Focus placement affects the interpretation of multiple interrogatives

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**Background.** Multiple *wh*-questions (MWQ) have (at least) two possible readings: a single-pair (SP) and a pair-list reading (PL). The representation of SP is a *set of propositions* and thus resembles the one of ordinary questions (originally Hamblin 1958). PL is represented as a *set of questions*, i.e. a set of sets of propositions (Hagstrom 1998). This analysis, adopted by most linguists working on MWQ in Slavic, has two crucial ingredients. First, *wh*-words (*wh* for short) are represented as Hamblin sets (of individuals) (Kratzer & Shimoyama 2002). Hamblin sets are semantically composed with their sisters by *flexible functional application*, which enables a function to yield a value for each of the arguments in the set (thus producing another Hamblin set). Second, questions involve a *Q*-morpheme, which (in combination with an interrogative *C₀*) takes a proposition as its argument and yields a set of propositions (i.e. a question) as its value. At the same time, *Q* is an existential quantifier binding a choice-function variable in its scope. The choice function (or *Q* for short), whose function is to turn a Hamblin set into a single member of that set, is instrumental in deriving the SP/PL difference: if both *wh* in a MWQ are in the scope of *Q*, we get SP (1a); if only one *wh* is in the scope of *Q*, we get PL (1b). On Hagstrom’s original proposal, *Q* takes either the whole TP or one of the *wh* as its sister. It was soon noted that this proposal overgenerates, when viewed cross-linguistically (e.g. Bulgarian MWQ do not have SP). Bošković (2001) amends Hagstrom by assigning *Q* a [+wh] feature. Obligatory *wh*-fronting (to SpecCP) is therefore incompatible with *Q* being merged with TP, because its [+wh] intervenes for *wh* attraction to SpecCP. This leaves a *wh* as the only possible sister for *Q* and PL as the only possible reading for *wh*-fronting languages. Grebenyova (2004) puts into doubt Bošković’s idea that the incompatibility with SP is tied to *wh*-fronting to SpecCP (e.g. Russian has no such fronting but still disallows SP). She proposes that the selectional properties of *Q* are lexically determined—either it can select only *wh* or both *wh* and TP. For Grebenyova, the question of “what determines the lexical choice of a particular *Q*-morpheme crosslinguistically [...] can[not] be answered in any insightful way.” We disagree with this agnostic view and propose that *Q*-placement can be derived on independent grounds.

**Proposal.** We propose that *Q* always selects the constituent which is in focus. This can be a *wh* but does not have to be (cf. Eckardt 2007). The primary evidence comes from Czech, which has two MWQ patterns: multiple *wh*-fronting (MF) with both SP and PL available (2a), and single *wh*-fronting (SF) with only PL (2b). Deriving PL-only in SF (7a). It can be shown that *wh*-based indefinite pronouns in postverbal position attract narrow focus (3). This holds also for the postverbal *wh* in (4b), which, being in focus, triggers a presupposition that somebody said something and (4b) thus cannot be used in a rhetoric fashion. It follows automatically that SF only has PL because *Q* must associate with the postverbal *wh*. Interestingly, we also account for the availability of SP with complex *wh*-phrases in postverbal positions (5) since complex indefinites in postverbal positions do not attract narrow focus (6). Deriving SP in MF (7b). Both *wh* undergo a movement which we could call “escape (narrow) focus” (EF-movement), i.e. some sort of scrambling to the vP edge (cf. Sturgeon 2007). This creates a broad-focus configuration, where the whole vP/TP is selected by the focus-sensitive *Q*. Deriving PL in MF (7c). One of the *wh* undergoes the EF-movement and the other moves to SpecFocP. Since the latter one is in a derived narrow focus position, it is selected by *Q*. These clearly semantically motivated movements are followed by a semantically vacuous movement of one of the *wh* to a clause-initial position, motivated by clause typing (Cheng 1991). The main prediction of this system is that the (un)availability of SP/PL in a language should correlate with the (un)availability of *wh*-movement into / out of focus in that language. E.g. the lack of *wh*-scrambling in English derives its lack of SP; *wh*-scrambling in Japanese, on the other hand, yields SP (Hagstrom 1998), as predicted.
(1) Which student invited which girl? [a. – Adam invited Karen (SP) / b. – all, bI, cIm (PL)]
   a. SP: $\lambda p \exists x. p = f(\lambda p' \exists x \in \text{student}' \exists y \in \text{girl}' . p' = \text{invited}' (x, y))$
   b. PL: $\lambda P \exists x \in \text{student}' . P = \lambda p \exists x. p = \text{invited}' (x, f(\lambda y. \text{girl}' (y)))$

(2) a. Kdo mu asi co řekl? / b. Kdo mu asi řekl co?.
   ‘Who probably told what? (a. SP or PL, b. only PL)’

(3) Popřel, že by se a. s kýmkoli vyspal / b. vyspal s kýmkoli.
   denied that would refl with anyone sleep sleep with anyone
   a. ‘He denied that he slept with anyone’
      $\text{claim}(xhe, \neg \exists y. \text{slept with}(xhe, y))$ Neg takes wide scope ≈ broad focus
   b. ‘He denied that he slept with just anyone’
      $\text{claim}(xhe, \exists y. \text{slept with}(xhe, y) \wedge \neg \text{freechoice}(y)))$ Neg takes narrow scope ≈ narrow focus

(4) Prosím tě, a. kdo mu mohl co říct!? / b. * kdo mu mohl říct co!?
   please you who him could what tell who him could tell what
   Lit. ‘Come on, who could tell him what?’ ≈ ‘Come on, nobody could have told him anything!’

(5) Nevím, kdo koupil jakou/ kterou knížku.
   not.know who bought what/which book
   ‘I don’t know who bought what/which book. (SP or PL)’

(6) Popřel, že by koupil jakoukoli/ kteroukoli knížku
   denied that would buy any.kind.of/ any.one.of book
   ‘He denied that he bought any book.’ ≈ (3a)

(7) Syntax of single fronting and multiple fronting (⟨X⟩ is an intermediate copy/trace; interpreted copies are underlined)
   a. SF [CP wh₁ [TP … [vP ⟨wh₁⟩ [vP V Q wh₂]]]]
   b. MF/SP [CP wh₁ [TP … Q [vP ⟨wh₁⟩ wh₂ [vP V]]]]
   c. MF/PL [CP wh₁ [FocP Q wh₂ [TP … [vP ⟨wh₁⟩ [vP V]]]]]

References