Left Branch Extraction and Interpretation of Multiple Wh-Questions

In this paper I examine a surprising behavior of Serbo-Croatian (SC) multiple *wh*-questions with left branch extraction (LBE), such as (1), with respect to their interpretation. The analysis leads to several conclusions regarding the nature of LBE as well as the interpretation of multiple questions discussed in Bošković (2003), Hagstrom (1998), Citko and Grohmann (2001), and Grebenyova (2006), among others.

The multiple questions in (1) are grammatical and do not involve a syntactic superiority violation, even though a lower wh-element moves over a higher one. This is not surprising given the fact that short distance matrix multiple wh-questions in SC generally do not involve superiority violations (see Rudin (1988) or Bošković (1999, 2002), among others), as illustrated in (2b). However, what is surprising is that the interpretations of multiple questions with wh-LBE like (1) differ from those of multiple questions without LBE, like (2b). As discussed in Bošković (2003), multiple questions such as (2a), with the subject > object order, have both pair-list (PL) and single-pair (SP) readings, indicated in (3a,b). Questions such as (2b) with the object > subject order, on the other hand, have only SP readings, as in (3b). The PL reading in (2b) is lost, and this is what Bošković (2003) calls interpretative superiority. Since in examples like (1) a lower wh-element moves over a higher one just as in (2b), they are expected to be interpreted the same as examples like (2b). However, unlike (2b), examples like (1) can have both PL and SP answers. The salient reading is a PL one, but a SP reading is also available, as evidenced by the fact that such examples are felicitous in a context like (4). They, therefore, do not exhibit interpretative superiority. The question is why.

The account relies on Bošković's (2002, 2003) analysis of multiple question interpretation, which is based on Hagstrom (1998). Under Bošković's analysis, examples like (2a) involve no overt wh-movement to SpecCP on the SP reading and can involve such movement on the PL reading. Examples like (2b), which only have SP readings, cannot involve overt wh-movement to SpecCP. Now, on the face of it, examples like (1) look syntactically like (2b), while semantically they are like (2a). In order to find an answer to the question above, I first check their syntactic behavior. Here I reject the possibility that the LB whelement in (1) undergoes overt wh-movement to SpecCP, since, otherwise, we would have no way of accounting for the contrast between grammatical examples like (1) and ungrammatical examples like (5a) and (6a). (5a) and (6a) are ungrammatical, because they involve syntactic superiority violations. As Bošković (2000, 2002) shows, syntactic superiority effects are triggered in SC with long-distance multiple whfronting (5a) and in multiple embedded questions (6a), because in these cases overt wh-movement to SpecCP must occur. But, then, (1) cannot involve overt wh-movement to SpecCP. Also, since (5a) and (6a) are ungrammatical, we cannot ascribe the obviation of syntactic superiority in (1) to possible D-linking of wh-phrases. In other words, (1) and (2b) ARE syntactically the same. Next, I examine why even though (1) is syntactically the same as (2b), it behaves semantically as (2a). Are such examples a counterexample to the Bošković (2003)/Hagstrom (1998) analysis of interpretation of multiple questions? I argue that, although at first sight they seem to be, they are not, and that they actually further support it. Their analysis crucially relies on the existence of a Q-morpheme, responsible for interrogative interpretation. The position of the Q-morpheme (together with the availability of overt wh-movement to SpecCP) correlates with the availability of SP and PL readings. In a nutshell, if the Q-morpheme is merged in a high position and ends up having scope over both wh-phrases, as in (7a), a SP reading is obtained. Another option is to merge it with a lower wh-phrase, as in (7b), causing it to scope over only one wh-phrase, which leads to a PL reading. In cases like (2b), the PL reading is unobtainable because, despite the fact that we can merge the Qmorpheme with a lower wh-phrase, the Q-morpheme still ends up scoping over both wh-phrases, since it is fronted together with the lower wh-phrase, as in (7c). Why is this then not the case with examples like (1) that involve wh-LBE? I argue that if LBE involves movement of the LB wh-element from the NP in which it is generated and if we make a natural assumption that the Q-morpheme is stranded with the NP from which the LB wh-element moves, as in (7d), where it has the scope over (the copy of) the lower wh-phrase only, all the facts follow straightforwardly. This Q-stranding analysis is confirmed by the data in (8), where the whole wh-NP, and not only the LB wh-element, moves. Such examples can have only SP readings. Since the whole NP moves, the Q-morpheme cannot be stranded and it ends up scoping over both wh-NPs.

Therefore, we are forced to conclude that *wh*-LBE does not have to involve overt *wh*-movement to SpecCP, contrary to what has been claimed (Fernandez-Salgueiro 2005, see also Bošković 2007) and that the Bošković/Hagstrom analysis of multiple question interpretation can accommodate these findings. Thus, *wh*-LBE is not different from the regular *wh*-fronting in SC. Also, LBE cannot involve remnant movement (Franks and Progovac 1994), since under this analysis in examples like (1), the Q-morpheme would end up having scope over both phrases (as in (9)) and, therefore, only a SP reading would be expected.

- (1)a. Kakvu; je ko [t; ocjenu] dobio? b. Koji; je ko [t; film] gledao? what is who grade gotten which is who film seen 'Who got what grade?' 'Who saw which film?'
- (2)a. Ko koga voli?
 who whom loves
 'Who loves whom?'
 b. Koga ko voli?
 whom who loves
 'Who loves whom?'
- (3)a. Petar Mariju, Ivan Vesnu, Asmir Melu.
 Petar Marija, Ivan Vesna, Asmir Mela
 'Petar loves Marija, Ivan loves Vesna,
 Asmir loves Mela, etc.'

 b. Petar Mariju
 Petar Marija
 'Petar loves Marija.'
- (4) Peter is a professor who gives one grade to one student every day and John knows this. On Tuesday John sees Peter just after a group of students has left him and asks him:

 A kakvu je ko ocjenu danas dobio? Peter answers: Goran tricu
 And what is who grade today gotten Goran three
 'And who got what grade today?' 'Goran got a C.'
- (5)a. ?*Koji ko tvrdiš da je film gledao? b. Ko koji tvrdiš da je film gledao? which who claim_{2sg} that is film seen 'Who do you claim saw which film?' 'Who do you claim saw which film?'
- (6)a. ?*Pavle se pita koji je ko film gledao. b. Pavle se pita ko je koji film gledao? Pavle SELF asks which is who film seen 'Pavle wonders who saw which film.' Pavle wonders who saw which film.'
- (7)a. SP reading: $C Q [WH_1 WH_2]$ c. $C WH_{2i}+Q [WH_1 t_i]$
- (8)a. Kakvu ocjenu je ko dobio? what grade is who gotten 'Who got what grade?'
- (9) $\begin{bmatrix} wh-NP & WH_2 & t_i \end{bmatrix}_k + Q & WH_1 & NP_i & t_k \end{bmatrix}$
- b. PL reading: C [WH₁ WH₂+Q]
- d. C WH_{2i} [WH_1 [wh-NP t_i N]+Q]
- b. Koji film je ko gledao? which film is who seen 'Who saw which film?'

References

- Bošković, Željko. 1999. On multiple feature-checking: Multiple wh-fronting and multiple headmovement. In *Working Minimalism*, ed. Samuel Epstein and Norbert Hornstein, 159-187. Cambridge, Mass: MIT Press.
- Bošković, Željko. 2000. Sometimes in SpecCP, sometimes in-situ. In *Step by step: Essays on minimalist syntax in honor of Howard Lasnik*, ed. Roger Martin, David Michaels, and Juan Uriagereka, 53-87. Cambridge, Mass.: MIT Press.
- Bošković, Željko. 2002. On multiple wh-fronting. Linguistic Inquiry 33: 351-383
- Bošković, Željko. 2003. On the interpretation of multiple questions. *Linguistic Variation Yearbook* 1: 1-15.
- Bošković, Željko. 2007. A note on wh-typology. In *Linguistic Investigations into Formal Description of Slavic Linguistics*. *Contributions of the Sixth European Conference held at Potsdam University*, ed. P. Kosta and L. Schürcks, 159-170. Peter Lang, Frankfurt am Main.
- Citko, Barbara, and Kleanthes Grohmann. 2001. The (non)-uniqueness of multiple wh-fronting: German=Bulgarian. In *Proceedings of Formal Approaches to Slavic Linguistics: The Indiana Meeting 2000*, ed. Steven Franks, Tracy Holloway King and Michael Yadroff, 117-136. Ann Arbor: Michigan Slavic Publications.
- Fernandez-Salgueiro, Gerardo. 2005. To move or not to move. Paper presented at the 41st Annual Meeting of the Chicago Linguistic Society, Chicago.
- Franks, S., and L. Progovac. 1994. On the placement of Serbo-Croatian clitics. *Indiana Linguistic Studies* 7: 69-78.
- Grebenyova, Lydia. 2006. Multiple interrogatives: Syntax, semantics, and learnability. Doctoral dissertation, University of Maryland, College Park.
- Hagstrom, Paul. 1998. Decomposing questions. Doctoral dissertation, MIT, Cambridge, Mass.
- Rudin, Catherine. 1988. On multiple questions and multiple *wh*-fronting. *Natural Language and Linguistic Theory* 6: 445-501.