putting together the order of the adjuncts with the relative positions of the two types of indirect *wh*-objects illustrated above, we arrive at the following order:

- (16) *na kogo* > *koga* > *kâde* > *na kolko* N > *kak*
'to whom' 'when' 'where' 'to how many' 'how'

We assume that the different distribution of the indirect objects is related to their different feature specification: while *na kogo* is positively specified for the feature [human], *na kolko* N phrases are underspecified for that feature, since their head N can have human, but also non-human reference (e.g., *na kolko studenti* 'to how many students', *na kolko bolnitsi* 'to how many hospitals', etc.).³

Multiple questions containing two [+human] *wh*-objects also show a strict ordering. As noted by Billings and Rudin (1996, 41), and confirmed by our informants,⁴ the direct *wh*-object must always precede the indirect *wh*-object. Cf. (17):

³ The relevance of the feature [human], which was first noted in Billings and Rudin (1996), will be shown below to play a role also in the distribution of direct *wh*-objects, and subjects.

⁴ The judgements reported in this article reflect the intuitions of ten native speakers of Bulgarian, in addition to those of the first author.

- (17) a. Kogo na kogo šte predstavíš?
whom to whom will introduce-you 'Whom will you introduce to whom?'
b. *Na kogo kogo šte predstavíš?
to whom whom will introduce-you

We expect, then, on the basis of both (16) and (17), that by transitivity *kogo* should precede whatever *na kogo* precedes, i.e. all of the wh-adjuncts, as well as *na kolko* N phrases. That this is correct is shown by the a) examples of (18)-(21). We come back to the more marked (and prima facie unexpected) alternative orders of (18b) and (19b):

- (18) a. Kogo kâde šte nastaniš?
whom where will accommodate-you 'Whom will you accommodate where?'
b. ? Kâde kogo šte nastaniš?
where whom will accommodate-you
- (19) a. Kogo koga šte posreštaš?
whom when will meet-you 'Whom will you be meeting when?'
b. ??Koga kogo šte posreštaš?
when whom will meet-you
- (20) a. Kogo kak šte posrešneš?
whom how will meet-you 'Whom will you meet how?'
b. *Kak kogo šte posrešneš?
how whom will meet-you
- (21) a. Kogo na kolko študenti šte predstavíš?
whom to how many students will introduce-you
'Whom will you introduce to how many students?'
b. *Na kolko študenti kogo šte predstavíš?
to how many students whom will introduce-you

(22) summarizes the relative order of the wh-phrases considered so far:

- (22) *kogo* > *na kogo* > *koga* > *kâde* > *na kolko* N > *kak*
'whom' 'to whom' 'when' 'where' 'to how many' 'how'

Looking at the distribution of other direct wh-objects, we find that wh-objects which are specified negatively, or are underspecified, for the feature [human] show a distribution which is markedly different from that of the [+human] *kogo* 'whom'. This is shown by the examples below: (23a) and (25a), alongside (4b), feature the [-human] wh-object *kakvo* 'what'⁵; (24a) features the wh-phrase *kolko* (N) 'how much/how many (N)'. Both types of direct wh-objects (similarly to *na kolko* N phrases seen above) ordinarily follow the adjuncts *kâde* and *koga*, and precede *kak*:⁶

⁵ *Kakâv / kakva / kakvo / kakvi* N 'what (kind of) N' phrases pattern with *kakvo* and *kolko* (N) phrases in terms of distribution. Like *kolko* (N) phrases, they are also underspecified for the feature [human] (cf. *kakâv študent* 'what student', *kakâv stol* 'what chair', etc.).

⁶ In fact, *kak* must follow all wh-phrases (cf. (2), (9a), (10a), (11a), and (15a) above), though direct object *kolko* (N) phrases for some (semantic?) reason do not easily combine with *kak*, in any order.

- (23) a. Koga / kâde kakvo kupuvaš?
when / where what buy-you 'When are you buying what?'
b. (??)Kakvo koga / kâde kupuvaš?
what when/ where buy-you
- (24) a. Koga / kâde kolko (pari) si poxarčil?
when / where how much (money) are-you spent
'How much (money) did you spend when/where?'
b. *Kolko (pari) koga / kâde si poxarčil?
how much (money) when/ where are-you spent
- (25) a. Kakvo kak šte napraviš?
what how will do-you 'What will you do how?'
b. *Kak kakvo šte napraviš?
how what will do-you

The low position of *kakvo* and *kolko* (N) phrases leads to certain expectations. If a strict hierarchical order is assumed, such phrases should be preceded by whatever *wh*-material precedes the adjuncts. In other words, we expect that the direct and indirect *wh*-objects *kogo* and *na kogo* should appear to their left. That this is indeed the case can be seen from the following examples, some well-known from the literature (cf. in particular Bošković 1997):

- (26) a. Kogo kakvo e pital Ivan (Bošković 1997 [20])
whom what is asked Ivan 'Who did Ivan ask what?'
b. *Kakvo kogo e pital Ivan
what whom is asked Ivan
- (27) Na kogo kakvo e pokazal Ivan?⁷
to whom what is shown Ivan 'What has Ivan shown to whom?'
(28) a. Na kogo kolko pari šte dadeš?
to whom how much money will give-you
'Whom will you give how much money?'
b. *Kolko pari na kogo šte dadeš?
how much money to whom will give-you

Summing up what we have seen so far, the relative orders among object *wh*-phrases and *wh*-adjuncts appear to conform to the following generalizations:

1. (Non-D-linked) [+human] *wh*-objects move to a space above the space to which *koga* 'when' and *kâde* 'where' move to.

⁷According to our informants, *kakvo* may more markedly precede the prepositional indirect object (cf. (i) below). Some speakers seem to fully accept such examples (cf. Grewendorf 2001, fn.19) while others seem to fully exclude them (cf. Rudin 1985, 119):

- (i) (??)Kakvo na kogo e pokazal Ivan
what to whom is shown Ivan 'What did Ivan show to whom'

2. (Non-D-linked) wh-objects which are either negatively specified or underspecified for the feature [human] (namely, wh-phrases like *kakvo* 'what' and (*na*) *kolko* N 'how much/many N') move to a space below *koga* 'when' and *kâde* 'where' and above *kak*.

Table 1 summarizes the orders of the wh-phrases so far reviewed:

<i>kogo</i> 'whom'	<i>na kogo</i> 'to whom'	<i>koga</i> 'when'	<i>kâde</i> 'where'	(<i>na</i>) <i>kolko</i> N 'to how many N'	<i>kak</i> 'how'
				<i>kakvo</i> 'what'	

Table 1.

4. The order of wh-subjects with respect to wh-adjuncts

A comparable situation is found with wh-subjects because they also come to occupy different positions, depending on their internal makeup. As expected, [+human] *koj* 'who' patterns with [+human] *kogo* and *na kogo* in having to precede *kâde*, *koga* ((29)-(30)), and *kak*.

- (29) a. *Koj kâde šte spi?* (Billings and Rudin 1996, 41)
 who where will sleeps 'Who will sleep where?'
 b. **Kâde koj šte spi?*
 where who will sleeps
- (30) a. *Koj koga pristiga?*
 who when arrives 'Who will arrive when?'
 b. **Koga koj pristiga?*
 when who arrives

On the other hand, subject *kakvo* and *kolko* (N) phrases pattern together with their object counterparts in that they follow *kâde* and *koga*:

- (31) a. *Koga kakvo te pravi šastliv?*
 when what you-acc makes happy 'What makes you happy when?'
 b. ??*Kakvo koga te pravi šastliv?*
 what when you-acc makes happy
- (32) a. *Kâde kakvo stava sega po sveta?*
 where what happens now in world-the
 'What is happening where around the world now?'
 b. **Kakvo kâde stava sega po sveta?*
 what where happens now in world-the
- (33) a. *Kâde/koga kolko se investira v častnija sektor?*
 where/when how much refl.cl. invests in private-the sector
 'Where/when how much is invested in the private business?'
 b. **Kolko kâde / koga se investira v častnija sektor?*
 how much where / when refl.cl. invests in private-the sector

These data are summarized in Table 2:⁸

[+human]				[-human] or underspecified for [human]			
				Subject	(indirect/direct) Object		
<i>koj</i>	<i>kogo</i>	<i>na kogo</i>	<i>koga</i>	<i>kâde</i>	<i>kakvo/kolko</i> N	<i>kakvo/ (na) kolko</i> N	<i>kak</i>

Table 2.

Some of the alternative orders in the examples above were seen to vary in marginality. For some speakers *kakvo* (whether object or subject) can (marginally) appear to the left of the following *wh*-phrases: *kogo* ((6a)), *na kogo* ((i) of fn.6), *kâde* ((4a), (7a), (23b)), and *koga* ((23b), (31b)).

Similarly, for some speakers, *kâde* and *koga* can precede *kogo* (cf. (18b), (19b), Bošković 1997, fn. 7, and Billings and Rudin 1996, 42), as well as *na kogo* (cf. (12b) and (13b)). Such possibilities are thus in apparent violation of the orders in Table 2.

We assume that the problem posed by these marked orders of *kakvo* and *kâde/koga* can be made sense of if they are taken to access (more markedly) a higher position, the one reserved for D-linked phrases (which will be discussed in the next section).

One first piece of evidence comes from the contrast between the impossible (32b), which contains a non easily D-linkable *kakvo*, and (4a) / (7a) above (repeated as (34a-b), which more readily allow for a D-linked interpretation of *kakvo*.

- (34) a. = (4a) ?Kakvo kâde šte složiš?
 what where will put-you 'What will you put where?'
 b. = (7a) ?Kakvo kâde raste?
 what where grows 'What grows where'

A second piece of evidence comes from the distribution of *koe* 'which' (the inherently D-linked counterpart of *kakvo*),⁹ which obligatorily precedes the *wh*-adjuncts (and, more generally, all non-D-linked *wh*-phrases):

⁸ Within the same slot *wh*-subjects appear to precede *wh*-objects. See, e.g., (ia-b), exemplifying the case of *wh*-phrases underspecified for the feature [human]:

- (i) a. Kakvi grupi xora po kolko pari xarčat na mesets
 what groups people each how much money spend-they in month
 'What groups of people spend monthly how much money'
 b. *Po kolko pari kakvi grupi xora xarčat na mesets
 each how much money what groups people spend-they in month

Here, we abstract away from a number of complications, like the apparent ban on combining a *kakvo* subject with a *kakvo* object, as well as with a *kolko* object, regardless of order.

⁹ D-linked *wh*-phrases can show up either as full *which*-phrases or in a reduced (elliptical) form in which the head noun is missing but implicitly understood from previous context. The 'which' paradigm displays the following gender and number forms:

- (i) *koj* (*student/stol*) 'which (student/chair) – masculine, singular
koja (*žena/kniga*) 'which (woman/book) – feminine, singular
koe (*momče/spisanie*) 'which (boy/journal) – neuter, singular
koi (*studenti/knigi/spisanija*) 'which students/books/journals) – m/f/n plural

- (35) a. Koe (spisanie) kâde si složil?
 which journal where are-you put
 'Which [one] did you put where?'
 b. *Kâde koe (spisanie) si složil?
 where which journal are-you put
- (36) a. Koe kâde otiva?
 which where goes
 'Which [one] goes where?'
 b. *Kâde koe otiva?
 where which goes

5. The order of D-linked and non-D-linked wh-phrases

Phrases in which *koj* functions as a specifier, i.e. *koj/koja/koe/koi* (N) ('which' phrases) are inherently D-linked and must precede all non-D-linked wh-phrases. This may lead to the reversal of the canonical order specified in Table 2, as in (37a) (vs. (38a), where both wh-phrases are non-D-linked)¹⁰, and may also lead to apparent violations of Superiority (for previous discussion, see Richards 1997/2001, Grohmann 1998, 2000, and Jaeger 2003, 2004).

- (37) a. Koi kartini na kogo za Boga iskaš pak da
 podarjavaš?
 which paintings to whom for God's sake want-you again Mod.prt
 donate-you
 lit. 'Which paintings do you want again to donate to whom on earth'
 b. *Na kogo za Boga koi kartini iskaš pak da podarjavaš?
 to whom for God's sake which paintings want-you again to donate-you
- (38) a. Na kogo za Boga kakvi kartini pak šte davaš?
 to whom for God's sake what paintings again will give-you
 'What paintings will you again be giving to whom?'
 b. *Kakvi kartini na kogo za Boga pak šte davaš?
 what paintings to whom for God's sake again will give-you

The only exception to the order D-linked > non-D-linked seems to be the fronting of a D-linked wh-phrase over a *koj*-subject (cf. Krapova 2002b and Jaeger 2004), which is unacceptable under a true question reading in a matrix question (the order becoming more acceptable in an indirect question – cf. fn.1):

- (39) a. *?Koja studentka koj šte izpita?
 which student who will examine
 b. Koj koja studentka šte izpita?
 who which student will examine

¹⁰ We use *za Boga* 'for God's sake' (one Bulgarian equivalent of "the hell" phrase) to force the non-D-linked reading of *na kogo*.

The ungrammaticality of (39a) may be taken to suggest that *koj* 'who' actually belongs to the same paradigm as *koj* (N) 'which', with the head N left implicit and interpreted necessarily as [+human]. This conclusion appears to be supported by the similar case of the quantifier *vsicki* 'all', which also requires a [+human] interpretation when it occurs without the head noun (*Utre šte potársja vsicki* 'Tomorrow I will look for all (=everyone/*all books, etc.)'). If so, the ungrammaticality of (39a) is no longer unexpected as both *wh*-phrases belong to the same D-linked "space", within which subjects precede objects. (Cf. fn.7, and section 7. below.)

The results so far are summarized in Table 3:¹¹

D-linked <i>wh</i> - ¹²	Non-D-linked <i>wh</i> -phrases						
<i>koj/koja/koe/koi</i> (N) (<i>kogo</i>) (<i>na kogo</i>) (marked) <i>kakvo</i> _{Subj/Obj} (marked) <i>káde/koga</i>	<i>kogo</i>	<i>na kogo</i>	<i>koga</i>	<i>káde</i>	<i>kakvo</i> _{Subj} <i>kolko</i> _{Subj} N	<i>kakvo</i> _{Obj} (<i>na</i>) <i>kolko</i> _{Obj} N	<i>kak</i>

Table 3.

6. The order of clitic resumed and non-clitic resumed *wh*-phrases¹³

6.1. Clitic resumption with D-linked *wh*-phrases

Let us now turn to another type of multiple *wh*-constructions, containing an inherently D-linked phrase resumed by a clitic.

From cases such as (40) it would seem that clitic resumption is optional:

- (40) *Koja kartina na kogo / na koj prijatelj si (ja) posvetil?*
 which painting to whom / to which friend are-you it dedicated
 'Which painting have you dedicated to whom/to which friend?'

This is, however, dubious. For one thing, as (41) shows, clitic resumption is not available for the second of two *wh*-phrases when the first is not itself resumed by a clitic.

¹¹ Things are actually more complex in that (39a) seems to improve if the *wh*-phrase refers to a non-human entity:

- (i) *?(?)Koja kniga koj e napisal*
 which book who is written 'Who wrote which book?'

We assume that the contrast between (39a) and (i) is related to the contrast between (iia) and (iib), which suggests that, in Bulgarian, phrases referring to non-human entities are (for some reason) easier to enter a null Operator Topic construction (cf. fn.13 below) than phrases referring to human individuals:

- (ii) a. *Filma šte gleda Maria* b. **? Ivan šte gleda Maria*
 film-the will watch M. I. (obj) will watch M. (subj.)
 'Maria will watch the film' 'Maria will look after Ivan'

This in turn suggests that *koja kniga* in (i) is located in higher (operator topic) position, and the Superiority violation is only apparent.

¹² In the D-linked column we have also indicated the possibility of D-linking *kogo* and *na kogo*, although we are not giving evidence for that here.

¹³ This section has gained considerably from the extensive discussions Iliyana Krapova had with Željko Bošković during her visit at the University of Connecticut in March, 2002 (sponsored by Research Support Scheme, Project 91/2000 between the University of Bucharest and the University of Plovdiv).

Moreover, as (42) shows, clitic resumption becomes obligatory if the leftmost D-linked wh-phrase is separated by a parenthetical from the second wh-phrase (D-linked or not). (cf. Krapova 2002b):

- (41) a. Na kogo koja kartina si (*ja) posvetil?
to whom which painting are-you it dedicated
'Which painting did you dedicate to whom?'
b. Na koj prijatelj koja kartina si mu ja posvetil
to which friend which painting are-you him it dedicated
'Which friend did you dedicate which painting to?'
- (42) a. Koja kartina, spored tebe, kade *(ja) e risual tozi xuzdonik?
which painting, according to you, where it is painted this artist
'According to you, which painting did this artist paint where?'
b. Koja knjiga, spored tebe, na koj prijatelj da (*mu) ja dam?
which book, according to you, to which friend Mod.prt (him) it give-I
'According to you, which book should I give to which friend?'
c. Na koj prijatelj, spored tebe, koja knjiga da mu (*ja) dam?
to which friend, according to you, which book Mod.prt him (it) give-I
'According to you, to which friend should I give which book?'

What these facts seem to suggest is that material preceding the parenthetical correlates with obligatory presence of a resumptive clitic, while material following the parenthetical correlates with obligatory absence of such a clitic. This in turn means that the apparent optionality in (40) should be interpreted as representing two different structures: one involving a position (call it XP) which can be targeted only by clitic resumed (inherently) D-linked wh-phrases; the other involving a position (call it YP) which can be targeted only by non-clitic resumed (inherently) D-linked wh-phrases. XP and YP occur, respectively, to the left and to the right of the parenthetical. (Cf. Krapova 2002a,b, and Jaeger 2003, 2004 for observations apparently leading in the same direction). This is sketched in (43):

- (43) [_{XP} Cl-D-linked wh [parenthetical [_{YP} non-Cl-D-linked wh [_{ZP} non-D-linked wh [_{IP} ..cl...

Clear indication that XP and YP are distinct projections comes from the contrast between (44a) and (44b):

- (44) a. Koe (meroprijatie), spored tebe, koj trjabva da *(go) provezda?
which (initiative), according-to you, who must Mod.prt it carry out-he
'Which (initiative), according to you, who should carry out?'
b. *Kakvo (ot tezi nešta), spored tebe, koj trjabva da go
svârši?
what (from these things), according-to you, who must Mod.prt it
finish-he
c. ?Kakvo (ot tezi nešta), spored tebe, na kogo da zanesa?
what (from these things), according to you, to whom Mod.prt bring-I
'What [which] (of these things) should I bring to whom?'

(44b) contains the *wh*-phrase *kakvo* 'what' (the non-D-linked counterpart of *koe*) which has been forced into a D-linked reading by including it into a partitive phrase. Nevertheless, the question is ungrammatical. As an indefinite quantifier, *kakvo* resists clitic resumption in true questions, although as we mentioned earlier, in the absence of an inherently D-linked phrase, it is in principle possible to D-link it (as also indicated by the possible alternative order *kakvo* > *na kogo* in (44c) apparently violating their canonical order). The contrast between (44b) and (44c) thus shows that the highest position *kakvo* can target is still lower than the position occupied by *koe* in (44a). Therefore, we can conclude that the pre-parenthetical position cannot be occupied by non-clitic resumed D-linked material.

The parenthetical, in addition to the position it occupies in (44), can also occupy a sentence initial position (cf. (46)), as shown by the examples in (45):

- (45) a. Vpročem, koja kartina, spored tebe, koj *(ja) e narisuval?
by-the-way which painting according-to-you who it is painted
'By the way, according to you, who painted which painting?'
- b. Vpročem, koja kartina, spored tebe, koj xudožnik *(ja) e narisuval?
by-the-way which painting according-to-you which artist it is painted
'According to you, which painting did which artist paint?'

- (46)
parenthetical [XP parenthetical [YP [ZP [IP cl_{XP}
 Cl-D-linked wh- *D-linked wh-* *non-D-linked wh-*

Within a finer-grained CP structure (cf. Rizzi 1997; Benincà and Poletto 2004), XP can be identified with the CLLD Topic position (TopP)¹⁴ (cf. also Krapova 2002b, Jaeger 2003,

¹⁴ Richards (1997, 2001, 95) and Grohmann (1998, 44; 2000, 278) propose that all D-linked *wh*-phrases target a (Wh-)Topic position (although neither author discusses the issue of clitic resumption). This would need to be qualified in view of the apparent existence of two distinct Topic constructions in Bulgarian: Clitic Left Dislocation topics and topics involving (null) operators, given in (i) and (ii), respectively (see Krapova 2002a, and Lambova 2000, 2001, and Arnaudova 2004 who calls them 'contrastive topics'):

- (i) [_TKufara] Ivan NA MARIA li šte *(go) dade?
suitcase-the Ivan to Mary Interr.prt will it(CL) give
'The suitcase, is it to Mary that Ivan will give?'
- (ii) [_TKufara] koj šte prenese do garata?
suitcase-the who will carry to railway-station-the

In fact, such apparent Superiority violations as in (iii), and in (iv) below where a D-linked *wh*-object precedes a D-linked *wh*-subject, may provide further evidence for distinguishing between the two types of topics:

- (iii) Koja kartina koj xudožnik e narisuval?
which painting which artist is painted 'Which painting did which artist paint?'

It can plausibly be argued that in (iii) *koj xudožnik* occupies Spec, YP (i.e. Spec of the D-linked *wh-*), while *koja kartina* targets the lower of the two Topic positions – the Operator/Contrastive Topic position situated below TopP. This will explain the lack of a resumptive clitic in (iii) vs. the additional availability of (iv), where the fronted *wh*-object is clitic resumed, as a function of targeting the higher Clitic Left Dislocation Topic:

- (iv) Koja kartina koj xudožnik ja e narisuval?
which painting which artist it(CL) is painted

2004, Grohmann 2005); YP with a position specialized for D-linked phrases (D-LP); and ZP with a position specialized for non-D-linked phrases, the traditional CP, we may assume.¹⁵ In addition to the presence vs. absence of a corresponding clitic, the two D-linked positions can be differentiated on the basis of their quantificational status. While XP, like topical projections in general, is non-quantificational, YP is quantificational, as shown by the systematic contrasts discussed in 6.2 below.

6.2. WCO effects

Lack of WCO effects is one of the properties characterizing CLLD Topic structures in contrast to quantificational structures (cf. Rizzi 1997).

In Bulgarian, all Clitic Left Dislocated (CLLD) material (indefinite affirmative quantifiers with specific interpretation, D-linked universal/distributive quantifiers, partitive phrases, Topics, etc.) do not show WCO effects. The same is true for the clitic resumed wh-phrases illustrated in (47a). On the other hand, WCO effects are present with exactly the same types of elements if the clitic is missing, cf. (47b). We therefore conclude that *na koj student* occupies an operator position in (47b) but not in (47a):

- (47) a. Na koj student_i mu e daval pari bašta mu_i?
 to which student him is given money father his
 'Which student did his father give money?'
 cf. Na Ivan mu e dal pari bašta mu.
 to Ivan him is given money father his
 'His father gave money to Ivan.'
- b. Na koj student_i e daval pari bašta mu_i?
 to which student is given money father his
 cf. *Na Ivan e dal pari bašta mu.
 to Ivan is given money father his

6.3. Interaction with quantifiers

Another distinction between the two types of positions comes from their interaction with quantifiers (Roumyana Pancheva, p.c.). (48a) shows that while D-linked phrases may have both wide and narrow scope with respect to the (non-D-linked) distributive quantifier *vseki* 'everybody'. Cl-D-linked phrases necessarily have wide scope (cf. (48b)):

- (48) a. Koja kniga e pročel vseki? wide and narrow scope
 which book is read everyone
 'Which book did everyone read?'
- b. Koja kniga ja e pročel vseki? wide scope only
 which book it is read everyone

The evidence that we presented so far shows that Spec,TopP is a non-quantificational position, while Spec,D-LP (the lower position hosting D-linked wh-phrases) is a quantificational position. The results are summarized in Table 4. In the Clitic resumed Topic wh-"space" we have indicated the non-bare inherently D-linked wh-phrases, as well as the D-linkable bare wh-phrases *kogo* and *na kogo*, which can also be clitic-resumed (cf. Dimitrova-Vulchanova & Hellan 1999, Jaeger 2004).

¹⁵ We take each "space" (non-D-linked, D-linked, Cl-D-linked) to involve a hierarchy of projections hosting the different wh-phrases, in the fixed order imposed by Superiority (cf. section 7. below).

clitic resumed Topic <i>wh</i> -	D-linked <i>wh</i> -	non-D-linked <i>wh</i> -						
(<i>na</i>) <i>koj/koja/koe/</i> <i>koi</i> (N)	(<i>na</i>) <i>koj/koja/koe/</i> <i>koi</i> (N)	<i>kogo</i>	<i>na kogo</i>	<i>koga</i>	<i>kāde</i>	<i>kakvo</i> _{subj} <i>kolko</i> _{subj} N	<i>kakvo</i> _{obj} (<i>na</i>) <i>kolko</i> _{obj} N	<i>kak</i>
<i>kogo</i>	(<i>kogo</i>)							
<i>na kogo</i>	(<i>na kogo</i>)							
*? <i>kakvo</i>	<i>kakvo</i> (marked) <i>kāde/koga</i> (marked)							

Table 4.

7. Concluding remarks.

The deeper question of what determines the relative order of the various *wh*-phrases seen above is beyond the scope of this article. We can only hint here at a possible way of approaching it that looks to us promising.

Various clues seem to suggest that such ordering reflects the order of *wh*-phrases prior to *wh*-movement (cf. also Bošković 1997, 1998b, 1999).

Consider non-D-linked *wh*-phrases. The order of the adjuncts (*koga* > *kāde* > *kak*) seems to conform to the UG hierarchy of Merge of these adjuncts, according to which Temporal adjuncts are higher than Locative adjuncts, which are in turn higher than Manner adjuncts (Boisson 1981, Nilsen 2000, Cinque 2002, Schweikert 2005).¹⁶ This appears supported by the fact that in German the corresponding existentially interpreted *wh*-phrases are ordered within IP in the same way, with Temporal phrases obligatorily preceding (i.e., higher than) Locative phrases:

- (49) Hans sollte **wann wo** / ***wo wann** darüber vortragen (Frey 2000, 113)
Hans should sometimes somewhere about-that talk

Likewise, the surface order of Bulgarian [+human] *wh*-phrases (*koj*, *kogo*, and *na kogo*) with respect to the temporal and locative *wh*-adjuncts (*koga* and *kāde*), and to *wh*-phrases underspecified (or negatively specified) for the feature [human] (*kakvo* and *kolko/kakāv* N) (cf. Table 4) appears to reflect their relative order prior to *wh*-movement. This is once again suggested by the relative order in IP of the corresponding German existentially interpreted *wh*-phrases. As (50)–(53) show, [-human] subject *was*¹⁷ has to follow the temporal and locative adjuncts *wann* and *wo*, while [-human] *wer* has to precede the adjuncts:¹⁸

- (50) Ich weiss nicht ob dort **wann was** / ***was wann** geschehen ist (Josef Bayer p.c.)
I don't know if there sometime something happened has

¹⁶ As there is reason to assume that they do not move to higher IP-internal licensing positions, their position prior to *wh*-movement presumably coincides with their Merge position.

¹⁷ The same appears true of object *was*.

¹⁸ This suggests that arguments move from their Merge position to different “spaces” depending on their specification for the feature [human] (cf. the Animacy Hierarchy of the typological tradition). Concerning the relative ordering of elements which bear the same specification for the feature [human], if subjects are merged higher than direct and indirect objects, the pre-*wh*-movement position of [+human] subject *koj* ‘who’ will be higher (more to the left) than that of [+human] *kogo* ‘whom’ and *na kogo* ‘to whom’ (if not higher, given the discussion following (39)). As to the relative order of *kogo* and *na kogo*, we must assume that direct objects move to a pre-*wh*-movement position higher than that of indirect objects, since the Merge position of indirect objects is presumably higher than that of direct objects.

- (51) Ich glaube dass **wo was** / ***was wo** geschehen ist (Josef Bayer p.c.)
I believe that somewhere something happened has
- (52) Ich weiss nicht ob hier **wer wann** / ***wann wer** geschlafen hat (Josef Bayer p.c.)
I don't know if here someone sometime slept has
- (53) Weil **wer wo** / ***wo wer** das Buch verloren hat... (Frey 2000, 132)
Because someone somewhere the book lost has...

It seems to us that this identity of ordering at the IP level in one language and at the CP level in the other can hardly be accidental.¹⁹

If the order of (non-D-linked) wh-phrases simply reflects their order prior to wh-movement, some principle will have to ensure that this order is preserved under wh-movement. While there have been a number of proposals to capture this (selective) effect (cf. Richards 1997, 2001, Müller 2001, among others) we think that it can be derived in an interesting way by slightly modifying, and extending to A-bar chains, a principle originally proposed in Chomsky (2000, section 6; 2001, (17)) for A-chains. We will phrase such principle in terms of Rizzi's (2001) notion of Relativized Minimality, which is formulated as a condition on chain links ((54)), itself based on the Minimality notion in (55):

- (54) (A_1, \dots, A_n) is a chain iff, for $1 \leq i < n$
(i) $A_i = A_{i+1}$
(ii) A_i c-commands A_{i+1}
(iii) A_{i+1} is in a Minimal Configuration with A_i

In other words "each chain link involves identity (under the copy theory of traces), c-command and Minimality" (Rizzi 2001, 91).

- (55) Y is in a Minimal Configuration with X iff
there is no Z such that
(i) Z is of the same structural type as X, and
(ii) Z intervenes between X and Y

In the spirit of Rizzi (2001), we take Z to count as an intervener between a trace Y and a target X if Z c-commands Y without c-commanding X, and if it is specified with the same feature as the target (quantificational; modifier (non-quantificational); etc). Cf. the ill-formedness of (56a-b) vs. the well-formedness of (57a-b):²⁰

- (56) a. *Combien a-t-il beaucoup consulté de livres?
'How many has he a lot consulted of books?'
- * _____ a-t-il **beaucoup** consulté **combien** de livres
[+quant] [] [] []
- b. *Rapidamente, i tecnici hanno probabilmente risolto il problema

¹⁹ This identity, however, is concealed in many circumstances by the application of additional (focus-related) movements and becomes visible only when such movements are blocked (as happens with wh-phrases interpreted existentially in languages like German, or with interrogative wh-phrases in languages like Bulgarian).

²⁰ Note that (56a) does not become better if the closest quantifier is attracted (**Beaucoup a-t-il consulté combien de livres?* 'A lot has he consulted how many of books?'). This implies that, unlike Relativized Minimality, Attract Closest cannot relate the violation in (56a-b) to standard Superiority violations like **What did who buy?* or **Who did you persuade who to invite?*, even though the two cases seem to involve similar intervention effects (cf. Rizzi 1990, 2001).

'Rapidly, the technicians have probably solved the problem'

* _____, i tecnici hanno **probabilmente** risolto **rapidamente** il problema
 [+modifier] [+modifier]

- (57) a. Combien a-t-il attentivement consulté de livres?
 'How many has he carefully consulted of books?'

_____ a-t-il **attentivement** consulté **combien** de livres
 [+quant] [+modifier]

- b. **RAPIDAMENTE**, i tecnici hanno probabilmente risolto il problema (non lentamente)
 'Rapidly (focus), the technicians have probably solved the problem (not slowly)'

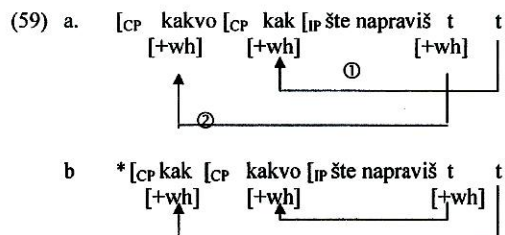
_____, i tecnici hanno **probabilmente** risolto **RAPIDAMENTE** il problema...
 [+Focus] [+modifier]

Within a system in which Superiority is subsumed under Relativized Minimality, the preservation of the pre-*wh*-movement order of the *wh*-phrases in the case of multiple movements can be ensured through the requirement in (58), which is a modification, as noted, of one of Chomsky's principles:²¹

- (58) Only a whole chain, not just a link of a chain, counts as an 'intervener'.

In other words, no (trivial or non trivial) chain can intervene between the trace and the target, if the intervening chain is specified with the same feature as the target.

With (58), contrasts like those in (25a-b) above can now be seen to follow from Relativized Minimality (assuming *kakvo* to move to a Case-related position higher than *kak* prior to *wh*-movement – cf. Bošković 1997, 239f). The relevant derivations, and the resulting representations are given in (59a-b). (59a) represents the only possible order of the two *wh*-movements which respects both Relativized Minimality and the Extension Condition. (59b), on the other hand, violates Relativized Minimality whatever the order of the two *wh*-movements is (and the Extension Condition in one of the two possible derivations).²²

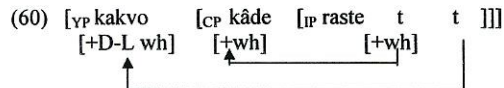


²¹ Chomsky's condition reads "Only the head of an A-chain (equivalently, the whole chain) blocks matching under the Minimal Link Condition" (Chomsky 2001, (17)). Rizzi reaches a similar conclusion in unpublished work refining his (1990, 2001) notion of Relativized Minimality.

²² Note that under this account of Superiority, it is crucial that Relativized Minimality applies at the end of the derivation, or on the representation. See Rizzi (2001, especially fn.6) for arguments to this effect. In (59) we abstract away from possible earlier movements leading to the pre-*wh*-movement configuration.

In (59a) there is only a *link* of a chain (not an entire chain) intervening between the trace of *kak* and the target of *kak*, and similarly only a link of a chain between the trace of *kakvo* and the target of *kakvo*. Not so, in (59b), where the entire (non trivial) chain *kakvo* intervenes between the trace of *kak* and its target. (58) has in fact the quite general consequence of forcing a crossing (rather than a nesting) derivation of wh-phrases.

If D-linked wh-phrases have special features matching corresponding features in their target (say, +D-L wh – but see fn.22), it is understandable why they can reverse the order holding strictly within the “space” of non-D-linked wh-phrases. In the slightly more marked, yet acceptable, (7a) above, even if the whole (non trivial) chain of *kâde* intervenes between the trace of *kakvo* and its target, the feature of the intervener is distinct from that of the target, so that no violation of Relativized Minimality is triggered:²³



A comparable case is provided by the apparent violation of Superiority in e.g. (44a), where the target is specified for the feature [CI-D-L wh] while the intervening chain bears no such feature.

Notice that in order to derive the apparent Superiority violations of (7b) (*Kâde kakvo raste?* ‘Where what grows’) and similar cases, one has to crucially assume that subject *kakvo* may fail to raise to the preverbal position and may receive Case in situ under Agree with the preverbal position in Spec,IP, much as it happens in normal cases of subject inversion (e.g. *Tuk ne raste treva* lit. Here not grows grass ‘Grass does not grow here’). This possibility in turn appears to be relatable to the pro-drop nature of Bulgarian, which allows an expletive empty subject satisfying the EPP feature, along the lines of the original proposal of Rizzi (1982, chapter IV), which relates free subject inversion to the null subject property of the language.

To summarize, the facts discussed here seem to us to provide evidence for two conclusions: 1) that the order of wh-phrases in Bulgarian multiple wh-fronting reflects, up to the finest degree, their pre-wh-movement order, and 2) that all cases which seem to go against preservation of order (leading to seeming violations of Superiority) involve selective movements triggered by a feature that is not present in any of the intervening elements. More tentatively, we also proposed to capture Superiority effects under a version of Rizzi’s Relativized Minimality which incorporates Chomsky’s insight that links of a chain do not count as interveners.

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²³ If D-linking is related to Specificity, given that specific indefinites are higher than existentially interpreted ones (cf. Diesing 1992), it could be that in (60) *kakvo* has moved higher than *kâde* prior to wh-movement (which would impose distinctness of features at the IP, rather than at the CP level).

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