

WH and/or WH? The effects of coordination strategy (disjunction vs. conjunction) on coordinated wh-constructions

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Previous research has established that certain ungrammatical sequences of multiple fronted wh-phrases improve when they are conjoined with *and* (Browne 1972; Kazenin 2002; Whitman 2002; 2004; Gračanin-Yuksek 2007; Gribanova 2009; Scott 2012; Citko and Gračanin-Yuksek 2013; 2016, among many others). For example, English wh-questions with multiple fronted wh-phrases improve if these two-phrases are separated by a conjunction, as shown in (1a-b).

(1) a. ***When where** did you see John? b. **When and where** did you see John?

Since Slavic languages allow multiple wh-fronting to begin with, no parallel contrast is found:

(2) a. **Kogo gdzie** zobaczyłaś? b. **Kogo i gdzie** zobaczyłaś? Pol
 whom where saw who and where saw
 'Whom did you see where? Lit. 'Whom and where did you see?'

Gračanin-Yuksek (2007) shows that English **CWHs** are impossible with two arguments (3a), and those with a wh-object are only allowed with optionally transitive verbs such as *eat* (vs. *devour*) (3b), but that Slavic CHWs (e.g., Polish or Croatian) are not subject to these restrictions (4a-b):

(3) a. ***What and to whom** did John give? b. **What and when** does John *eat*/**devour*?

(4) a. **Co i komu** Jan dał? b. **Co i kiedy** Jan naprawił? Pol
 what and whom Jan gave what and when Jan fixed
 Lit. 'What and to whom did Jan give?' Lit. 'What and when did Jan fix?'

Based on these differences, Gračanin-Yuksek (2007) established that Slavic CWHs can involve both a mono-clausal and a bi-clausal structure, whereas English ones only allow a bi-clausal structure. In this talk, we examine the effects of **disjunction** (versus conjunction) on the grammaticality and interpretation of *sequences of wh-phrases in coordinated questions, free relatives and multiple sluicing*.

We start with the differences between CWHs with *i/a* 'and' (henceforth CWH_{AND}) and *albo/ili* 'or' (henceforth CWH_{OR}), and observe that unlike CWH_{AND}, CWH_{SOR} are not allowed if the two wh-phrases are arguments, or if the verb is obligatorily transitive and one of the disjoint wh-phrases is a direct object.

(5) **Co i/*albo komu** Piotr dał? Pol
 what and/*or whom Piotr gave
 Lit. 'What and/or to whom did Peter give?'

(6) **Co i/*albo kiedy** Piotr naprawił? Pol
 what and/*or when Piotr fixed
 Lit. 'What and/or to whom did Peter fix?'

Next, we turn to the distribution of auxiliaries in Croatian; Auxiliaries are second position clitics, which can follow either the first constituent in their clause or the first prosodic word in that constituent. In a CWH_{AND}, the placement of an auxiliary after the entire wh-coordination (7a) is compatible with both a mono-clausal and a bi-clausal analysis, while its placement after the first wh-conjunct (7b) unambiguously indicates a mono-clausal structure (see Gračanin-Yuksek

2007). In a CWH_{OR}, the clitic can only follow the entire wh-coordination (8a-b), suggesting an obligatorily bi-clausal analysis.

- (7) a. **Što i gdje** je Petar pjevao? b. **Što je i gdje** Petar pjevao? *Cro*
 what and where aux_{CL} Petar sung what aux_{CL} and where Petar sung
 ‘What and where did Peter sing?’ ‘What and where did Peter sing?’
- (8) a. **Što ili gdje** je Petar pjevao? b. ??**Što je ili gdje** Petar pjevao?
 what or where aux_{CL} Petar sung what aux_{CL} or where Petar sung
 ‘What or where did Peter sing?’ ‘What or where did Peter sing?’

This suggests that unlike CWH_{SAND} CWH_{SOR} can *only* involve a bi-clausal structure, patterning in this respect with English rather than with Slavic CWH_{SAND}. We thus conjecture that coordinating two WHs with OR rather than AND forces a bi-clausal structure, irrespective of the availability of a mono-clausal structure for CWH_{SAND}. We link it to the independent fact that OR, unlike AND, lacks a non-Boolean interpretation (Woo 2019 and the references therein). This is shown, for example, by the following contrast.

- (9) a. *Which student **or** which professor met?
 b. Which student **and** which professor met?

Citko and Gračanin-Yuksek (2016) also showed that free relatives with conjoined wh-phrases only allow a bi-clausal structure, even in multiple wh-fronting languages like Polish or Croatian, deriving the unavailability of mono-clausal multiple free relatives from semantic considerations. This predicts that the choice of a conjunction (*and* vs. *or*) should not affect the grammaticality of coordinated free relatives. This is indeed what we find; the ungrammatical free relatives remain ungrammatical and the grammatical ones remain grammatical.

- (10) a. Jan je **co(kolwiek) i/albo kiedy(kolwiek)** Piotr gotuje. *Pol*
 Jan eats whatever and/or whenever Piotr cooks
 ‘Jan eats whatever and/or whenever Piotr cooks.’
- b. *Jan poprawia **co(kolwiek) i/albo kiedy(kolwiek)** Piotr gotuje. *Pol*
 Jan fixes whatever and/or whenever Piotr cooks
 Lit. ‘Jan fixes whatever and/or whenever Piotr cooks.’

Similarly, Citko and Gračanin-Yuksek (2019, 2020) argued that multiple coordinated sluicing obligatorily involves clausal coordination of single sluices both in English and in multiple wh-fronting languages. Thus, the bold-faced coordinated sluice in (11a) has the structure in (11b).

- (11) a. Someone saw something, but I don’t remember **who or what**.
 b. [_{CP1} who_i [_{TP1} t_i saw something]] or [_{CP2} what_j [_{TP2} they_i saw t_j]]

Given the presence of the (E-type) pronoun in the second conjunct, multiple coordinated sluicing (unlike CWH_{SAND}) admits coordination of obligatory arguments. It is then not surprising that (12) can contain both AND and OR, in contrast with (5).

- (12) Netko je nekoga pozvao na ples. Mislim da znam **tko i/ili koga**. *Cro*
 someone aux someone invited on dance think.1sg that know.1sg. who and/or whom
 ‘Somebody invited somebody to dance. I think I know who and/or whom.’

Selected references: Citko, Barbara and Martina Gračanin-Yuksek. 2013. Towards a New Typology of Coordinated Wh-Questions. *Journal of Linguistics* 49, 1-32. Citko, Barbara and Martina Gračanin-Yuksek. 2016. Multiple (Coordinated) (Free) Relatives. *Natural Language and Linguistic Theory* 34: 393-427. Gračanin-Yuksek, Martina. 2007. About sharing. Doctoral dissertation, MIT. Woo, Brent. 2019. &: The syntax and semantics of 'slash' and 'and/or'. Doctoral dissertation. University of Washington.