Interpretation of Multiple Interrogatives: An Information Structure Sensitive Account[*]

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1 Introduction

The common denominator of the recent formal Slavicist work on multiple interrogatives (Bošković 2001, 2002; Grebenyova 2004, 2006; Gribanova 2009) is the belief that their interpretation is constrained primarily by parametric settings. Different classes of interrogative interpretations, such as pair list and single pair readings, derive from the properties of functional heads, which are hard-wired in the lexicon and thus fixed once and for all for a language or, at best, a grammatical environment. This leaves very little space, if any, for aspects of interpretation that are dynamic and context dependent. The relevance of discourse context for the form and meaning of questions has been discussed in more pragmatically oriented literature (Kuno 1982, Erteschik-Shir 1986, Kennedy 2005, *inter alia*). Within Slavic linguistics, the first attempt to incorporate context-sensitivity into the theory of multiple questions goes back to Wachowicz (1974).

In this paper, I take a novel approach to multiple interrogatives which combines the strengths of both lines of research. I show how Hagstrom's (1998) formal analysis of questions, adopted by Bošković and Grebenyova, should be amended by an information structure sensitive rule of Q-particle placement. In particular, I argue that the Q-particle always gravitates to the constituent(s) in focus. The prediction is that information structure – the reflection of context at the sentential level – directly constrains the interpretation of multiple interrogatives. In a sense, the Q-particle is the contextual ambassador in the structure of

interrogatives. Some novel evidence from Czech will be explored in defense of this hypothesis.

In section 2 I outline Hagstrom's analysis of questions. Section 3 discusses the problem of Q-particle placement, and defends the focus gravitation hypothesis. Section 4 concludes the paper.

2 A brief sketch of Hagstrom's (1998) theory

Hagstrom's analysis of questions is embedded in a tradition under which a question is represented as a set of propositions that constitute possible answers to that question. Hasgstrom combines two types of question composition: Hamblin (1973)-style and Karttunen (1977)-style. In the former, the source of the set-semantics of questions is the wh-word itself – denoting a set of alternative entities. By pointwise functional application, the set-semantics "percolates" from the wh-word all the way to the propositional level, yielding a set of propositions:

(1) $\|$Who came?$\|^{\text{Hamblin}} =$
    $\|$came$\|(\|$who$\|) = \{p : p = \lambda w.\ \text{came}'(w)(x) \mid \text{human}'(x)\} =$
    $\lambda p \exists x.\ p = \lambda w.\text{came}'(w)(x)\ \&\ \text{human}'(x)$

In the latter, a special interrogative complementizer/operator is used, which binds the variable associated with the wh-word and turns an open proposition into a set of existential statements, i.e. a question. In order to keep the wh-word semantics uniform, Hagstrom assumes that wh-words universally denote sets (Hamblin-style) and the role of the bound variable is taken over by a generalized choice functional variable (type $\langle\sigma t,\sigma\rangle$ for any type σ), which takes a set (e.g. a wh-word) and returns an element of that set. This choice function is called the Q-particle, a term that I adopt. The complementizer binds the choice-functional variable and returns a set of propositions (f and g are choice-function variables, the variable p' in (2) is of type $\langle\langle\sigma t,\sigma\rangle,st\rangle$ – a function from choice functions to propositions).[1]

(2) $\|$Who came?$\|^{\text{modified Karttunen}} =$

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1 I depart from Hagstrom in that I take the Q-particle to be a variable rather than a quantifier. This will become relevant in questions with more than one Q-particle (§3.4.3). I leave the formal redefinition of the interrogative complementizer aside here.

$\|C_i \; \mathbf{Q}_i(\text{who}) \; \text{came}\| = \|C\|(\|f(\text{who}) \; \text{came}\|) =$

$[\lambda p'\lambda p \exists f.p = p'(f)](\lambda g \lambda w.\text{came}'(w)(g(\lambda x.\text{human}'(x)))) =$

$\lambda p \exists f.p = \lambda w.\text{came}'(w)(f(\lambda x.\text{human}'(x)))$

Even though the semantics produced by the two systems is answerhood-conditionally equivalent (i.e. both yield identical sets of propositions), the difference in the way the propositional alternatives are introduced into the representation can be functionally exploited in the analysis of multiple interrogatives. Depending on how and whether these two systems are combined within one question, a multiple interrogative is translated either to a set of propositions or to a set of *sets of* propositions, i.e. a set of subquestions (cf. also Roberts 1996). In general, a multiple question is answered if each of the (sub)questions that it denotes is addressed. In the former case (a set), this is just one question and the answer a single proposition – the single pair (SP) reading. In the latter case (a set of sets), this is a list of questions and the answer a list of propositions – the pair list (PL) reading. SP readings are generated if both wh-words are in the scope of the Q-particle or if there is no Q-particle at all. PL readings are generated if only one wh-word is in the scope of a Q-particle (see Hagstrom 1998: Ch6 for details). I exemplify a possible configuration for each of the readings (π has the type of questions, i.e. $\langle st,t\rangle$):

(3) $\|\text{Who likes what?}\| =$
   SP: $\|\text{who likes what}\| = [\|\text{likes}\|(\|\text{what}\|)](\|\text{who}\|) =$
      $\lambda p \exists x \exists y.\; p = \lambda w.\; \text{likes}'(w)(x,y) \;\&\; \text{human}'(x) \;\&\; \text{thing}'(y)$
   PL: $\|C_i \; \text{who likes} \; \mathbf{Q}_i(\text{what})\| = \|C\|[[[\|\text{likes}\|(f(\|\text{what}\|))](\|\text{who}\|)] =$
      $\lambda \pi \exists x.\; \pi = \lambda p \exists f.\; p = \lambda w.\; \text{likes}'(w)(x,f(\lambda y.\; \text{thing}'(y))) \;\&\; \text{human}'(x)$

The position (or the presence) of the Q-particle is crucial for determining the type of reading a multiple interrogative is assigned. Thus, the million-dollar question for any Hagstrom-based theory that tries to account for the distribution of SP and PL readings is: How to determine the position of the Q-particle?[2]

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2 The background assumption is that the device of Q-particle is a linguistic universal, even if it has no morphological exponent in a language. This is also assumed in Cable (2007) for independent reasons.

3 The Q-particle placement and the focus gravitation hypothesis

3.1 Previous accounts
In Hagstrom's original proposal, the introduction of the Q-particle into the structure is determined by economy considerations: it is merged as soon as possible (see his Chapter 8 for a conceptual discussion). This means that in a multiple question with wh-words in the subject and object position, Q will always attach to the object. The resulting structure yields a PL reading (as exemplified in (3)). Under certain conditions, the Q-particle can be re-placed to a position where it c-commands both wh-words (IP), a structure that yields an SP reading. This re-placement is called "migration" and it is a novel kind of movement that combines the properties of A and A-bar movement (no reconstruction but no locality either). Because of these somewhat *ad hoc* properties, the operation of migration is conceptually unattractive and should be avoided if possible. Bošković (2001, 2002) adopts Hagstrom's core proposal, including Q-migration, and proposes additional restrictions to broaden the cross-linguistic coverage of Hagstrom's system. Grebenyova (2004, 2006) dispenses with Q-migration but offers no *principled* alternative of Q-placement, letting the lexicon decide where Q-particles can be placed in which languages. As a result, the (un)availability of different kinds of multiple interrogative readings is accidental and unpredictable.

These "rigid" (either syntactically or lexically oriented) accounts of Q-placement fall short of explaining some structure- and context-dependent aspects of multiple interrogative interpretation. Consider the English question in (4):

(4) Who cheated on who?

This question will be answered in a pair list fashion when watching a thousandth sequel of a Mexican soap opera. However, it will receive a single pair answer in response to a query about what is behind the recent break-up of a couple. One form and yet, two different meanings. Hagstrom, Bošković, and Grebenyova have no satisfactory account of this context-dependent ambiguity, failing to derive the single pair reading. Another problem for the rigid accounts is the asymmetry that arises in superiority-obviating contexts:

(5) a.   What did you buy where?
     b.   Where did you buy what?

It has been argued by many authors for many languages (Wachowicz 1974 for Polish, Kuno 1982 for English, É. Kiss 1993 for Hungarian, Comorovski 1996 for Romanian, Jaeger 2004 for Bulgarian, *inter alia*) that (5a) should be paraphrased as 'for each thing tell me where you bought it' and (5b) as 'for each place, tell me what you bought there.' As noted by Hagstrom (1998:152), this universal-like effect is accounted for by his semantics without an actual universal quantifier in the structure. This is because the alternatives of the wh-word scoped over by Q are nested within the alternatives of the other wh-word. Despite this neat property of Hagstrom's system, the existing rules of Q-placement do not make use of it and fail to account for the observation in (5): If the Q-particle merges invariantly with the first wh-word that enters the structure (Hagstrom, Bošković), it will invariably merge with *what* and both (5a,b) will receive identical semantics, namely 'for each place, tell me what you bought there.' Alternatively, if Q merges with either *what* or *where* in both (5a) and (5b) (Grebenyova), the result is an ambiguity of both (5a,b). While the former approach undergenerates, the latter one overgenerates.

3.2 The focus gravitation hypothesis
In order to account for the observation in (5), one needs to assume that the Q-particle merges with the wh-word that remains in situ, rather than the one that is introduced first into the structure. As suggested by some authors (Erteschik-Shir 1986, Kennedy 2005), a wh-word in situ is in focus (which is not necessarily true of moved wh-words) – a hypothesis that will receive some novel support in §3.3. This leads us to the present proposal:[3,4]

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3 Due to space reasons, I cannot spell out a theory of information structure. I am assuming a version of givenness-based theories (cf. e.g. Schwarzschild 1999). Givenness is defined as generalized discourse entailment and can*not* be identified with presupposition (see Kratzer 2004 for discussion). The F-marking used here is somewhat misleading in that it covers both information focus (which is actually not marked in syntax at all and simply corresponds to the absence of givenness), and contrastive focus (which is marked in syntax).
4 A related proposal – one that argues for focus-sensitivity of the Q-particle – was made by Kishimoto (2005) for Sinhala, a language with overt Q-particles.

(6) *The focus gravitation hypothesis for Q-placement*

    A Q-particle merges with a constituent C iff

        (i) C is F(OC)-marked or new (not given) and

        (ii) C dominates/is an interrogative wh-expression

Despite a superficial similarity with Hagstrom's original proposal for Q-placement (focus ≈ low in structure), the focus gravitation hypothesis cuts the pie of multiple interrogative readings in a fundamentally different way. Most importantly, it predicts the interpretation to be (at least partly) a function of dynamic discourse properties. Hard-wired lexico-grammatical properties are expected to play a role only insofar as they determine the richness and flexibility of the information structure tools of a particular language.[5]

    The hypothesis will be defended based on a detailed analysis of Czech. After I outline some background assumptions (§3.3), I investigate the properties of Czech multiple and single fronting multiple interrogatives (§3.4). Finally, I include a sketchy account of a number of other languages (§3.5).

3.3 Czech multiple interrogatives and their information structure

Czech has two strategies for asking multiple questions (leaving coordination cases aside): multiple fronting (MF) (7a) and single fronting (SF) (7b). In MF, the lower wh-phrase does not front to the CP periphery, but rather to the vP periphery (Sturgeon 2007). The pitch accent (which will be marked with capitals throughout for clarity) is invariably placed on the final constituent in Czech (cf. also Kučerová 2007).[6]

(7) a. Kdo co KOUPIL?
       who what bought
   b. Kdo koupil CO?
       who bought what
       'Who bought what?'

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5 Notice that (6) allows for more Q-particles to appear in one question, which happens when there are at least two discontinuous foci each of which contains a wh-word. See §3.4.3 for a discussion of this case.

6 The SF strategy also exists in Polish, as noted in Wachowicz (1974:60). From what Wachowicz points out in her very brief note, the Polish SF could be quite similar to the Czech one.

In order to apply our hypothesis to the data, we need a reliable way to assign the two types of wh-questions a possible range of information structures. I propose to determine the information structure properties of questions/wh-words based on the analogy with declaratives containing indefinite pronouns. I take this method and its results to be justified by (i) the fact that wh-words and indefinites are very closely related morphologically and semantically (since Katz & Postal 1964) – a paradigmatic relation that is remarkably stable cross-linguistically (Haspelmath 1997) and (ii) wh-words are not necessarily in focus and the information structure properties of wh-questions are very close to the ones of declaratives (Wachowicz 1974, Bolinger 1978, Erteschik-Shir 1986, Kennedy 2005).

Below, we see two possible word orders of a declarative containing an indefinite pronoun in the object position, (8a) and (8b).[7] Using the standard question-answer test, we find out that the information structure of the latter order is highly constrained: the indefinite must be construed as narrowly focused (this is also true for the English translations).[8]

(8) a. *1. What happened? / 2. What did Karel do? / 3. Did Karel sell something? / 4. Karel bought something, right?*
   $[_{F1}$ Karel $[_{F2}$ něco $[_{F3}$ KOUPIL $]$ $]$ $]$ (4: no F-marking)
   Karel something bought
   'Karel BOUGHT something.'

   b. *1. What happened? / 2. What did Karel do? / 3. Did Karel buy everything? / 4. Karel bought something, right?*
   $[_{*F1}$ Karel $[_{*F2}$ koupil $[_{F3}$ (jenom) NĚCO $]$ $]$ $]$ (*4: no F-marking)
   Karel bought (only) something
   'Karel bought (only) SOMETHING'

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7 For the sake of felicity, I use a referential expression in the subject position. Since we are primarily interested in the wh-element that varies with respect to word order, i.e. the lower one, we can ignore this inconsistency. For completeness – I will assume that the information structure status of the left-peripheral wh-word is (structurally) unconstrained, i.e. it can be new, given, focused, or given and focused.

8 The notation in (8) should be interpreted as follows: F-subscripts signify F(OC)-marking. The numerical subscripts determine question-answer pairing: e.g. a sentence with F-marking 2 constitutes an answer to question 2. Asterisks mark ungrammaticality of the sentence under the relevant F-marking/in the relevant context. Thus, the sentence (8b) is ungrammatical in contexts provided by questions 1, 2, and 4.

Now, by analogy, we assign the same range of information structures to the corresponding interrogatives:

(9) a. [$_{F1}$ Kdo [$_{F2}$ co [$_{F3}$ KOUPIL]]]? (4: no F-marking)
        who what bought
    b. [$_{*F1}$ Kdo [$_{*F2}$ koupil [$_{F3}$ CO]]]? (*4: no F-marking)
        who bought what

If we combine the two possible word order patterns (SF/MF) and the assumed restriction on F-marking (8b/9b) and we feed it into the focus gravitation hypothesis (6), we arrive at four relevant sites for the Q-particle: (10a,b,c,d). One configuration is added: (10e), where we assume a discontinuous F-marking and therefore two Q-particles. Three of these configurations yield an SP reading (10a,b,e) and two a PL reading (10c,d).[9]

(10)a. **MF / all given → SP**
        [$_{IP}$ who [$_{vP}$ what [$_{vP}$ bought]]]
        $\lambda p \exists x \exists y.\ p = \lambda w[B(w)(x,y) \& H(x) \& T(y)]$
    b. **MF / all new → SP**
        [$_{CP}$ C$_1$ **Q**$_1$ ([$_{IP}$ who [$_{vP}$ what [$_{vP}$ bought]]])]
        $\lambda p \exists f.\ p = f(\lambda q \exists x \exists y.\ q = \lambda w[B(w)(x,y) \& H(x) \& T(y)])$
    c. **MF / vP new → PL**
        [$_{CP}$ C$_1$ [$_{IP}$ who **Q**$_1$ ([$_{vP}$ what [$_{vP}$ bought]])]]
        $\lambda \pi \exists x.\ \pi = \lambda p \exists f.\ p = \lambda w[(f(\lambda P \exists y.\ P = B'(w)(y) \& T(y)))(x) \& H(x)]$
    d. **SF / wh-in situ F-marked → PL**
        [$_{CP}$ C$_1$ [$_{IP}$ who [$_{vP}$ bought **Q**$_1$ (what)]]]
        $\lambda \pi \exists x.\ \pi = \lambda p \exists f.\ p = \lambda w[B(w)(x,f(\lambda y.\ T(y))) \& H(x)]$
    e. **SF / both wh F-marked → SP**
        [$_{CP}$ C$_{1,2}$ [$_{IP}$ **Q**$_1$ (who) [$_{vP}$ bought **Q**$_2$ (what)]]]
        $\lambda p \exists f \exists g.\ p = \lambda w[B(w)(f(\lambda x.\ H(x)),g(\lambda x.\ T(x)))]$

The prediction is that both SF and MF allow for both PL and SP,

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9 The variable *p* ranges over propositions (type <st>), π ranges over questions, i.e. sets of propositions (type <st,t>), *P* over properties (type <et>), and *f* and *g* range over generalized choice functions (type <σt,σ> for any type σ). *H* stands for the property human', *T* for thing', and *B* for bought', *B'* for bought-something'.

however, under different contextual/information structure conditions. In the following section, we will see these schemas (with the exception of (10a), for reasons of space) materialize in real examples from Czech.

3.4 Testing the predictions for Czech
We discuss three types of readings: PL readings, and two classes of SP readings, one which, to my knowledge, has gone unnoticed in the literature, and the other which has been well-known, at least since Wachowicz (1974).

3.4.1 PL readings. As will be illustrated shortly, both SF and MF in Czech allow for PL readings. The relevant configurations are the following:[10]

(10)c. $[_{CP} C_1 [_{IP}$ who $\mathbf{Q}_1 ([_{vP}$ what $[_{vP}$ bought $]])]]$
   d. $[_{CP} C_1 [_{IP}$ who $[_{vP}$ bought $\mathbf{Q}_1$ (what) $]]]$

Let us directly explore two specific predictions, which are relevant for the current thesis. The present system correctly captures the observation already hinted at in §3.1, namely that in questions with PL readings, the moved wh-word behaves as outside of the scope of the Q-particle. In this way, it affects the answerhood conditions of the question, such that the moved wh-word corresponds to the topic of the answer. However, the point can be made stronger. The wh-word that moves not only corresponds to the topic of the answer, it can actually *be* the topic of the question. I assume here that a "topic" is defined in terms of givenness (Schwarzschild 1999), i.e. generalized discourse entailment. In the examples below, it is preferred to front the wh-word that has a direct discourse antecedent and thus qualifies as given (*the things – what; the people – who*) . The members of the givenness relation are marked by boldface.

(11) They brought **the things**, but I don't know...

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10 Throughout the discussion, I use wh-in situ representations. This oversimplification can be ignored once we make the assumption that the interrogative complementizer has the highest scope and thus scopes even over moved wh-words. In other words, one can also replace IP with CP and CP with, say ForceP in most examples without changing anything substantial.

a. **co** jsme měli předat KOMU
    what aux:pst:1pl have give whom
    'what we were supposed to given to whom.'
b. #komu jsme měli předat **CO**

(12) **The people** showed up, but I don't know...
a. **komu** jsme měli předat CO
    whom aux:pst:1pl have give what
    'whom we were supposed to give what.'
b. #co jsme měli předat **KOMU**

The second interesting prediction concerns the choice between SF and MF, under identical readings. Given that SF corresponds to a more "marked" pattern, information-structure-wise (cf. (9) above), the SF cases are expected to be used in more "marked" situations. The questions above, for instance, can only be felicitously asked, if they are embedded in a discourse that entails 'giving'. Now, consider the following minimal pairs. The predicate 'sit down' has a discourse antecedent in (13) but not in (14) (given that there was no discussion about sitting down before). All other things being equal, a discourse-given predicate (marked by boldface) will appear in a deaccented position in (13), leaving the wh-word in narrow focus, while in the absence of such givenness, the verb can stay in a more unmarked position and the configuration corresponds to a broader (vP) focus, as in (14).

(13) – Proč se ne**posadíte**? – Neřekli nám...
    why refl not.sit.down:2pl not.told:3pl us
    '– Why don't you sit down? – They didn't tell us...
a. #kdo se má kam **POSADIT**.
    who refl have:3sg where sit.down
b. kdo se má **posadit** KAM.
    who refl have:3sg sit.down where
    who is supposed to sit down where.'

(14) – Proč tady tak stojíte? – Neřekli nám...
    why here so stand:2pl not.told us
    '– Why are you standing here like that? – They didn't tell us...
a. kdo se má kam POSADIT.
    who refl have:3sg where sit.down

b. #kdo se má posadit KAM.
    who refl have:3sg sit.down where
    who is supposed to sit down where.'

In sum, we illustrated that both SF and MF facilitate PL readings. On top of that, we saw that two predictions specific to the present account are borne out: one which concerns the problem of topicality, both question-internal and in relation to answerhood, and the other concerning the choice between SF and MF under identical readings.

3.4.2 Default SP readings. Now we move on to a class of SP readings, which arise when the asker has no reason to assume that there is a list of pairs each of which satisfies the predicate under discussion. I call them "default", since they pose hardly any requirements on the context in which they can appear. This class of readings is arguably unavailable in English (see §3.5 for the reason why this is the case), which is why its existence has practically gone unnoticed. Questions of this type can be used as conversation starters, in which case they are all-new information-structure-wise, or are only reacting to a certain situation, rather than to information that is explicitly provided in the discourse. Being all-new, the Q-particle merges with the whole IP and the structure yields an SP reading.

(10)b. $[_{CP} C_1 \mathbf{Q}_1 ([_{IP} \text{who } [_{vP} \text{what } [_{vP} \text{bought }]]])]$

I exemplify these SP readings on the two examples below. Notice that only MF can generate them, as correctly predicted.

(15)[Context: I meet a friend about who I know that he recently decided to be polite, do good deeds, and help people as much as possible. I can start the conversation by asking.]
    a.   Tak co, komu jsi dnes s čím POMOHL?
        so what whom aux:pst:2sg today with what help
        'So, who did you help with what today?'
    b. #Tak co, komu jsi dnes pomohl s ČÍM?

(16)[Context: At work, we have a colleague who is very touchy and gets offended easily. Other colleagues tease him now and then. One day

I come to work and see that he is offended again. I say]
a.   Proboha, kdo mu zase co ŘEKL?
     Oh.my.god who him again what told
     'Oh my god, who told him what again?'
b. #Proboha, kdo mu zase řekl CO?

A careful reader might wonder whether the lower wh-words are interrogative pronouns at all. In fact, Wachowicz (1974:62) reports that in analogous configurations in Polish, they are interpreted as indefinites, a fact that also holds for German unaccented bare wh-words. However, in answering the questions above, the value for both wh-words must be filled in in Czech. It is not sufficient to answer (15a) *našemu sousedovi* '[I helped] *our neighbor*' or (15a) *Pavel* 'Pavel [told him something]'. This suggests that they are genuinely interrogative.

In sum, we saw a type of SP reading where the asker's commitment with respect to the answer complexity is very weak: since there is no reason to assume that there are multiple pairs that satisfy the predicate, the asker is bound to use a structure that can be assigned an SP reading. Even though these questions can be answered in a PL fashion (as opposed to the type of SP questions to be discussed now), it is infelicitous to use a structure that *forces* such an answer.

3.4.3 Reciprocal SP readings. The final SP reading to be discussed was already hinted at in §3.1 and has been discussed at least since Wachowicz (1974).[11] It concerns questions like *Who hit who?* asking for the clarification of which of two contextually salient people was active in some salient event of hitting. Such questions denote a set of two propositions, e.g. {A hit B, B hit A}, and therefore qualify as having an SP reading. It turns out that these questions can only be expressed by using SF in Czech:

(17) I heard that Karel and Marie broke up, but I don't know
     a.   kdo se rozešel S KÝM.

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11 Wachowicz discusses one more type of SP readings, the so-called "referential" reading. Questions with this reading are asked when an interlocutor fails to assign a referent to a pronoun. These questions are formally and semantically related to echo questions and in the present categorization behave as all-given questions, presumably with no F-marking. They require MF, as predicted.

who refl broke.up with whom
'who broke up with whom'
b. #kdo se s kým ROZEŠEL.

Questions of this type are strongly context dependent. It seems safe to assume that they are typically all-given. But why does this not yield the default word order, as schematized in (10a) above? The reason is that the two questioned constituents are contrasted with each other. This contrast is formally mediated by F-marking (on top of the givenness). Since both wh-words are F-marked without forming a constituent to the exclusion of a non-F-marked element, two separate Q-particles have to be used, in accordance with the focus gravitation hypothesis. Both these Q-particles get bound from the interrogative C and the result is an SP reading:

(10)e'. $[_{CP}$ $C_{1,2}$ $[_{IP}$ **Q**$_1$ (who) $[_{vP}$ broke up **Q**$_2$ (with who) $]$ $]$ $]$

3.4.4 Summary
We discussed three types of readings, which are mapped from different word orders and information structures in non-trivial ways, in accordance with the focus gravitation hypothesis. In the exposition, we focused mainly on the context-sensitive aspects of the form and interpretation of interrogatives. No other analysis known to me has tools sensitive enough to account for the observations presented in this section.

3.5 Cross-linguistic prospects
The advantage of the focus gravitation hypothesis is that it can be tested relatively directly, after one establishes the information structures that are available for different types of multiple interrogatives in different languages. For instance English is relatively rigid in its information structure tools. Its wh-in situ in multiple interrogatives is always narrowly focused.[12] This directly accounts for the absence of default SP readings (§3.4.2), while allowing for the reciprocal SP readings (§3.4.3). Some languages might opt for licensing narrow focus in a derived position. The prototypical case is Hungarian, in whose multiple interrogatives one wh-word obligatorily moves to the preverbal focus position, while the other one lands in a higher (presumably a topic/givenness-related) position. The result is a PL reading and the

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12 The reader can verify that this is indeed the result of the analogy test presented in §3.3

unavailability of the default SP reading. As discussed in É. Kiss (1993:§3.1), Hungarian also allows for reciprocal SP readings, in which case it has to resort to an situ assignment of focus for one of the wh-words – presumably the only configuration that allows focusing of both wh-words at the same time. Bulgarian behaves essentially in the same way as Hungarian, with the difference that non-subject wh-topics have to be clitic-doubled (Jaeger 2004). The positive effect of scrambling on the availability of SP readings (observed e.g. by Hagstrom 1998 for Japanese) can be understood in terms of focus-broadening in the present approach. While under normal conditions, the hierarchically lower wh-word is in narrow focus, as in English, its scrambling can facilitate a broader focus assignment and hence higher Q-particle attachment, yielding an SP reading.

4 Conclusion

In the present paper, I proposed to amend Hagstrom's (1998) analysis of questions with a new, information structure sensitive rule of Q-particle placement. This rule correctly predicts the context dependency of the form and interpretation of multiple questions and makes finer predictions than any existing approach, concerning the distribution of different kinds of readings. Some novel data from Czech were presented, including those illustrating a class of default single pair readings. Questions with these readings typically have very relaxed felicity conditions. To my best knowledge, this SP reading has so far gone unnoticed in the literature on multiple interrogatives.

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