

In Steven Franks, Tracy Holloway King & Michael Yadroff, eds. 2001. *Formal Approaches to Slavic Linguistics: The Bloomington Meeting, 2000*. Ann Arbor, MI: University of Michigan Press, 117-136.

The Non-Uniqueness of Multiple Wh-Fronting: German = Bulgarian*

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1. Introduction

Since Wachowicz 1974, it has been known that Slavic languages front all Wh-phrases overtly in multiple Wh-questions. This is illustrated in (1) for Bulgarian and (2) for Serbo-Croatian (henceforth, SC).

- (1) Koj kogo vižda? *Bulgarian*
who whom sees
'Who sees whom?'
- (2) Ko je šta kupio? *Serbo-Croatian*
who is what bought
'Who bought what?'

Rudin (1988) showed that Bulgarian and SC represent different types of languages, differing in the surface order of fronted Wh-elements and their behavior with respect to the Superiority Condition (Chomsky 1973). In Bulgarian-type languages (such as Romanian), the order of fronted Wh-phrases is fixed, whereas in SC-type languages (such as Polish or Russian), the order appears to be free.¹

- (3) *Kogo koj vižda? *Bulgarian*
whom who sees
- (4) Šta je ko kupio? *SC*
what is who bought

* We would like to thank the FASL 9 audience for useful comments and suggestions. All remaining errors and omissions are our own.

¹ There are many complicating factors that are not going to be crucial for the discussion that follows. For example, the ordering between the second and third Wh-phrase in Bulgarian Wh-questions is free (see e.g. Bošković 1997, Richards 1997).

Our goal is to show that overt multiple Wh-movement is attested outside of the Slavic family of languages, and in particular that German, contra standard assumptions, is a language with overt multiple Wh-movement. The main evidence for this claim comes from the correlation between overt movement and the availability of Single Pair and Pair List readings in multiple Wh-questions. We show how analyzing German as an overt Wh-movement language allows for a straightforward partition of languages with respect to the availability of Single Pair and Pair List readings in multiple Wh-questions. We conclude with examining the consequences and predictions of this improved partition for the analysis of multiple Wh-movement in Slavic.

2. Proposal: A Tripartition of Wh-Question Formation

2.1 Pair List versus Single Pair Readings

In addition to variation in the syntax, languages differ in the range of interpretations they allow for multiple Wh-questions. In principle, multiple Wh-questions are ambiguous between P(air) L(ist) and S(ingle) P(air) readings. An SP answer consists of a single proposition, whereas a PL answer consists of sets of propositions.

- (5) a. Mary bought a sweater. *(Single Pair answer)*
b. Mary bought a sweater, Jane bought shoes, Anne bought a skirt... *(Pair List answer)*

The availability of SP and PL readings is subject to cross-linguistic variation (Bošković 1998b, Hagstrom 1998). For example, English contrasts with Japanese in that it disallows SP readings in multiple Wh-questions. Thus, in the scenario given in (6), which calls for an SP answer, only a Japanese multiple Wh-question is felicitous (infelicity marked by '#').²

- (6) *Scenario I: John is in a store and off in the distance sees somebody buying an article of clothing, but he does not see who it is and neither does he see exactly what is being bought. He goes to the shop assistant and asks:*

² Presumably, the only way to ask a question in this situation in English would be to use a conjoined question.

- | | |
|---|-----------------------------|
| a. #Who bought what? | <i>English</i> ³ |
| b. Dare-ga nani-o katta no?
‘Who bought what?’ | <i>Japanese</i> |
| c. Mary bought a sweater. | |

Since the most obvious difference between languages like English and languages like Japanese lies in whether the Wh-phrases undergo overt movement or not, Hagstrom (1998) and Bošković (1998b) establish a correlation between overt syntactic movement (in a sense yet to be defined) and the availability of SP readings. The contrast between Japanese and English illustrated above suggests that overt syntactic movement forces PL readings, and consequently that SP readings are allowed only in Wh-in situ languages.

The following shows that this correlation is on the right track.

- | | | |
|-----|--------------------------------|------------------|
| (7) | <i>(Scenario I from above)</i> | |
| a. | #Koj kakvo e kupil? | <i>Bulgarian</i> |
| | who what is bought | |
| b. | Ko je šta kupio? | <i>SC</i> |
| | who is what bought | |
| c. | Šta je ko kupio? | |
| | what is who bought | |

In Bulgarian, a multiple Wh-question is infelicitous in a situation that calls for an SP answer (hence the degraded status in (7a)). Interestingly, SC patterns with Wh-in-situ languages in that it allows an SP answer. This brings further support for Bošković’s (1997) claim that Wh-phrases in SC do not involve Wh-movement (where by Wh-movement we mean movement to an extended C-projection), but focus-driven scrambling to some position contained within TP. We will come back to SC in section 4.

In situations that call for PL answers, further distinctions emerge. Consider the following scenario.

³ It is possible to ask a D-linked Wh-question in English in a situation described in (6); thus (i) is felicitous. We will mention related facts below in passing.

(i) Which item did which customer buy?

- (8) *Scenario II: John sees Jim finishing off his daily sales. He sees a bunch of people that he knows walk away and Jim stacking his left-over merchandise, so he asks him:*
- a. Ko je šta kupio? SC
 who has what bought
 - b. #Šta je ko kupio?
 what has who bought
 - c. Dare-ga nani-o katta no? Japanese
 who-NOM what-ACC bought Q
 - d. #Nani-o dare-ga katta no?
 what-ACC who-NOM bought Q
 - e. Wer hat was gekauft? German
 who has what bought
 - f. Was hat wer gekauft?
 what has who bought

This pattern shows that in Wh-in situ languages such as Japanese and, on current assumptions SC, a PL reading is lost if the lower Wh-phrase is scrambled over the higher one. We will follow Bošković (1998b), and refer to the loss of PL reading in an otherwise grammatical question as *Interpretive Superiority*.

2.2 A Typological Tripartition

Furthermore, the data in (8) show that German presents a puzzle. First, German does not obey superiority, since both orders, *subject* > *object* and *object* > *subject*, are possible. The lack of superiority is standardly attributed to scrambling (cf. Müller and Sternefeld 1993). However, if scrambling really is responsible for the availability of both orders, it is not clear why German does not pattern with other scrambling languages like Japanese or SC in that it loses the PL reading in a scrambled version (cf. (8f)). This contrast is going to be crucial for our analysis of multiple Wh-movement in German.

The table given in (9) offers an initial partition of languages with respect to the availability of SP/PL readings, taken straight from Bošković (1998b), who explores Hagstrom (1998) further. Beyond the examples above, a comprehensive discussion of the data that lead to this typology can also be found in Grohmann 2000. Relevant is that German is odd regarding WH2 > WH1, given the Hagstrom-Bošković approach.

(9) *Table 1: Quasi-tripartition à la Bošković-Hagstrom*⁴

<i>If a language has:</i>	<i>It allows readings:</i>	<i>But:</i>
Wh-in situ (Japanese, Chinese, Hindi, SC, Polish, French II...)	WH1 > WH2: PL/SP WH2 > WH1: SP (such as Wh-scrambling)	
Singular Wh-movement (English, Italian, French I, German, ...)	WH1 > WH2: PL WH2 > WH1: SP ⁵ (such as D-linking)	German: WH2>WH1:PL
Multiple Wh-movement (Bulgarian, Romanian...)	WH1 > WH2: PL WH2 > WH1: PL ⁶ (such as D-linking)	

The data examined so far raise the following questions, which we attempt to provide answers for in the remainder:

1. Why is there a correlation between syntactic movement (such as scrambling) and availability of SP interpretation in Wh-in situ languages?
2. Why does German not pattern with other ‘singular’ Wh-movement languages (such as English, Italian, standard French etc.) or other ‘scrambling’ languages such as Japanese or SC with respect to the availability of PL readings in WH2 > WH1 multiple questions?
3. Do Slavic languages like Polish or SC always pattern with Wh-in situ languages?

⁴ See Grohmann 2000 for detailed exposition. French I refers to the construction pattern found in English, where one Wh-phrase moves, while French II denotes the strategy where all Wh-phrases can be left in situ (see Bošković 1998a, Boeckx 1999)

⁵ Barss (1992) notes that in D-linked questions, only SP answers are possible:

- (i) Which woman did which man see?

Again, while judgments might be fuzzy, we assume this here, but refrain from a more detailed discussion pertaining to issues of D-linking (cf. Pesetsky 1987).

⁶ In Bulgarian, D-linked Wh-questions allow violations of superiority. Furthermore, the preferred reading is a PL reading (Roumyana Izvorski, p.c); the same applies to Romanian (Ileana Comorovski, p.c.):

- (i) a. Koga kniga koj čovek e kupil? *Bulgarian*
 ‘Which book did which person buy?’
 b. La care cînd te ai gîndit? *Romanian*
 ‘Which one have you thought of when?’

What is particularly puzzling is the German pattern. Note that if German were a multiple Wh-movement language, we would get a real tripartition, as shown in (10), a state of affairs we argue for explicitly here (also Citko and Grohmann 2000).

(10) *Table 2: An improved tripartition*

<i>If a language has:</i>	<i>It allows readings:</i>
Wh-in situ (Japanese, Chinese, Hindi, Polish, SC, French II...)	WH1 > WH2: PL/SP WH2 > WH1: SP
Singular Wh-movement (English, Italian, French I, ...)	WH1 > WH2: PL WH2 > WH1: SP
Multiple Wh-movement (Bulgarian, Romanian, German ...)	WH1 > WH2: PL WH2 > WH1: PL

The answer to the first question follows from the semantics for Wh-questions provided by Hagstrom (1998), and further developed by Bošković (1998b). Their solution crucially relies on the universal existence of a Q-particle responsible for interrogative clause-typing. In English-type languages, the Q-particle is a covert counterpart of an overt morpheme found in Wh-in situ languages like Chinese or Japanese (cf. Cheng 1991). As Hagstrom (1998) and Bošković (1998b) argue, the position of a Q-particle correlates with the availability of SP/PL readings.

2.3 Homing in on Q and F

The Q-particle originates in a clause-internal position and moves to C, thus typing the clause interrogative. Movement can take place from two positions: from the lower Wh-phrase, correlating with PL reading (11a), or from a position above all Wh-phrases, correlating with SP reading (11b).

- (11) a. $[_{CP} [Q]-C^0 \dots [_{TP} (\dots) WH1 \dots WH2-[Q] \dots]]$
 b. $[_{CP} [Q]-C^0 [_{FP} [Q]-F^0 [_{TP} (\dots) WH1 \dots WH2 \dots]]]$

For reasons of space, we will not go into the semantic details, but refer the reader to Hagstrom (1998) and Bošković (1998b), or Citko and Grohmann (2000) for further discussion. Suffice it to say that SP readings correlate with the variable left

behind by Q-movement (bold strikethrough), scoping over all Wh-phrases, and PL readings correlate with it scoping over a lower Wh-phrase only. Our critical assumption is the existence of FP, which we take to be a low, C-related functional projection (assuming a split C-structure, e.g. à la Rizzi 1997).

These two options are attested in Wh-in situ languages, which explains why both SP and PL readings are allowed (see (6) above). With high Q, the choice function computed over the variable (i.e. the boldfaced Q-position; cf. (11b)) ranges over all Wh-phrases in situ (yielding SP), whereas with low Q it ranges only over WH2 (yielding PL, as in (11a)).

Note however, that in languages where WH2 scrambles over WH1, even a low Q is going to end up having both Wh-phrases in its scope; the variable only gets created once Q moves to C⁰. This results in a configuration comparable to (11), which accounts for why scrambling results in the loss of a PL reading (*Interpretive Superiority* effect illustrated in (9) above):

(12) $[_{CP} [Q]-C^0 \dots WH2-~~[Q]~~ [_{TP} (\dots) WH1 \dots WH2-~~[Q]~~ \dots]]$

If the loss of a PL reading is indeed the effect of scrambling of a lower Wh-phrase over a higher one, the only way to account for why German WH2 > WH1 questions retain PL readings is to resort to a Q-stranding mechanism which would allow WH2 to scramble over WH1, but leave the Q-particle in situ. This is indeed the line of thought taken by Hagstrom (1998) and Bošković (1998b). The resulting configuration looks like (13), where, unlike in (12), WH2 and Q move separately:

(13) $[_{CP} [Q]-C^0 \dots WH2 [_{TP} (\dots) WH1 \dots WH2-~~[Q]~~ \dots]]$

The Q-stranding mechanism strikes us as somewhat ad hoc, thus we will argue for an alternative explanation. It is not clear, for example, why Q-stranding should be allowed in German, but not in Japanese (such as illustrated by the contrast in (8)).

We have seen above that in singular Wh-movement languages, SP readings are in principle disallowed.⁷ Given the

⁷ We are abstracting away here from D-linked questions, which might involve a very different mechanism.

correlation between the scope of Q and the position of Wh-phrases, it becomes clear why this should be the case. Simply, the configuration needed for an SP reading, in which Q has scope over both Wh-phrases, never arises. Wh-movement always displaces one Wh-phrase to a position out of the scope of (the trace of) Q, even if Q is generated high (in F).

$$(14) \quad [_{CP} [Q]-C^0 \dots [_{FocP} WH1 [_{FP} \cancel{Q}]-F^0 [_{TP}(\dots) \cancel{WH1} WH2]]]]$$

Similarly, in multiple Wh-movement languages, Wh-phrases escape the scope of Q, which destroys the SP reading:

$$(15) \quad [_{CP} [Q]-C^0 \dots [_{FocP} WH1 [_{FP} WH2 \cancel{Q}]-F^0 [_{TP} \cancel{WH1} \cancel{WH2}]]]]$$

This rests on the rather natural assumption that one Wh-phrase targets [Spec, FP], the specifier of the projection hosting high Q. Leaving aside more specific motivation (such as the possibility of a focus feature involved, as sometimes argued), we build on the intuitive connection between F and Wh-properties in the sense that clause-typing properties must be identified in the finer grained C-domain of the clause (cf. Chomsky 1995, Rizzi 1997 and others). As such, we assume clause-typing proper to take place in C, hence motivating movement of Q to C in a straightforward manner. Yet introducing a high occurrence of Q—justified at least on semantic grounds (à la Hagstrom-Bošković)—raises the question of a clausal position. Generating low Q on the lowest Wh-phrase follows from the Hagstrom-Bošković approach. We believe it also follows if high Q is generated not only above all Wh-phrases, but more specifically in a position belonging to the C-system of the clause (responsible, among others, for clause-typing, discoursal effects such as topic or focus, and the like). We assume, following much recent work, a finer structure of the C-domain consisting of a force-indicating CP, topic and focus projections (TopP, FocP) and at least a “low” C-head, here identified as F (cf. Uriagereka 1995; see also Agr1P of Cardinaletti and Roberts 1991 or FinP of Rizzi 1997, and discussion in Grohmann 2000). Given that this low head may host complementizers (which may undergo further movement to C; cf. Rizzi 1997 and references), it is not implausible to

assign it the property of licensing Q (which undergoes further movement).

So much for motivating not only the existence of F but also its connection to C and Q. In what follows, we argue that this assumption, fitting in neatly with the Hagstrom-Bošković approach, allows for justification of a split as proposed in table 2 (i.e. (10) above). We first show how this approach can be implemented in German, and then address Slavic-related issues.

3 Integrating German

3.1 German as a Multiple Wh-Fronting Language

If German really were a multiple Wh-movement language, as suggested in section 3.1 on interpretive and in section 3.2 on typological grounds, we would expect certain grammatical reflexes, such as syntactic evidence for this very high occurrence of all Wh-elements as found in Bulgarian, for example. In this section we show that such evidence indeed exists and revolves around the relative placement of adverbs and quantifiers with respect to the Wh-phrases in the clause. We illustrate with binary Wh-questions, as throughout, focusing on Wh-arguments; Grohmann (1998, 2000) extends the discussion to further instances, including Wh-adjuncts.

Given what we have said so far, under a multiple Wh-movement analysis of German we would expect all Wh-phrases to appear in some C-related position at the point of Spell Out, i.e. all Wh-phrases obligatorily move into the C-domain in the overt syntax.⁸ Following, but not necessarily relying exclusively on, the assumption that FocP is the default host for overtly moved Wh-phrases, FP is a possible host for the Q-particle (if high, and also for subsequent Wh-elements).

Apart from the syntactic evidence introduced presently and the typological considerations we have based our discussion on

⁸ There are two issues to note. Firstly, without further ado we assume a head-initial analysis of German clause structure, in the spirit of Zwart (1993) or Kayne (1994), for example. As a result, many argument positions automatically shift higher up, certainly beyond the V-domain. Secondly, note that while it is widely acknowledged that the highest Wh-phrase has indeed moved to a C-position (whether one may want to call it CP, FocP or something else), the standard assumption about subsequent Wh-phrases in German is that they stay in situ or move at most to some Agr-projection. The data presented below are intended to make the case for a particular high occurrence of all Wh-elements, namely within an articulated C-domain.

so far, there are other “grammatical reflexes” worth mentioning. One is semantic in nature and follows the approach sketched out in section 2, namely the role of SP/PL interpretations following the Hagstrom-Bošković line. Another is pragmatic in nature and was first explored by Grohmann (1998). It focuses on the observation that the discursal requirements, which make asking a multiple Wh-question in German felicitous to begin with, are different from those applying to English or even more closely related Dutch.

3.2 *Quantifier interaction*

Beck (1996) observes that some quantifiers may appear in between two Wh-phrases, whereas others may not. We cannot review the details of her analysis here nor delve further into the patterns (cf. Boeckx 1999, Grohmann 1998, 2000, Hagstrom 1998, Pesetsky 2000, and references cited). What is of interest for us is the pattern that emerges. Consider the following:

- (16) a. Wer hat gestern wo alle/viele/die meisten/
who has yesterday where all/many/the most
mehr als drei Bücher gekauft?
more than three books bought
‘Who bought all books where?’
b. Wer hat gestern wo kein Buch/wenige/die
who has yesterday where no book/few/the
wenigsten/weniger als drei Bücher gekauft?
fewest/ fewer than three books bought
‘Who bought no book where?’

From (16) we can deduce that there are no Wh/quantifier-restrictions as such; when following the Wh-phrases, any quantifier may appear.⁹ (Same facts shown here and below hold of all kinds of multiple Wh-questions, regardless of Wh-argument or adjunct status.)

⁹ We illustrate with the temporal adverb in between the two Wh-phrases, which may sound more natural to most speakers. Given that we identify the specifiers of FocP and FP as the positions for the two Wh-phrases, the adverb must occur in between, e.g. in TopP, (by generation or movement); we will not discuss this further.

When the quantifiers are placed in between the Wh-phrases, however, only those displayed in (16a) are grammatical, for convenience cut down to one instance in (17) and below.¹⁰

- (17) a. Wer hat alle Bücher wo gekauft?
 who has all books where bought
 ‘Who bought all (the) books where?’
 b. #Wer hat kein Buch wo gekauft?
 who has no book where bought
 ‘Who bought no book where?’

The contrast in (17) allows for a generalization along the following lines. Monotone increasing quantifiers may appear between two Wh-phrases, decreasing ones may not. Rather than following Beck’s (1996) approach and tie this generalization in with additional assumptions on LF-movement of Wh-phrases (argued against by, for example, Hornstein 1995) or a reintroduction of (artificial) barriers, we build on the operations assumed here independently: all Wh-phrases overtly move into the C-domain to FocP and FP. Following Rizzi (1997) and others, iterative topic phrases TopP may appear in between these two. It follows from this architecture that anything in between two Wh-phrases must sit in TopP—if all German Wh-phrases do indeed move overtly into the C-domain. Returning to our generalization, we could say that only topicalizable quantifiers may occur between two Wh-phrases. As it happens, increasing quantifiers fit this condition, while decreasing ones do not. Consider the following data:

- (18) a. VIELE Bücher hat Peter gelesen.
 many-FOC books has Peter read
 ‘It is many books that Peter read.’
 b. Viele Bücher hat Peter gelesen.
 many books has Peter read
 ‘Many books, Peter read.’
- (19) a. WENIGE Bücher hat Peter gelesen.
 few-FOC books has Peter read
 ‘*It is few books that Peter read.’
 b. *Wenige Bücher hat Peter gelesen.

¹⁰ This extends to separation constructions, such as partitives, *was für*-split, etc.

few books has Peter read
'*Few books, Peter read.'

German is a verb second language. As (18) shows, virtually any maximal phrase may appear in initial position, whether focused or not. Commonly, the first element is referred to as “topic,” but as seen in (18a), it need not be a “topic” and is not one when focused. However, decreasing quantifiers may not appear in initial position, unless they are focused. Given that focused phrases may move to a specific FocP in the C-domain, which moreover is unique (cf. Rizzi 1997), the contrast in (19) and our modified generalization follow immediately.

3.3 Adverb placement

A similar “intervention” effect can be found with adverbs: some adverbs may appear in between two Wh-phrases, others may not. Again, it can be independently shown that the illicit configurations arise with non-topicalizable adverbs.

Manner adverbs, rather low in the structure, must follow the object, unless the object is focused:

- (20) a. Peter hat das Buch kaum/gerade gelesen.
Peter has the book barely/just read
'Peter barely read the book.'
b. Peter hat kaum/gerade das BUCH gelesen.

In combination with multiple Wh-phrases, these adverbs may not appear in between the two. This might strike us as a surprise, given that focus is commonly construed with Wh-phrases. It follows, however, if both Wh-phrases are in the C-domain (as opposed to a non-interrogative object as in (20)) and such adverbs may not be topicalized.

- (21) a. Wer hat was kaum/gerade gelesen?
who has what barely/just read
'Who barely read what?'
b. #Wer hat kaum/gerade was gelesen?
c. *Was hat kaum/gerade wer gelesen?

Indeed, manner adverbs, as opposed to sentential adverbs, are not topicalizable. (22) illustrates the contrast, where the object is topicalized also to force a topic-reading of the fronted adverb, rather than a high occurrence in the T-domain. (Again, the same contrasts can be found in embedded contexts.)

- (22) a. Wahrscheinlich hat das Buch Peter gelesen.
 probably has the book Peter read
 ‘Probably, Peter read the book.’
 b. *Kaum hat das Buch Peter gelesen.
 c. ..., daß <*gerade> Peter <wahrscheinlich> das
 Buch <wahrscheinlich> <gerade> gelesen hat.
 ‘Probably/*Barely, Peter read the book.’

Regarding sequences of Wh-phrases and certain “intervening” elements, if an interpretation can be construed at all it is the SP reading only for the #-marked cases in (17b) and (21).

In sum, certain elements are not topicalizable and hence predicted not to appear in between two Wh-phrases under the assumption that both Wh-phrases have moved very high, into the C-domain. This prediction is empirically borne out and it is hard to imagine how to account for these facts straightforwardly, without further assumptions or stipulations, under the standard approach to (multiple) Wh-question formation in German. (See also Grohmann 2000, Citko and Grohmann 2000 for more discussion and data on topicalizability in German.) We can schematize the relevant structures as follows (where IQ and DQ stand for increasing and decreasing quantifier, respectively):

- (23) a. [_{CP} [Q]-C⁰ [_{FocP} WH [_{TopP} **IQ** [_{FP} WH [_{TP} ...]]]]]
 a'. [_{CP} [Q]-C⁰ [_{FocP} WH [_{FP} WH [_{TP} ... IQ ...]]]]]
 b. * [_{CP} [Q]-C⁰ [_{FocP} WH [_{TopP} **DQ** [_{FP} WH [_{TP} ...]]]]]
 b'. [_{CP} [Q]-C⁰ [_{FocP} WH [_{FP} WH [_{TP} ... DQ ...]]]]]

What occurs in between two Wh-phrases must sit in TopP (qua our analysis of CP) and as such must be topicalizable.

4 A Slavic Perspective

4.1 Wh-fronting in Serbo-Croatian

In the final part of this paper, we examine the consequences of the Hagstrom/Bošković semantics for the analysis of Slavic multiple Wh-movement. We have seen above that SC patterns with Wh-in situ languages in the availability of SP/PL readings. Thus, (24a) can have both an SP and a PL interpretation, whereas (24b) can only have an SP interpretation.

- (24) a. Ko je šta kupio? (SP/PL)
 who is what bought
 b. Šta je ko kupio? (SP/*PL)
 what is who bought
 ‘Who bought what?’

Bošković (1998b) shows that this pattern receives a straightforward explanation on the assumption that Wh-phrases in SC do not undergo movement to check Wh-features (to [Spec,F] on our assumptions) but rather focus-driven movement to some position within the T-domain (e.g. Stjepanović 1995, Bošković 1997a). For concreteness, let us assume that the relevant positions are specifiers of the two agreement projections, or the equivalents thereof in more recent versions of the Minimalist Program.

- (25) $[_{CP} C^0 \dots [_{FP} Q-F^0 [[_{AgrSP} WH1 \dots [_{AgrOP} WH2 [_{AgrOP} [_{VP}]]]]]]]]$

Since Wh-fronting in SC never crosses Q, the availability of SP readings is to be expected.

Bošković gives a number of additional arguments for non-Wh-feature driven movement of Wh-phrases in SC. For example, Wh-phrases have to move even in echo questions, where the Q feature is clearly not involved.

- (26) ?*Jovan je kupio šta? (Bošković 1997b:12)
 Jovan is bought what
 ‘John bought what?’

The interaction of fronted Wh-phrases with adverbs sheds some light on the exact location of the moved Wh-phrases. An adverb like *wisely* is in principle ambiguous between a manner and a sentential reading. The two readings are standardly correlated with the different positions for the adverb, TP-adjoined vs. VP-adjoined, for example. In SC, when *mudro*

‘wisely’ intervenes between the two fronted Wh-phrases, it can either be interpreted as a sentential or a manner adverb.¹¹

- (27) Ko mudro kogo savjetuje? (Stjepanović 1995)
who wisely whom advises
‘??Who is it wise of to advise whom?’
‘Who advises whom in a wise manner?’

However, when the adverb follows the two fronted Wh-phrases, the only possible reading is the manner reading. This we take to show that the second Wh-phrase has to occupy a fairly low position within the clause, [Spec,AgrO] in Bošković’s analysis, which compels him to the assumption that manner adverbs can adjoin to AgrOP).

- (28) Ko koga mudro savjetuje?
who whom wisely advises
‘*Who is it wise of to advise whom?’
‘Who advises whom in a wise manner?’

For our purposes, what is crucial is the fact that moved Wh-phrases in SC never leave TP, thus never cross Q. This explains why SC patterns with Wh-in situ languages with respect to the availability of SP and PL readings.

4.2 Superiority Effects in Serbo-Croatian

The generalization of the previous section that in SC fronted Wh-phrases never leave the T-domain is not without exceptions, which makes an interesting prediction concerning the availability of SP/PL readings. Bošković (1997) shows that in certain contexts SC has real Wh-movement, that is movement to the C-domain, which correlates with the emergence of superiority effects. Interestingly, the contexts in which SC exhibits superiority are the contexts in which French has obligatory Wh-movement: embedded Wh-questions and long-distance matrix questions, illustrated in (29).

¹¹ The slightly degraded status of (27) follows from the general incompatibility of sentential adverbs with questions (Bošković 1996).

- (29) a. *Pierre a demandé tu as embrassé qui.
Peter has asked you have kissed who
'Peter asked who you kissed.'
b. Pierre a demandé qui tu as embrassé.
Peter has asked who you have kissed
- (30) a. Jovan i Marko ne znaju ko je koga istukao.
Jovan and Marko notknow who is whom beaten
'Jovan and Marko don't know who beat whom.'
b. *Jovan i Marko ne znaju koga je ko istukao.
Jovan and Marko notknow whom is who beaten
- (31) a. Qui Jean et Marie croient que Pierre a embrassé?
who John and Mary believe that Peter has kissed
'Who do John and Mary believe that Peter kissed?'
b. *Jean et Marie croient que Pierre a embrassé qui?
John and Mary believe that Peter has kissed who
- (32) a. Ko si koga tvrdio da je istukao?
who are whom claimed that is beaten
'Who do did you claim beat whom?'
b. *Koga si ko tvrdio da je istukao?
who are whom claimed that is beaten

Since in long-distance matrix questions, SC patterns with English-type languages with respect to superiority, it is also predicted to pattern with English with respect to the availability of SP/PL readings i.e. to only allow PL in these contexts. While a more careful investigation into the data is necessary, the judgments do appear to confirm this prediction.

4.3 Polish/Russian vs. Serbo-Croatian

Polish and Russian are standardly analyzed as belonging to this group, however if we examine them closer, important differences emerge. Polish and Russian differ from SC in that they never show superiority effects (Citko 1998, Stepanov 1998).

- (33) a. Ivan i Petr ne pomnjat kto kogo pobil.
Ivan and Peter not remember who whom beat

- b. Ivan i Petr ne pomnjat kogo kto pobil.
Ivan and Peter not remember whom who beat
'Ivan and Peter don't remember who beat whom.'
- (34) a. Kogo kogda ty xočeš čtoby ja priglasil?
whom when you want that I invite
'Whom do you want me to invite when?'
b. Kogda kogo ty xočeš čtoby ja priglasil?
when whom you want that I invite
- (35) a. Jan i Maria nie wiedzą kto kogo lubi.
John and Mary not know who whom likes
'John and Mary do not know who likes whom.'
b. Jan i Maria nie wiedzą kogo kto lubi.
John and Mary not know whom who likes
- (36) a. Kogo kiedy chcesz żebyś zaprosiła?
whom when want that.I invite
b. Kiedy kogo chcesz żebyś zaprosiła?
when whom want that.I invite
'Who do you want me to invite when?'

Since Polish and Russian long distance Wh-questions behave just like matrix questions with respect to superiority, they should also exhibit the same behavior with respect to the availability of SP/PL. In particular, they are predicted to allow both SP and PL. Again, this prediction appears to be confirmed.¹²

5 Conclusions

To conclude, we have shown that overt Wh-movement pattern is attested outside of the Slavic family of languages, in particular that German is a language with overt multiple Wh-movement. We have furthermore shown that analyzing German as a multiple Wh-movement language allows for a neater partition of languages with respect to the availability of SP/PL readings in multiple Wh questions. Finally, we have shown that

¹² For some Russian speakers, SP readings are infelicitous. Interestingly, for the same speakers, orders violating superiority are degraded.

there is a finer distinction within the Slavic family of languages with respect to the availability of SP/PL readings.

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