

Wh & Wh: Syntactic and Semantic Arguments for Clausal Coordination

Barbara Tomaszewicz, University of Southern California, btomasze@usc.edu

I propose a novel bi-clausal analysis of wh-questions with coordinated wh-elements as in (1 in contrast to 2). Depending on their semantics coordinated multiple wh-questions (CMWHs) are derived either via a conjunction of single wh-questions (3) or a conjunction of a single- and multiple wh-question (4). This analysis accounts for four special properties of CMWHs in Slavic, not observed so far.

Background: CMWHs are found in many typologically distinct languages and it has been argued that they can be derived in three distinct ways even within a single language: **A.** distinct material in SpecCP of two clauses and either ellipsis in first conjunct or sharing of lower structure (5); **B.** distinct material in the left periphery and sharing of the T-complement (6); **C.** single clause with multiple fronting and conjunction of wh-phrases (7). The earliest analyses proposed variant A (Browne, 1972, Wachowicz 1974, also Whitman 2002, Ratiu 2009), more recent ones (Gribanova 2009, Kazenin 2001, Skrabalova 2006, Zhang 2007, Haida&Repp 2009, Merchant 2007, Paperno, to appear) call for C as the basic strategy for languages (Romanian, Hungarian and Slavic) where wh-arguments can be conjoined (1a vs 1b). Citko&Gracanin-Yuksek 2009, Gracanin-Yuksek 2007 add B to account for superiority effects.

Predictions of the present proposal: My analysis (crucially extending A) can account for the syntactic and semantic properties of CMWHs that distinguish them from standard multiple wh-questions:

(i) As predicted on a bi-clausal analysis, high **speaker-oriented adverbs** can freely occur together with the conjunction (8a), but have to precede the fronted wh-phrases in a regular multiple question (8b-d), .

(ii) The contrastive conjunction "a" (available in some Slavic languages), which is clearly a **clausal coordinator** (9a-c vs 9d), is correctly predicted to be available in CMWHs (10).

(iii) Ellipsis is necessarily licensed by the preceding discourse and can be the source of the **existential presupposition** – in contrast to standard wh-questions, which only presuppose that they can be informatively answered (11B), CMWHs require enough specific information to be already present in the common ground (11B', 12B'). The existential presupposition in a CMWH checks what is logically entailed by the context (cf. 11A: That Mary had birthday does not entail she received presents, so the presupposition in 11B' cannot be accommodated). The existential presupposition in a CMWH allows for an answer with a cleft like construction (13B), which is infelicitous with a non-coordinated MWH (14B). [Additionally, the particle "to" is an indicator of (cross-clausal) ellipsis (15) – its availability in a CMWH (16) is licensed both by existential presupposition and elided clausal antecedent in the first conjunct.]

(iv) My analysis straightforwardly predicts that CMWHs can ask for **multiple pairs** (17a) but with an additional effect given that the first conjunct introduces the existential presupposition (17b) - the answer to the first question locates a specific entity within a frame of reference (cf. 13). If the second conjunct is a multiple wh-question, the listing of pairs will be evaluated with respect to the plural entity identified by the first conjunct (17b). My analysis correctly predicts that when the plural entity to be identified by the first question is already known, a CMWH is infelicitous (18a), as opposed to a MWH (18b).

Conclusion: None of the properties in (i-iv) can be accounted for without stipulation on the approach C. Additionally, I am avoiding the major drawback of C: the treatment of the coordinator as a truth-conditionally meaningless element or a conjunction of wh-quantifiers (Paperno, to appear) different from other quantifiers (19). My analysis relies on multiple wh-fronting in the derivation of multiple pair readings (4), it therefore predicts that CMWHs involving arguments and allowing multiple pair readings will occur only in multiple wh-fronting languages. It is assumed that only those languages will allow coordinated wh-arguments which can allow the TP in second conjunct to be identical to the elided TP, i.e. contain "empty categories"/traces. Support for this assumption comes from Browne 1972 and Gracanin-Yuksek 2007: English allows CMWHs only if the argument of the verb is optional but a CMWH in English has a basic single pair (SP) reading (20), Serbo-Croatian allows "object-drop" in certain anaphoric contexts, so it always allows CMWHs (21), while Bulgarian disallows empty objects so it disallows CMWHs with the order "what and who". Backwards ellipsis requires identity of the two TPs, thus I assume that in pro-drop languages like Spanish a *pro* within the TP, coindexed with a subject in a contrastive topic position blocks ellipsis.

- (1) Kto i co kupił? (Polish) (2) Kto co kupił? (Polish)
 who and what bought.3Sg who what bought
 'Who bought something and what did they buy?' 'Who bought what?'
- (3) a. [[wh₁ [... t₁ ...]] & [wh₂ [...t₂...]]]
 b. [who₁ [t₁ bought something]] & [pro what₂ [t_{pro} bought t₂]]
- (4) a. [wh₁ [t₁ [... t₁ ...]] & [t₁ wh₂ [...t₁...t₂...]]]
 b. [who₁ [t₁ [t₁ bought something]]] & [t₁ what₂ [t₁ bought t₂]] *ATB + ellipsis*
- (5) [&P [CP wh₁ [TP ... t₁ ...]]] and [CP wh₂ [TP ... t₂ ...]]] (Browne 1972; Wachowicz 1974)
 (6) [&P [CP wh₁ [TP subj_i [T... t₁ ...]]] and [CP wh₂ [TP pro_i [T... t₂ ...]]] (Citko & Gracanin 2009)
 (7) [CP [TP [&P wh₁ & wh₂]] [TP ... t₁ ... t₂ ...]]] (Gribanova 2009)
- (8) a. Koj i naj-važno kakvo e казал? b. *Koj naj-važno kakvo e казал? (Bulgarian)
 who and most-importantly what aux said c. A naj-važno koj kakvo e казал?
- (9) a. Jan i/*a Maria d. Kto grał i/a kto śpiewał? (Polish)
 b. Już przeczytałam i/*a wyrzuciłam tę gazetę. who played and who sang
 already read.1.Sg and discarded1.Sg this newspaper
- (10) a. Kto a najważniejsze co mówią o tobie? b. *Kto a co mówił o tobie? (Polish)
 who and most.importantly what said about you who and what said about you
- (11) A: Mary had her birthday yesterday. (13) A: Kto i jakie miasto podbił? (Polish)
 B: Kto co przyniósł Marii na urodziny? who and which city conquered
 who what brought Mary.Dat for birthday B: Wandalowie i to Rzym.
 B': #Kto i co przyniósł Marii na urodziny? Vandals and TO Rome
 who and what brought Mary.Dat for birthday 'Vandals, and it was Rome (that they conquered)'
- (12) A: Mary had her birthday yesterday and (14) A: Kto jakie miasto podbił?
 she received a lot of presents. who which city conquered
 B: Kto co przyniósł Marii na urodziny? B: #Wandalowie i to Rzym.
 B': Kto i co przyniósł Marii na urodziny? C: Wandalowie Rzym, Gepidowie Kluž,
 Wizygoci Leon, Goci Werone, ...
- (15) A: Janek przyniósł Marii bukiet. B: O tak! I to (przyniósł) już w niedzielę. (Polish)
 John brought Maria.Dat bouquet Oh yes! And TO (brought) already on Sunday
- (16) a. Koj i to kakvo kupi? b. *Koj to kakvo kupi? (Bulgarian)
 who and TO what bought who TO what bought
- (17) a. Nasobranii mnogie vyskazali svoju tochku zrenija na etu problemu, no
 at meeting many presented self's point vision on this problem, but
 ja ne pomnju po porjadku kto i chto skazal. (Russian)
 I not remember on order who and what said
 b. 1st conjunct: *Who said something?* 2nd conjunct: *Who said what?*
- (18) a. Majoritatea invitatilor va aduce ceva, dar nu știu cine și ce va aduce. (Romanian)
 majority guests will bring something but not I.know who and what will bring
 b. #Toată lumea aduce ceva, dar nu știu cine și ce va aduce.
 all people will bring something but not I.know who and what will bring
- (19) a. *Ktoś i coś kupił. (Polish) b. *Nikoj i ništo e kupil. (Bulgarian)
 someone and something bought nobody and nothing bought
- (20) What₁ (did you sing t₁) and where [did you sing]? (SP) vs What did you sing where? (MP)
- (21) a. A: Da li je razbio staklo? B: Da, razbio je. b. Šta i ko razbio? (Serbo-Croatian)
 prt aux broke glass yes, broke aux what and who broke

Selected References: Browne, 1972. Conjoined Question Words... Linguistic Inquiry 3 // Citko, Gracanin 2009. Ways of Wh-Coordination. Abstract for NELS 29 // Gribanova 2009. Structural Adjacency and the Typology of Interrogative. Linguistic Inquiry 40 // Gracanin-Yuksek 2007. About Sharing. MIT Diss. // Kazenin 2002. On coordination of wh-phrases in Russian. Ms.// Ratiu 2009. Coordinated Questions vs. Matching Questions in Romanian. Abstract for ConSOLE XVII // Paperno, D. (to appear). Semantics of Hybrid Coordination in Russian: New Evidence. Proceedings of FASL 18