

Top Issues in Questions: Topics — Topicalization — Topicalizability

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1 On *Wh*-Movement and “On *Wh*-Movement”

Noam Chomsky in his seminal paper “On *Wh*-Movement” mentions in passing an unacceptable structure involving an embedded *wh*-phrase moved beyond a fronted topic. The datum in question is (1a), taken from Chomsky (1977: 105, ex. (132b)); (1b) highlights the (updated) analytical details relevant for the present contribution:

- (1) a. *I wonder [who₂, this book, [(which₁) t₂ really likes t₁]]
 b. [CP who_i C⁰ [TopP this book_k Top⁰ [IP t_i I⁰ (t_k) [vP really t_i likes t_k]]]]]

Taken out of its historical context and disregarding notational differences, I want to investigate structures that superficially look like grammatical counterparts of (1b): a fronted *wh*-phrase moved over a preposed topic. The structures that this chapter revolves around are questions that involve two *wh*-phrases in between which a topicalized constituent may or may not be sandwiched in German, the primary language of concern; comparative data will be presented in support of the proposal unfolding. The upshot of this study is that looks are deceiving: what may look like a multiple *wh*-question involving a fronted topic is in fact multiple topicalization and does not serve as a proper information question.

Empirically, the discussion starts off with the main fact that might be drawn from the paradigm in (2) and related ones, discussed in quite some detail by Beck (1996a): in certain positions, certain elements seem to “intervene” in a certain way and thus destroy an otherwise well-formed dependency.

- (2) a. *Warum haben wenige Linguisten wem geglaubt?
 b. Warum haben wem wenige Linguisten geglaubt?
 why have whom few linguists believed
 ‘Why did few linguists believe whom?’

In essence, I will revisit and extend a partial set of data that served as motivation for the so-called “intervention effect,” sometimes even dubbed “Beck effect” (Hagstrom 1998), a term popularized by Pesetsky (2000), who implements a similarly small

empirical subset in his study on phrasal movement. The source of apparent “intervention” in the structures discussed here is Beck’s intriguing article, the base of my discussion.¹ I will argue against the existence of *intervention* as understood there and account for the facts observed on the basis of *topicalizability*. As such, this contribution combines results from and follows up on previous work of mine on multiple *wh*-questions in German (Grohmann 1998, 2000b: ch. 5, 2003a).

Once the notion of topicalizability is on the table and its relevance to the present subject matter clarified, I will turn to a number of consequences:

- (i) the role of topicalizability in the formation of multiple *wh*-questions in German;
- (ii) conclusions to be drawn from the notion of topicalizability for the structure of and derivational processes involved in the German clause;
- (iii) cross-linguistic implications of topicalizability for the syntax and semantics (as well as discourse properties/pragmatics) of (multiple) *wh*-questions in grammar.

In this sense, the paper addresses one of the larger issues that Chomsky (1977) presented, namely how (the rule of) *wh*-movement ties in with other operations in the grammar, possibly of the same or related type (what later became known as A’-movement), an issue which has subsequently been the center of many studies on the interaction of such operations as well as intervention in syntax (Cinque 1990, Rizzi 1990²). It will be mainly concerned with the formation of multiple *wh*-questions (in German) and the connection with topicalization at large (across languages).

2 Topicalizability in Questions: Against an Intervention Effect

This section introduces the notion, illustrates the idea, and discards the existence of an intervention effect in German multiple *wh*-questions as currently understood widely. While something like it may be at work in other languages — or for that matter, even in other structures in German³ — there is reasonable doubt that it should be applied to monoclausal questions involving two *wh*-phrases. Instead, an alternative approach will be suggested that capitalizes on the notion of topicalizability.

2.1 Enter and Exit: Intervention

Investigating the position and role of quantifiers in German multiple *wh*-questions, among other structures, Beck (1996a) proposes the informal ban in (3),⁴ illustrating abstractly her definitions reproduced in (4) and (5).

- (3) *Restriction on LF (ROLF*; Beck 1996a: 1)

*[... X_i ... [Q ... [... t_i^{LF} ...]]]

- (4) *Quantifier-Induced Barrier (QUIB*; Beck 1996a: 39)

The first node that dominates a quantifier, its restriction, and its nuclear scope is a Quantifier-Induced Barrier.

- (5) *Minimal Quantified Structure Constraint (MQSC*; Beck 1996a: 39)

If an LF trace β is dominated by a QUIB α , then the binder of β must also be dominated by α .

The paradigmatic instance of a ROLF-violation of interest here (ignoring other phenomena discussed by Beck) is arguably a structure like (6), in which the negative quantifier *niemand* ‘nobody’ sits in between two *wh*-question words, apparently inducing the ungrammaticality by the combination of (3)-(5).

- (6) *Wen hat niemand wo gesehen?

whom has nobody where seen

‘Where did nobody see whom?’ (Beck 1996a: 1)

The relevant contrasting fact from German is that the variant of (6) in which the negative quantifier follows both *wh*-expressions is well-formed:⁵

- (7) Wen hat wo niemand gesehen?

whom has where nobody seen

‘Where did nobody see whom?’

Intervention qua MQSC apparently accounts for the contrast. Note, however, that “[t]he distinction between S-Structural and LF movement is absolutely crucial” (Beck 1996a: 18) for such an explanation, within the limits of Beck’s syntax (cf. note

9 below). In other words, LF must involve phrasal movement into a position like [Spec, CP] of all *wh*-material in order for ROLF to apply. (As a matter of fact, Beck has to go to some length and through some pains for additional LF-movements of items for which it is not at all clear that they should move, including the assumption that *jeder* ‘every(one)’ “is raised to a CP-adjoined position at LF” (p. 22).) Thus, (8), slightly adjusted from Beck’s work, must be the relevant simplified LF-structure of (6), where IP forms a QUIB (induced by *niemand* ‘nobody’) and t_i cannot be bound by *wo* ‘where’ (due to the MQSC):

(8) [CP wo_i wen hat [IP niemand t_i gesehen]]

However, the syntactic assumptions Beck makes are not at all shared by everybody. In particular, with the rise of the minimalist program (Chomsky 1995), LF-movement of the type first suggested by Huang (1982) is rejected: on the basis of well-motivated economy conditions, covert phrasal movement is replaced by feature movement. This is not the right place to indulge in a more elaborate discussion.⁶ As it turns out, one might cite works like Pesetsky (2000) and argue that covert phrasal movement is digestible with minimalism after all. And indeed Pesetsky endorses Beck-type intervention, he even couches a definition of it in a minimalist framework. Again, however, this does not make the approach any more valid. As argued in length by Mathieu (2002), among others, there are empirical reasons to doubt the existence of covert phrasal movement in the relevant cases, i.e. *wh*-questions.⁷

For what it is worth, Pesetsky’s definition of intervention reads as follows:

(9) *Intervention Effect* (universal characterization; Pesetsky 2000: 67)

A semantic restriction on a quantifier (including *wh*) may not be separated from that quantifier by a scope-bearing element.

One cannot help but agree with Mathieu’s appraisal that none of the explanations offered for this type of intervention (i.e. neither Beck’s nor Pesetsky’s, for example⁸) “follow from anything” and that they “only amount to a restatement of

the facts” (p. 174). Maybe the bottom line, possibly more explicit in (9) than (5), can be semantically motivated or even fleshed out; but with regards to the syntax involved here, I see very little hope. If anything, it should fall under some version of locality restrictions à la Relativized Minimality (Rizzi 1990)— indeed, one could envision a more poignant relevance of what most of us know as negative islands, mentioned only in passing and brushed off by Beck; see Boeckx 2003 and references cited for recent attempts in this direction.⁹

Another problem with intervention being explicitly (and “crucially”) defined as an LF condition concerns the Uniformity Condition (see also Mathieu 1999). With the rise of the minimalist program and the denial of the existence of levels or components of representation other than those needed for the interfaces (LF, PF), uniformity as understood as follows plays an important role for the coherence of the grammar.

(10) *Uniformity Condition* (Hornstein, Nunes, and Grohmann 2005: ch. 2, (106))

The operations available in the covert component must be the same ones available in overt syntax.

Lastly, I want to mention in passing a further problem with intervention as understood in Beck and Kim 1997 (which is the same as Beck 1996a), noted by Kim (2003): as their discussion of *wh*-scrambling in Korean shows, scrambling must be semantically effective (otherwise intervention could not be called upon). This stands in stark contrast to the received wisdom that scrambling is semantically vacuous and involves radical reconstruction (Saito 1989). Here the facts for Korean seem to be duplicated in Japanese, the language of Saito’s concern (cf. Lee and Tomioka 2000).

Beyond theoretical concerns, the analysis encounters some empirical problems as well, which shall play a major role in formulating an alternative. For example, Beck (1996a: 17) addresses some predictions of QUIB/MQSC from (4)/(5), such as the ungrammaticality of elements being in the restriction of a (negative) quantifier due to the barrier postulated by these conditions. One of her supportive data is (11).

(11) *Wen hat kein Pferd, das wer gefüttert hat, gebissen?

whom has no horse that who fed has bitten

‘Whom did no horse that who fed bite?’

What is puzzling here is that none of a set of imaginable positive counterparts, without a negative quantifier inducing a barrier (or any other of the set of quantifiers that work for the QUIB/MQSC; see below for more), as given in (12), is any good either; in fact, it evades me what this example, among others brought up by Beck, is even supposed to show.¹⁰ Beck’s formulation of intervention might have something to say on the ill-formedness of (11), but it does not relate at all to (12).

(12) a. *Wen hat ein Pferd, das wer gefüttert hat, gebissen?

whom has a horse that who fed has bitten

‘Whom did a horse that who fed bite?’

b. *Wen hat das Pferd, das wer gefüttert hat, gebissen?

whom has the horse that who fed has bitten

‘Whom did the horse that who fed bite?’

c. *Wen haben viele Pferde, die wer gefüttert hat, gebissen?

whom have many horse that who fed has bitten

‘Whom did many horses that who fed bite?’

This said, since more narrowly defined multiple *wh*-questions constitute the focus of this study, I will simply disregard this puzzle (and the potential mismatch between what intervention is supposed to be ruling out and how that ties in with grammatical structures). Rather, my empirical quibbles with intervention regard those structures that look very much like (2a) vs. (2b), and as such might be expected to receive an identical explanation, but fail to fall under (3)-(5) or any reformulation thereof. In other words, the intervention effect investigated by Beck is more general than she makes it out, even for a subset of her structures. Moreover, the alternative account presented below *does* follow from other, independent properties.

2.2 Introducing Topicalizability

Let me present the full paradigm relevant for the subsequent discussion. As Beck (1996a) notes, many elements may occur in between two *wh*-phrases or follow them. (The examples presented in this section are variations of constructions first discussed in Grohmann 2000b, 2003a.)

- (13) a. Wer hat Maria/seine Freundin/einen Porsche wo geküsst?
 b. Wer hat wo Maria/seine Freundin/einen Porsche geküsst?
 who has where Maria/his girlfriend/a Porsche kissed
 ‘Who kissed Maria/his girlfriend/a Porsche where?’

This is not so for all quantificational phrases, though. Considering both ordering options for quantificational elements, we can observe a stark contrast (cf. (2) above): (some) universal quantifiers are able to appear in between the two *wh*-elements, while negative ones are not. If all *wh*-elements really must end up in CP at one point (through *wh*-movement at LF, for example), Beck’s barrier-approach would constitute one possibility. Note that nothing rules out the co-occurrence of two *wh*-elements and a negative quantifier: if the apparently intervening quantifier follows all *wh*-elements, the question is well-formed, as the examples in (14) and (15) illustrate.

- (14) a. Wer hat alle Bücher wo gekauft?
 b. Wer hat wo alle Bücher gekauft?
 who has where all books bought
 ‘Who bought all (the) books where?’
- (15) a. *Wer hat kein Buch wo gekauft?
 b. Wer hat wo kein Buch gekauft?
 who has where no book bought
 ‘Who bought no book where?’

However, not only negative quantifiers are prohibited from intervening, and neither is the class of possible intervenors restricted to universal quantifiers:¹¹

- (16) a. Wer hat viele/die meisten/mehr als drei Bücher wo gekauft?
 b. Wer hat wo viele/die meisten/mehr als drei Bücher gekauft?
 who has where many/the most/more than three books bought
 ‘Who bought many/the most/more than three books where?’

And again, if the quantifiers follow the *wh*-items, everything is alright:

- (17) b. *Wer hat wenige/höchstens drei/weniger als drei Bücher wo gekauft?
 b. Wer hat wo wenige/höchstens drei/weniger als drei Bücher gekauft?
 who has where few/at-most three/fewer than three books bought
 ‘Who bought few/at most three/fewer than three books where?’

These contrasts seem to allow for the following generalization:

- (18) *Quantifier-Intervention Generalization* (Grohmann 2003a: 116)

Monotone increasing quantifiers may appear in between two *wh*-phrases, while monotone decreasing quantifiers may not appear in between two *wh*-phrases.

Now, this generalization seems to fit the characterizations of intervention presented earlier rather well — but does that make it any more plausible? I do not think so (see also note 11). Rather, I believe, this state of affairs begs to be explained by something deeper, preferably by being tied to other properties of the grammar.

Let me introduce and investigate further one such property: *topicalizability*, the property of being able to serve as a topic. As it turns out, there is evidence for the assumption that (monotone) decreasing quantifiers are *non-topicalizable*.

Consider the contrast in (19)-(20), where capitals indicate focus:^{12,13}

- (19) a. VIELE Bücher hat Peter gestern gelesen (, nicht ALLE).
 many books has Peter yesterday read not all
 ‘MANY books Peter read yesterday (, not ALL).’
 b. Viele Bücher hat Peter gestern gelesen. (Er ist fleissig.)
 many books has Peter yesterday read he is industrious
 ‘Many books, Peter read yesterday. (He is a hard worker.)’

- (20) a. WENIGE Bücher hat Peter gestern gelesen (, nicht VIELE).
 few books has Peter yesterday read not many
 ‘FEW books Peter read yesterday (, not MANY).’
- b. *Wenige Bücher hat Peter gestern gelesen. (Er ist faul.)
 few books has Peter yesterday read he is lazy
 *‘Few books, Peter read yesterday. (He is lazy.)’

Next, consider the following questions (see also note 12):

- (21) a. What happened?
 b. What did Peter do yesterday?
 c. Did Peter read few/many books yesterday?
 d. How many books did Peter read yesterday?

For a felicitous answer to (21a-b) in German, the new information appears in what we may call a default focus position, where the type of focus is information focus (as summarized in É. Kiss 1998) and the default position is rather low in the structure (see Meinunger 2000 for useful discussion and references).

Considering (21b), note that neither construction in (19) or (20) can be used; the only word order of a felicitous answer is that in (22):

- (22) a. Peter hat gestern viele Bücher gelesen.
 Peter has yesterday many books read
 ‘Peter read many books yesterday.’
- b. Peter hat gestern wenige Bücher gelesen.
 Peter has yesterday few books read
 ‘Peter read few books yesterday.’

However, (19a) and (20a) can be used as felicitous answers to questions like (21c-d), distinguishing them from the context in note 12, where the answer contains a contrastive element as part of the new information. (19b) and (20b) are simple topic structures: there is no contrastive stress, and the fronted elements can only pick up a

referent already established in the discourse; both are infelicitous.¹⁴

Let me finally undermine further any intervention-based story to the “Beck effect” (which we can now understand as the phenomenon of specific word order incompatibilities between non-topicalizable elements and the two *wh*-phrases in German multiple *wh*-questions). We can construe paradigms identical to the ones discussed above, but ones that do not contain any quantificational element. If it can be shown that here, too, we find a topicalizability effect, (any type of) intervention is out of the game for good.

2.3 *Adverbial Incompatibilities and Topicalizability*

As noted in Citko and Grohmann 2001, certain adverbs may not be placed in between two *wh*-elements either, and it can be shown that the property they all share is non-topicalizability, i.e. the impossibility of be(com)ing topicalized. Obviously, this could hardly be captured under a barrier-inspired, quantifier-induced intervention approach, even leaving aside LF-issues. I will present the relevant facts in this section and address an interesting twist as well.

For the sake of presentation, I confine myself to manner adverbs, the class of adverbial modifiers which arguably sit very low in the clause structure. In German declarative clauses, these must follow the direct object, unless it is focused:

- (23) a. Peter hat das Buch gerne/komplett/sorgfältig gelesen.
 b. *Peter hat gerne/komplett/sorgfältig das Buch gelesen.
 c. Peter hat gerne/komplett/sorgfältig das BUCH gelesen.
 Peter has with-pleasure/completely/carefully the book read
 ‘Peter read the book with pleasure/completely/carefully.’

In combination with multiple *wh*-phrases, these adverbs may not appear in between them, regardless of the order of the *wh*-phrases. (Recall that German does not show any obvious superiority effects in monoclausal interrogative structures.)

- (24) a. Wer hat was gerne/komplett/sorgfältig gelesen?

- b. *Wer hat gerne/komplett/sorgfältig was gelesen?
 c. Was hat wer gerne/komplett/sorgfältig gelesen?
 d. *Was hat gerne/komplett/sorgfältig wer gelesen?
 what has with-pleasure/completely/carefully who read
 ‘Who read what with pleasure/completely/carefully?’

Moreover, such adverbs may not be fronted, in contrast to sentence adverbs like *gestern* ‘yesterday’, adverbs implying a propositional argument such as *vielleicht* ‘perhaps’, or epistemic modal adverbs like *wahrscheinlich* ‘probably’. Since we can observe neutral intonation and stress, I understand this kind of fronting as topicalization (taken throughout to be a syntactic operation).

- (25) a. *Gerne/Komplett/Sorgfältig hat der Peter das Buch gelesen.
 with-pleasure/completely/carefully has the Peter the book read
 *‘With pleasure/Completely/Carefully, Peter read the book.’
 b. Wahrscheinlich/Vielleicht/Gestern hat der Peter das Buch gelesen.
 probably/perhaps/yesterday has the Peter the book read
 ‘Probably/Perhaps/Yesterday, Peter read the book.’

As it turns out, however, such *prima facie* non-topicalizable adverbs *may* be fronted if they are contrastively stressed. In these cases we would expect them also to be legitimate in between two *wh*-elements. And indeed this expectation is borne out. When any of these adverbs is fronted through focalization, it may also appear in between the two *wh*-phrases (see also the data in note 14).

- (26) a. GERNE/KOMPLETT/SORGFÄLTIG hat der Peter das Buch gelesen.
 with-pleasure/completely/carefully has the Peter the book read
 ‘WITH PLEASURE/COMPLETELY/CAREFULLY, Peter read the book.’
 b. Wer hat GERNE/KOMPLETT/SORGFÄLTIG was gelesen?
 who has with-pleasure/completely/carefully what read
 ‘Who read what WITH PLEASURE/COMPLETELY/CAREFULLY?’

The same contrasts can also be found in embedded contexts, thus ruling out that this is a matrix property possibly related to the verb-second constraint (a traditional indication of topicalization).

(27) Maria hat gesagt, ...

Maria has said

a. *dass gerne/komplett/sorgfältig der Peter das Buch gelesen hat.

b. dass GERNE/KOMPLETT/SORGFÄLTIG der Peter das Buch gelesen hat.

that with-pleasure/completely/carefully the Peter the book read has

*‘Mary said that with pleasure/completely/carefully, Peter read the book.’

(28) Maria hat gefragt, ...

Maria has asked

a. *wer gerne/komplett/sorgfältig was gelesen hat.

b. wer GERNE/KOMPLETT/SORGFÄLTIG was gelesen hat.

who with-pleasure/completely/carefully what read has

*‘Mary asked who with pleasure/completely/carefully read what.’

In this section I have argued that the phenomenon of (non-)topicalizability is not only more general than a QUIB-approach in terms of intervention, it also follows from more general (and independently testified) principles of grammar, and — “crucially” — may involve definitely *non*-quantificational material (such as adverbs). A Beck-inspired approach would be more than tested hard to capture these data — under any version of intervention presented in section 2.1 above.

It now looks like intervenors are finally a non-issue, at least as far as German multiple *wh*-questions are concerned. Previous, intervention-driven approaches (starting with Beck 1996a) rely on them being quantificational, however to be defined (universally or on the basis of monotonicity). This simply does not cut the pie right. The data in this section and the last suggest that the class of intervenors — which block binding of a trace created by LF-movement or one’s favourite interpretation of

ROLF — has one more property, which does not depend on interaction with any other material (such as those traces purportedly created at LF): they cannot be topicalized. For this, their quantificational properties do not matter one bit.¹⁵

Let me sum up the anti-intervention discussion and dismiss any such notion (including the revision provided by (18)) with the Topicalizability Generalization.

(29) *Topicalizability Generalization*

Only topicalizable elements may appear in between two *wh*-phrases; non-topicalizable elements may only follow (in German multiple *wh*-questions).

Admittedly, (29) is only that, a generalization, with the proviso that it is possibly restricted to German monoclausal questions with two *wh*-elements — but it is one that works, unlike all that has been said for intervention. As a generalization, (29) has no explanatory power. This is what section 3 is concerned with, fleshing out some more interesting consequences of a topicalizability-approach to the present subject matter and removing a stipulated axiom, be it intervention or topicalizability.

3 Topicalization: On the Complexity of “Move *Wh*”

This section expands on an important consequence of the topicalizability-account of apparent intervention phenomena in German multiple *wh*-questions. I first sketch an analysis of (the left periphery of) German multiple *wh*-questions in terms of multiple topicalization. I then integrate further phenomena which might not at first glance be related, but seem somehow also to be predicted by the multi-topicalization approach. And throughout, I introduce the notion of a *wh*-topic, to be solidified in section 4.

3.1 *An Alternative Derivation of Multiple Wh-Questions in German*

Is there anything interesting for the analysis of multiple *wh*-questions in German that would relate to the conclusion that apparent intervenors are non-topicalizable? I want to argue for a big *Yes*. After all, if true, this would make for a striking property.

To begin with, the purported role of topicalizability looks rather obscure under a traditional analysis of multiple *wh*-questions in German, of which a derivation

would run analogous to English: one *wh*-phrase fronts into the left periphery overtly, the other stays *in situ* (with ‘?P’ = VP; cf. von Stechow and Sternefeld 1988).

(30) [_{CP} WH1 C⁰ ... [_{?P} ... WH2 ...]]

Working from a rough structure like (30), I want to propose a radical alternative. After all, how could we tell from (30) that the intervenor, an illegitimately topicalized non-topicalizable element, is indeed in a topic position? What is a topic position anyway? Let me briefly lay out some background assumptions and sketch my analysis (drawing from the more detailed expositions in Grohmann 1998, 2000b, 2003a).

First of all, topicalization as understood here is an operation in the overt component; it is the result of movement (some form of the rule “Move *wh*” from Chomsky 1977), targeting a position like [Spec, CP] or rather, within an articulated Comp, the position explicitly identified by Rizzi (1997) and others as [Spec, TopP]. That is, minimally (building on (30)), we are dealing with something like (31):

(31) [_{CP} WH1 ... [_{TopP} XP ... [_{?P} ... WH2 ...]]]

(31) is then our starting point for the structures at hand. The potential intervenor, or rather (non-)topicalizable constituent, is signaled by XP — as a topic, it must move to [Spec, TopP], and if it is non-topicalizable it cannot move there. As a first stab, we thus yield the following ban:

(32) * [_{CP} WH1 ... [_{TopP} XP_{-TOP} ... [_{?P} ... WH2 ...]]]

The 64,000 dollar question is now how we can ensure that those structures discussed above do actually involve some XP in a purported topic projection. In other words, can we show that what appears in between two *wh*-phrases in German is *by necessity* in a syntactic topic position? Working with standard assumptions à la (30), the answer is clearly *No* — and the whole endeavour jeopardized. But with a simple suggestion first advanced in Grohmann 1998 we get a positive answer.

Assume that WH2 does not sit so low in the clause structure (“*in situ*”). Assume rather that, for some reason, WH2 has moved quite high, into the left periphery, i.e.

our C-domain, in the *overt* syntax. Assume further that this movement of WH2 also targets [Spec, TopP]. Assume finally that not only WH2 and XP, but also WH1 sit in [Spec, TopP] and that fronted topics like to stick together.

We now have a potentially more interesting picture:

(33) C^0 [_{TopP} WH1 XP WH2 Top⁰ [_{TP} ...]]

The line of the argument is clear: if both *wh*-phrases are topics and if they can couch only topics, then only topics may appear in between them. In other words, when we see any structure involving two *wh*-phrases, we know one thing for sure: whatever sits in between the two sits in [Spec, TopP]. Problem solved.

As nice as this argument may look, it carries a big *If* — and the big-*if* consists at least of the number of *Assume that*'s, rephrased as (34):

- (34) a. In German multiple *wh*-questions, WH1 overtly moves to [Spec, TopP].
 b. In German multiple *wh*-questions, WH2 overtly moves to [Spec, TopP].
 c. Any XP occurring in between WH1 and WH2 must sit in [Spec, TopP].

What I have done in previous work is motivate (34a-c) with some variation.¹⁶ In the interest of space, I will confine myself to a brief exposition. The specific details arguably play only a minor role, so that we can basically consider (35) instead to contain the most salient ingredients of the alternative analysis projected:

(35) *Deus ex machina* (Grohmann 1998, 2000b, 2003a)

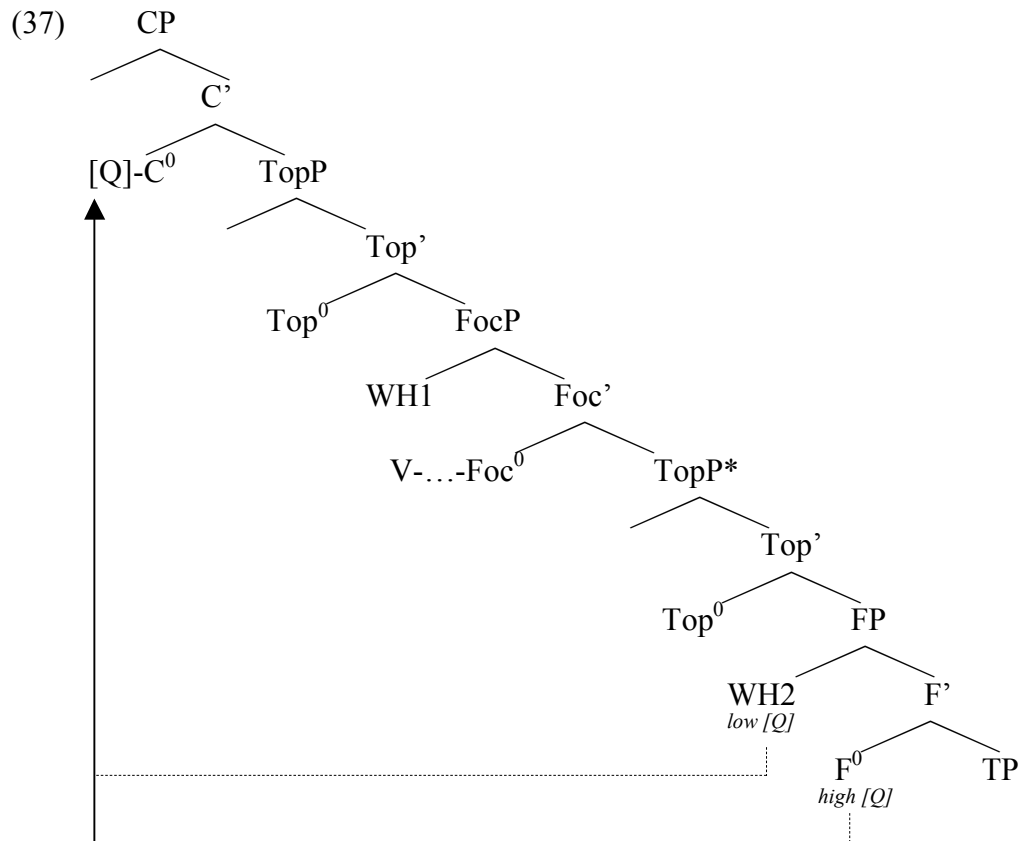
In German monoclausal multiple *wh*-questions, all *wh*-phrases move overtly to CP driven by properties such that the landing sites only sandwich topics.

Obviously, the argumentation I developed elsewhere does not involve some *deus ex machina*, but derives the desiderata on mostly empirical grounds. (I refer to the works cited.) We can then just adopt (35) as a make-believe in the absence of a more elaborate discussion in the present context. The single most important aspect of the derivation involved, however, is the topic-hood of both *wh*-phrases in a German multiple *wh*-question, and this I return to in more detail below (section 4.1), and I also

address the notion of a *wh*-topic from a cross-linguistic perspective (section 4.3).

Given the explosion of CP in (35) qua articulated Comp-layer as in (36b) or any version thereof, and the purported landing sites for the overtly A'-moved *wh*-phrases of (35) as indicated in (37) below (Grohmann 2003a: 114), any material appearing in between the two *wh*-phrases must target TopP. This particular analysis (as developed in Grohmann 2000b: ch. 5) is a modified Q-based analysis of *wh*-question formation, what I call elsewhere the “Hagstrom-Bošković approach” (see also note 16). Closer in line with what I have said above, and will say below, on (so far, purported) *wh*-topics, one might actually want to adopt an even further refined structure of the C-domain, such as (36c).¹⁷ Again, I believe that the details of the proverbial devil, important though they certainly are, are not critical for present purposes.

- (36) a. ForceP >> TopP* >> FocP >> TopP* >> FinP >> IP (Rizzi 1997: 297)
 b. CP >> TopP* >> FocP >> TopP* >> FP >> IP (Grohmann 2000b: 76)
 c. CP >> TopP* >> FocP >> FP >> IP (additional refinement)



Under this analysis, questions are licensed by a question morpheme [Q] which has to end up in C, in a position high enough to scope over the entire structure. As Hagstrom (1998) lays out in detail, [Q] may move on its own, from a high base-generated position (here, F^0) or it may tag along with the lowest *wh*-phrase (here, WH2), its alternative locus of generation. Bošković (2001) exploits this system to derive pair-list and single-pair readings, slightly revising Hagstrom's original mechanism, which is further refined in Grohmann 2003a. As argued there, a derivation as sketched in (37) not only derives the topicalizability issues discussed so far, but also the peculiar behaviour of German multiple *wh*-question with respect to the readings they allow (or require). In order for the latter to work, nothing hinges on the exact (labels of the) positions, as long as the relational properties of (37) remain. In other words, we would not lose anything from the explanatory power of that analysis if the landing sites of WH1 and WH2 were in fact the same (type of) projection, [Spec, TopP] (cf. note 16).

Note further that pursuing an alternative to the observed word order restrictions as hastily sketched above does not depend at all on the specific generalization, that is universal-based intervention in (3) or monotonicity-inspired topicalizability concerns such as (18) — empirical shortcomings of either aside. It does not matter how we define inherent properties of illegitimate in-betweeners; what matters is that any constituent XP that wants to follow one and precede another *wh*-phrase (WH1, WH2) must be a topic. If it cannot be a topic, for reasons that go beyond this investigation, it cannot appear in-between, but must strictly follow.

3.2 *Further Evidence for Multiple A'-Movement*

Next, I want to consider additional evidence supporting the assumption that even the lower *wh*-phrase WH2 moves overtly quite high up in the structure. Leaving aside the details of how topicality and interrogativity be married (section 4), the proposed step must be an instance of what used to be called A'-movement; the landing site, whether [Spec, TopP] or any of the other candidates of (36)-(37), is arguably an A'-position (terminology I continue to use for purely presentational reasons).

If all *wh*-elements do indeed A'-move overtly into an articulated C-domain in German, we would expect them to behave syntactically in ways that go beyond word order restrictions or intervention effects, such as A'-binding. As it turns out, such effects are notoriously difficult to show for German. But interestingly, we can find some — and while these do not necessarily suggest A'-movement proper, such as *wh*-movement in English, they do suggest some sort of movement, even (and especially) of the lower *wh*-element. The following discussion is taken from Grohmann 2003a, but the data are considerably enriched: whereas the argumentation provided there was suggestive that even the lower *wh*-element, WH2, moves *somewhere*, it is now getting close to conclusive that it is moving into the C-domain, as an A'-element.

Take parasitic gaps, for example, which are licensed by overtly A'-moved elements only — at least in English (pace Nissenbaum 2000; see e.g. Hornstein 2001

and Nunes 2004 for recent discussion and ample references to this core property of parasitic gaps and others). As it turns out, the lower *wh*-element in German may license a parasitic gap *pg*, thus at first glance suggesting overt A'-movement:

- (38) a. Wer hat wen_i ohne pg_i zu kennen eingeladen?
 who has who without to know invited
 ‘Who invited whom without knowing *(him)?’
 b. Wer hat was_i ohne pg_i gelesen zu haben rezensiert?
 who has what without read to have reviewed
 ‘Who reviewed what without reading *(it)?’

In order to go through as a bona fide argument in favour of overt displacement of the lower *wh*-element into the C-domain, it has to be shown that German does indeed have parasitic gaps analogous to English.¹⁸ But since *wh*-phrases do not scramble in German (unlike, say, Japanese; cf. Grewendorf and Sabel 1999), the landing site of the lower *wh*-phrase cannot be the typical scrambling position. In effect, the licensing of parasitic gaps by the lower *wh*-phrase can indeed be integrated into the analysis that the landing site is within the C-domain, and even as things stand now concerning the status of parasitic gaps in German, data such as (38) do not provide a counter-argument to my proposal — quite the opposite, in fact, as the ensuing discussion aims to show.

Note first that the A'-licenser of the parasitic gap has to c-command it in the overt syntax (Webelhuth 1992), thus the adjunct clause containing *pg* cannot scramble over the licenser (or whatever analysis one wants to apply to German word order, clause structure, and phenomena like scrambling).

- (39) *Wer hat [ohne pg_i gelesen zu haben]_k was_i t_k rezensiert?
 who has without read to have what reviewed
 *‘Who reviewed without reading (it) what?’

With this in mind, consider the following contrasts:

- (40) a. Wann hat Peter *was_i* [ohne *pg_i* gelesen zu haben] sorgfältig rezensiert?
 b. *Wann hat Peter [ohne *pg_i* gelesen zu haben] *was* sorgfältig rezensiert?
 c. *Wann hat Peter sorgfältig *was* [ohne *pg_i* gelesen zu haben] rezensiert?
 when has Peter carefully what without read to have reviewed
 ‘When did Peter carefully review what without reading *(it)?’

Regarding the mixed A/A’-character noted by Webelhuth, Mahajan (1990) offers an interesting solution for German: prior to the step of A’-movement licensing the parasitic gap, the licenser undergoes A-movement (from which it can license anaphors, one of the issues of contention). I adopt this basic line of analysis which, interestingly, should also work for anyone’s take on headedness of the German VP (see e.g. Sabel 1996: 37, n. 26). In other words, regardless of particular derivational operations and structural positions involved, the parasitic gap is eventually licensed from an A’-position and contrasts with lower positions (scrambled non-interrogatives or multiple *wh*-phrases as traditionally conceived). This approach makes a number of predictions which can be tested.

One concerns the contrasts in (40) above. The grammaticality of (40a) would be expected since we have seen in section 2.3 that an adverb like *sorgfältig* ‘carefully’ must follow all *wh*-phrases. This said, the ungrammaticality of (40b) is equally expected since the adjunct containing the parasitic gap is scrambled over its licenser, the lower *wh*-phrase *was* ‘what’. Interestingly, now, (40c) is bad: as the parasitic gap seems to be correctly positioned with respect to its licenser, one might hypothesize that the reason this structure is out is due to the relative ordering of the adverb and the lower *wh*-phrase for the by now well-known reasons.

A similar line of reasoning can be constructed for a different type of adverb. Frey (2000) identifies the adverb *vermutlich* ‘presumably, among others,’ as a marker for sentence topics: what stands to its left must be a topic. Consider now some relevant data:

(41) a. Wer hat vermutlich was rezensiert?

b. Wer hat was vermutlich rezensiert?

who has what presumably reviewed

‘Who presumably reviewed what?’

Both ordering relations between adverb and lower *wh*-phrase are possible — at first glance unexpected under the current assumptions, since, as a topic marker, *vermutlich* ‘presumably’ should follow *was* ‘what’. (One property of topic markers is that they do not allow the topic to follow.) Admittedly, Frey and I disagree on the implication for the syntax that topic markers (and his discussion of sentence topics in general) carry. He identifies the notion ‘sentence topic’ with a *Mittelfeld*-position, i.e. within the German middle field (here, roughly IP-internal). But it seems to me that unless the analysis hastily sketched above is fleshed out in all its glory and detail, we can remain agnostic as to which projection in the structure exactly is identified here. Rather, I would like to zoom in on the contrast between (41) and the following.

(42) a. *Wer hat vermutlich was_i rezensiert [ohne *pg_i* gelesen zu haben]?

b. Wer hat was_i vermutlich rezensiert [ohne *pg_i* gelesen zu haben]?

who has what presumably reviewed [without read to have]

‘Who presumably reviewed what without reading *(it)?’

While the lower *wh*-phrase may follow the topic-indicating adverb, it may not license a parasitic gap; this it can only do from the pre-adverbial position. (If the sentence receives any interpretation, the adverb in (42a) could only be understood as modifying *was* ‘what’.)

This suggests that (41) contains two quite different structures, one in which the *wh*-phrase has moved to a left-peripheral topic position, and one where it has not. So far, I have not considered the latter possibility at all. In fact, in previous work I have always argued that multiple *wh*-fronting is obligatory in German. With data such as the above at hand, however, this foregone conclusion might have to be revised. At this

point, I do not see any difficulties with such a revision; on the contrary, it might come in handy. Consider, for example, the following examples.

- (43) a. Wer hat was letztes Jahr jedenfalls zum Glück rezensiert?
 b. *Wer hat letztes Jahr jedenfalls was zum Glück rezensiert?
 c. Wer hat letztes Jahr jedenfalls zum Glück was rezensiert?
 d. *Wer hat was zum Glück letztes Jahr jedenfalls rezensiert?
 who has what for-the luck last year at-least reviewed
 ‘Last year at least, who fortunately reviewed what?’
- (44) a. Wer hat was_i letztes Jahr jedenfalls zum Glück rezensiert
 [ohne *pg_i* gelesen zu haben]?
 b. *Wer hat letztes Jahr jedenfalls zum Glück was_i rezensiert
 who has last year at-least for-the luck what reviewed
 [ohne *pg_i* gelesen zu haben]?
 without reading to have
 ‘Last year at least, who fortunately reviewed what without reading *(it)?’

Drawing on Frey’s work again, the structures in (43)-(44) contain two relevant elements: the expression *zum Glück* ‘fortunately’ serves a topic-marking purpose similar to *vermutlich* ‘presumably’, while the expression [NP *jedenfalls* ‘at least’] must refer to some aforementioned NP, i.e. be topic (and as such cannot follow the topic-marker, as in (43d)). The clear contrast in the complex examples here tells us one thing for sure: in the a-examples, the lower *wh*-phrase is in a higher position than in the other cases. This conclusion suffices for the purpose of this section: suggestive evidence that the lower *wh*-phrase moves overtly into a high left-peripheral position with A’-character exhibiting properties reminiscent of topics.

If this is a fair and safe conclusion, the *deus ex machina* from (35) above is finally demystified, and so are the big-*if* assumptions leading to (34). The parasitic gap data thus lend support to the hypothesis of multiple *wh*-topicalization endorsed

here from syntactic point of view.¹⁹ Regarding the purported optionality, I leave for further research additional properties that a non-topicalized WH2 may carry. What matters is that we now have the tools to define a topicalized WH2; for example, only a moved WH2 licenses parasitic gaps, and thus lends plausible support for the topic-analyses proposed here and in previous work.²⁰ This is the type of lower *wh*-phrase that I concentrated on in the previous sections and will return to below.

4 Topics: Interrogative Topicality across Languages

Let me finally address the dimension that topics give the structures in question. If, so the proposal goes, monoclausal multiple *wh*-questions in German are in fact multiple topicalizations of *wh*-phrases (as well as non-interrogative constituents, potentially), we are basically dealing with *wh*-topics. This section explores this notion, refines its meaning, and presents cross-linguistic support for it.

4.1 Discourse-Restricted Quantification

Side by side with the evidence suggested above, a further type of argument for multiple *wh*-displacement into the C-domain in German comes from discourse restrictions. This section presents the relevant data and introduces a means to account for them, *Discourse-Restricted Quantification* (Grohmann 1998).

Compare, for example, the following two discourse contexts and the (in)felicity (marked with a hash mark) of a multiple *wh*-question between English and German:

(45) *Context I*: A man comes to a newsstand and just sees three people leaving in different directions, each fiddling with their purchases, obviously excited. Asking the newsagent whether he sold anything interesting to those three, the newsagent replies: “I can’t believe it! Within two minutes, I just sold the Anarchist newsletter, a Fascist magazine, and the Christian church news.”

- a. Who bought what?
- b. Wer hat was gekauft?
who has what bought

‘Who bought what?’

(46) *Context II*: A jeweler comes home to his wife for lunch and exclaims excited: “I had a great morning, honey! I sold a platinum watch, a gold necklace, and a titanium wedding band.”

a. Who bought what?

b. #Wer hat was gekauft?

who has what bought

‘Who bought what?’

As can be seen, German only allows for a felicitous binary *wh*-question if the set of individuals is part of the common ground between speaker and hearer, introduced in the discourse, where (46a) is a perfectly reasonable question and a potential answer would be something like (47).²¹

(47) A businessman bought the platinum watch, an old lady bought the gold necklace, and a young groom bought the titanium wedding band.

This felicity condition is captured by a condition I called, for better or worse, Discourse Restricted Quantification in earlier work (Grohmann 1998):

(48) *Discourse Restricted Quantification (DRQ)*; from Grohmann 2000b: 269)

Questions involving two *wh*-expressions are well-formed if the value of both *wh*-expressions is determined by the context; determination of values is satisfied by providing a set of at least two possible referents in the discourse.

In other words, DRQ forces a certain salience of the referents to all *wh*-phrases in a multiple *wh*-question. As the above contrasts show, it strictly applies to German, but not to English; this is the notion of topicality understood throughout (cf. note 12).

What DRQ essentially expresses is the intuition that all *wh*-phrases in a German multiple *wh*-question must be D(iscourse)-linked (possibly, but not necessarily in the sense of Pesetsky 1987). While a *wh*-phrase in an information question represents a novel set of individuals (new information), the set of individuals represented by D-

linked *wh*-phrases is to some degree known (old information). The term DRQ can be used to distinguish a condition of D-linking on all *wh*-phrases (in German), while D-linking simply applies to those elements commonly identified as such.²² I present one type of interpretation of DRQ next, and another possible route in section 4.3.

4.2 *Absence of Multiple Information Questions*

Rizzi (1978) notes a curious property of Italian (though see McCloskey 1979 for a similar claim about Irish): this language does not allow multiple *wh*-questions at all.

(49) a. *Chi ha scritto che cosa?

who has written what

‘Who wrote what?’

b. *Chi è partito quando?

who is left when

‘Who left when?’

An intriguing explanation for this ban has been offered by Calabrese (1984, 1992): Italian does not have a second focus position required to license the additional *wh*-element. His reasoning goes as follows. A multiple *wh*-question, if not used as an echo or quiz question, asks for new information regarding all *wh*-elements; new information in a declarative sentence is construed with non-default sentential stress — or focus. The type of focus relevant for a felicitous reply to a question is information (or presentational) focus, not identificational (or contrastive) focus (see the discussion in É. Kiss 1998). In Italian, the position for information focus is unique and so it follows that multiple *wh*-questions are ill-formed: the multiple information requested cannot be realized in the answer.

(50) a. *MARIO ha scritto una LETTERA.

Mario has written a letter

‘MARIO wrote a LETTER.’

b. *FRANCO è partito alle CINQUE.

Franco is left at five

‘FRANCO left at FIVE O’CLOCK.’

This state of affairs is independent of interpretation in terms of single-pair and pair-list readings, as Calabrese shows (see Grohmann 2003a for discussion):

(51) #MARIO ha scritto una LETTERA, FRANCO un ARTICOLO,

Mario has written a letter Franco an article

CARLO un LIBRO...

Carlo a book

‘MARIO has written a LETTER, FRANCO an ARTICLE, CARLO a BOOK...’ (Calabrese 1984: 67)

The intended interpretation of (51) is not contrastive, but information focus (cf. ‘What did people write, and who did it?’), hence the hash mark. (Presumably, an utterance like (51) is felicitous and well-formed in a context that focuses contrast.) As it turns out, we can detect a similar effect in German: the analogue of (51) can only be used contrastively as well.

It seems that German and Italian pattern alike in the relevant properties. In a sense, then, German multiple *wh*-questions are not really questions. However, German has the option of marking contrastiveness in two positions: by fronting the relevant element or by assigning it heavy stress in low position. Thus, if a question is formed that asks for contrastive information (in a syntactically well-formed way), a possible answer is also well-formed syntactically (see e.g. section 2.3 above).²³

If German shares with Italian the absence of “real” (information) multiple *wh*-questions, the notion of *wh*-topic — or the analysis of movement to [Spec, TopP] for that matter — loses some of its initial awkwardness. More evidence in denial of such an awkwardness to begin with follows next. Let me just briefly remark and relativize earlier conclusions that the Italian connection might give us a clue as to why some structures do not seem to involve movement to TopP of the lower *wh*-phrase (see

especially the data in the discussion of parasitic gaps in section 3.2 above): maybe German *does* have real multiple *wh*-questions, but they are (possibly) rare and show different properties than those I have considered throughout.

4.3 The Wh/Clitic Connection

There is a further link one can make between *wh*-elements and some notion of topicality. In this final section, I will discuss how the phenomenon of clitic doubling in Bulgarian, later enriched with other languages, correlates with fronted *wh*-phrases, or rather vice versa. All in all, we can observe a close connection between topical *wh*-phrases and clitics — or, alluding to the work of Boeckx and Stjepanović (2004), there is more to the “*wh*/clitic connection” than meets the eye.

Citko and Grohmann (2001) advance the bold thesis that German is like Bulgarian, expanded in Grohmann 2000b, 2003a. The main parallels were argued to be the obligatory fronting requirement on all *wh*-phrases in the overt component in both languages presented above. In an intriguing recent paper, Jaeger (2004) presents a curious set of data from Bulgarian which is much more in unison with the view on German multiple *wh*-questions espoused here. Moreover, the analysis Jaeger suggests bears striking similarities to the analysis presented here. Let me summarize a presentation of the data and suggest an interpretation that couches nicely into the present set of assumptions, drawing also from joint work with Cedric Boeckx.

The parallelism between German and Bulgarian multiple *wh*-question formation hypothesized elsewhere faces the difficulty of a well-known property of Bulgarian interrogative syntax that German lacks: all *wh*-items are obligatorily fronted *en bloc* or adjacent to one another (Rudin 1988), that is to say, fronted *wh*-phrases may not be split up.²⁴ Rudin already offered some data pertaining to parentheticals (see Bošković 2002 for recent discussion). With more relevance to the present issues, another type of constituent that may occur in the left periphery and is presumably the result of movement may not intrude either: topics. Richards (1997, 2001) presents data

involving the interaction between topics and fronted *wh*-elements which suggest first, that the two are not incompatible, and second, that topics must precede, rather than follow, the *wh*-constituent(s).²⁵

- (52) a. Ivan včera kakvo kupi?
 b. Včera Ivan kakvo kupi?
 yesterday Ivan what bought
 ‘What did Ivan buy yesterday?’ (Richards 1997: 111)

- (53) a. *Koj včera kakvo kupi?
 b. Včera koj kakvo kupi?
 yesterday who what bought
 ‘Who bought what yesterday?’

The same effects can be found in Romanian (Ileana Comorovski, p.c.). What makes Romanian interesting is a fact that has first been observed by Dobrovie-Sorin (1990). This language allows clitic doubling, and as it turns out *wh*-phrases may be doubled by a clitic just in case they are D-linked — in fact, D-linked *wh*-phrases *must* be thus doubled, as the contrast in (54) shows.²⁶ (The particle *pe* occurs only in D-linked questions for reasons that do not bear on the present issue.)

- (54) a. *Pe care (baiat) ai vazut?
 b. Pe care (baiat) l-ai vazut?
 PE which boy CL-have.2SG seen
 ‘Which one (Which boy) did you see?’

Non-D-linked *wh*-words, on the other hand, do not allow doubling at all:

- (55) a. Cine ai vazut?
 b. *Cine l-ai vazut?
 who CL-have.2SG seen
 ‘Who did you see?’

Picking up on the discussion in Billings and Rudin (1998), Jaeger (2004) now

examines a curious property of (colloquial) Bulgarian: clitic doubling is not only allowed with overtly marked D-linked *wh*-elements, but with bare *wh*-words as well.²⁷

Consider some contrasting structures:

(56) a. Kogo kakvo go iznenada?

whom what CL.ACC surprised

‘What surprised whom?’

b. ?*Kakvo kogo go iznenada?

An important initial observation is that the doubled *wh*-phrase precedes all others, in particular a subject *wh*-phrase (see Jaeger 2004 for discussion). This fits in well with the proposal developed above for German: clitic-doubled *wh*-phrases seem to underlie different syntactic operations than non-doubled ones. The particular operation one could envision here, with the proposal from German in mind, is topic-movement. One result of the many Rizzi-inspired works on the left periphery, I take it, identify a cross-linguistic tendency that topics precede *wh*-items if both co-occur. The data from (52)-(53) suggest that this holds at least for Bulgarian.

And indeed, Jaeger explores an account along the same lines. He introduces some definition of topicality which (in the spirit of note 12) I will not recreate. Suffice it to say, the two approaches are compatible in many respects. To illustrate one discourse function of doubled *wh*-phrases in (colloquial) Bulgarian consider, for example, the following context and the question relating to it.

(57) Some of the most popular painters in town recently made portraits of a couple of John’s friends. John knows that each of his friends wanted to be painted by a particular artist, but he doesn’t know by which one. So he asks:

Kogo koj go e narisuval?

whom who CL.ACC AUX painted

‘Who painted who?’

To the best of my knowledge, the interpretation of the question would be analogous to

something one could reconstruct in English as ‘For each of our friends, who painted him?’ or simply ‘Which friend was painted by which artist?’. (Jaeger offers the latter as the sole translation, reflecting native speaker’s intuitions about the interpretation.)

Another property of clitic-doubled multiple *wh*-questions in (colloquial) Bulgarian is that the doubled *wh*-phrase may also precede a D-linked subject:

- (58) Kogo/Koj koja žena *(go) običa?
 whom/whom which woman CL.ACC love.3SG
 ‘Who does which woman love?’

By now it should not come as a surprise to see that D-linked *wh*-phrases may also be doubled, as shown in (59). Here one function of the doubling clitic seems to be disambiguation, since, as the pair in (60) shows, D-linked *wh*-phrases may front in either order (in which case the interpretation is, of course, unambiguous, as suggested in (59) already; see Jaeger 2003, 2004).

- (59) Koj mǎž koja žena (go) običa?
 which man which woman CL.ACC love.3SG
without CD ‘Which man loves which woman?’
with CD ‘Which woman loves which man?’

- (60) a. Koj mǎž koja žena običa?
 which man which woman love.3SG
 b. Koja žena koja mǎž običa?
 which woman which man love.3SG
 ‘Which man loves which woman?’
 or ‘Which woman loves which man?’

I leave the discussion of Bulgarian as is. It should have become clear that much more can be said, and in fact need to be, but that will have to wait for future research. The goal of this section was to draw a connection between *wh*-elements that are in one way or another linked to the discourse (*wh*-topics) and another discourse-heavy

element of grammar, clitics (viz. clitic doubling; see also note 17). This *wh*/clitic-connection has been noted in different contexts and might be worth exploring further.

5 Finding Closure and Looking Out

To sum up the main proposal of this article, I have argued in favour of an analysis of German monoclausal multiple *wh*-questions that involves topic movement of the two *wh*-elements into the left periphery of the clause in the overt syntax. The starting point was the so-called intervention effect (Beck 1996a), which I have argued against on theoretical and empirical grounds. Especially the latter demonstrated that any attempt to capture the “Beck effect” under some notion of intervention undergenerates and as such fails. The alternative developed here capitalizes on a property different from quantification that illegitimate in-betweeners share: they are all non-topicalizable. Fleshing out this notion led to further empirical justification not only of the validity of this generalization, but also of the theoretical proposal that involves movement to a left-peripheral topic position of both *wh*-phrases (as well as a legitimate in-beween, for example). One possible conclusion to draw from the analysis is to deny that multiple *wh*-questions exist in German in the first place, on analogy with Italian, based on finer discourse-properties distinguishing German from English, for example (Pesetsky 1987). But this is not the only necessary conclusion, and it need not be the final word either. I finally connected the structures of discussion to instances of clitic doubling *wh*-phrases in (colloquial) Bulgarian. It has been argued that here too topicality in a wider sense plays a role (Jaeger 2004), something independently explored in collaboration with Cedric Boeckx on the basis of languages such as Romanian (Boeckx and Grohmann 2004). How deep this *wh*/clitic-connection goes remains to be seen. Let me finally comment on some possibilities.

As noted above, the phenomenon of doubling *wh*-phrases with a clitic is not unique to Bulgarian, and neither is Jaeger’s study really groundbreaking news on an empirical level. And neither is the attempt to tie in doubled *wh*-phrases with some

notion of topicality. What is new and highly intriguing, however, is the double explicitness of the study.

First, in that it explicitly spells out such intuitions rather than mentions them as a side remark. Bear in mind that the language under consideration is Bulgarian; while there has been a tremendous amount of research on clitic strategies in Romance languages, including the distinction between clitic doubling and clitic left dislocation, the body of research on related phenomena in Slavic is considerably smaller. The consensus seems to be that Slavic has one strategy only, which is commonly referred to as clitic doubling. The relation between these clitic strategies and information structure are as obvious as they are contended. While they obviously go hand in hand, it is not necessarily clear which (type of) strategy goes with which kind of discourse function. In Romance, for example, there is a long-standing tradition to associate clitic left dislocation with topicality (in our sense), but not necessarily and/or exclusively clitic doubling (see Villalba 2000 for summary). Whichever way the dice fall, the phenomenon at hand is clearly one that shows topicality effects, if not even restrictions akin to D-linking or DRQ. For what it is worth (see also e.g. Leafgren 1997), I assume that Bulgarian clitic doubling is of the “right” variety to correlate with this kind of function. Future research will surely shed more light on the issue.

It is in this sense that Jaeger’s results are doubly interesting. To the extent that the explicit connection to my main proposal just painted against an incomplete picture holds up to scrutiny, there would be independent support for some of the wilder stabs at German left-peripheral syntax unleashed above. This is the topic of ongoing research and if nothing else, this hypothesis and some correlating predictions are empirically testable.

Note, incidentally, that the parallelism between clitic doubling and *wh*-phrases, the type of *wh*-clitic connection I am interested in (cf. Boeckx and Stjepanović 2004, Poletto and Pollock 2002 for further interpretations) is not restricted to the Balkan

Sprachbund and neither is the notion of a *wh*-topic, even in the explicitness presented above (for both Bulgarian and German).

Another language that has been argued to contain *wh*-topics is (Modern) Greek. On the basis of a wide range of properties, Androulakis (1998) suggests that some *wh*-phrases are in fact *wh*-topics — namely (at least) those that are doubled by a clitic. Her analysis accounts for the ambiguity she observes between a fronted *wh*-phrase and a lower quantifier in regular questions, which disappears when the *wh*-phrase is doubled, but extends to data pertaining to parasitic gaps, weak crossover effects, and others. And, importantly, she also explores a notion of topicality, presuppositionality, and discourse properties of such *wh*-topics basically driven by the need to say something additional to more or less well established concepts like D-linking (see my remarks above).

And just to stress that the connection between *wh*-phrases and topic-discourse properties is not the figment of limited imagination, let me mention Reglero's (2003) and Lambova's (2003) work on multiple *wh*-questions in Basque and Bulgarian, respectively, bearing heavily on these issues as well as Poletto and Pollock's (2002) explorations in Romance (Northern Italian dialects, predominantly). The latter work in particular picks up on the *wh*/clitic-connection made explicit in Boeckx and Stjepanović 2004, though it also carries some weight to present concerns. In the larger picture, then, we might add 'topicality' to the connection and explore even more intricate patterns.

While I do not wish to resound too functional a perspective on grammar, one wonders how narrow syntax is and how narrow syntax should be — or, more rhetorically, following up on the discussion in Chomsky 2000 and much subsequent work: what exactly is narrow syntax?

NOTES

1. In Beck 1996b, she addresses the issue as well, but as far as I can see, the relevant chapter is no more than a slightly revised reproduction of the published article (henceforth, Beck 1996a); an additional chapter on Korean, which later appeared as Beck and Kim 1997, serves as cross-linguistic support for her proposal.
2. Or even de Swart 1992, one of the contenders for the title of “inventor of intervention” (though from a strictly semantic perspective).
3. Note that Beck also applies her analysis to intervention effects observed in separation constructions of the form *was ... alles* ‘what ... all’, *was für-* ‘what for’-split, and *wh*-scope marking structures, for example, which are not considered here.
4. *ROLF* is my acronym for a term that Beck does not employ; she introduces it as “a restriction on LF movement [...] informally expressed as in [(3)]” (Beck 1996a: 1). As we will see below, however, the LF-part of ROLF is “absolutely crucial” to Beck (p. 18), so the acronym *ROLF* zooms in on its importance.
5. Note that, while starring (6) on p. 1, Beck (1996a: 3, fn. 3) then qualifies the degraded status, subsequently marking such structures with two question marks. Since I am not interested in finer factors of interpretation, I adopt the former notation throughout. The analysis proposed here can easily be accommodated to capture either state of affairs.
6. Nevertheless, I do criticize the “crucial” aspect of a separation between overt and covert components in the following. Note that I do not address the reintroduction of a *barrier* into the syntax, which in Beck’s formulation looks even stranger than in recent attempts within a phase-based framework initiated in Chomsky 2000.
7. Mathieu’s (1999, 2002) main concern are *wh*-in situ constructions in French (see his work for further references). Doubts of Huang-inspired covert phrasal *wh*-

movement are, however, far more general and widespread; see e.g. Hornstein 1995, Hagstrom 1998, Sabel 1998, Simpson 2000, and others for explicit arguments and alternatives (see also section 3.1 below for some discussion).

8. To complete the brief survey of the treatment of Beck-inspired intervention in the literature, Hagstrom (1998) formulates intervention qua “Beck effect” rather casually:

(i) *Beck Effect* (Hagstrom 1998: 80)

Q cannot be attracted over a certain set of elements (which includes at least negative items like *niemand* ‘nobody’).

For a revised implementation of Hagstrom’s Q(uestion morpheme) which fits into the current set of assumptions, see the exposition of the “Hagstrom-Bošković approach” in Grohmann 2000b, 2003a, drawing from Bošković 2001, and section 3.1 below.

9. Since Beck acknowledges that there is a huge body of literature on negative islands, with which her set of data have little in common, it comes as a surprise that so many linguists jump on the “Beck effect” ship (beyond those already cited, starting with Beck and Kim 1997, a number of researchers have looked for cross-linguistic evidence for intervention: Lee and Tomioka 2000, Lipták 2001, Lotfi 2003, and others). In fact, according to Beck herself, there is no such ship. I quote:

In contrast to this range of papers [syntactic and semantic work dealing with negative islands — KKG], my proposal does not deal with *wh*-phrases that occur structurally above a negation at S-Structure. I am only concerned with LF movement. Accordingly, I am looking at a somewhat different set of data.[...] Thus, none of the existing proposals are prepared to deal with my data. The distinction between S-Structural and LF movement is absolutely crucial.

(Beck 1996a: 18)

I stress my point again: regardless of whether some form of intervention exists in

grammar (cf. note 3), it does not play a role in German multiple *wh*-questions. After the conceptual arguments against it laid out here, I will turn to empirical reasons.

10. This is not to say that such a structure may not be found. See, for example, Lipták 2003 on Hungarian, but Beck mentions that such multiple *wh*-structures within nominals are really what she has in mind.

11. Since Beck (1996a) spends a fair deal on the issue of negative quantifiers, which forms the basis for her more general constraints, I stress these particularly. This becomes relevant in (18) below (see also Grohmann 1998, 2000b, Citko and Grohmann 2000, as well as Boeckx 1999 on French), where I suggest an alternative characterization of the class of impossible intervenors in terms of monotonicity — one which Beck in fact considers and dismisses in favour of universal quantifiers. This cannot be the whole story either, however. Space does not permit a more detailed discussion, but I think it suffices to say that the generalization arrived at below is just as meaningless as intervention accounts (pace a possible between-the-lines reading of the works just cited). Something else has to be said to tie together all observations, and the proposal in terms of topicalizability below arguably does.

In her early dismissal of (18), Beck (1996a: 33–34) mentions some misfits, namely the quantifier *jeder* ‘every(one)’ (as well as *fast jeder* ‘almost every(one)’), which seems to exhibit the same intervening powers as monotone decreasing (or downward monotonic) quantifiers without being one. In addition, some quantificational adverbials behave similarly (Beck exemplifies with *zweimal* ‘twice’, *meistens* ‘mostly’, *oft* ‘often’, and *mindestens zweimal* ‘at least twice’). I address the issue of adverbs in section 2.3, and it should become clear that once the real approach to apparent intervention is spelled out, these misfits fit.

12. Admittedly, the notion of topic —and its relevance to the syntactic component —

is one of the hotbeds of research and contention. I refer to the discussion in Grohmann 1998 and references cited as far as an integration for current purposes is concerned; see also Jaeger 2004 for a more recent treatment basically along those lines. Important at this point is that some notion of topic in terms of old or given information and possibly aboutness *does* play a role in the syntax, which I take to be some property driving displacement to a topic-devoted projection, for simplicity, Top(ic)P.

With respect to topicalizability mentioned in the text, it is interesting to note that the same observation seems to hold for English as well, possibly even across a wider range of languages. There seems to be disagreement among speakers, however, as to whether universal (monotone increasing) quantifiers may indeed be topicalized, or whether fronting into the first position of a matrix clause is necessarily focus-driven. Beck's (1996a) suggestion to test with left dislocation structures is useful, but caution is advised; see Grohmann 2000b, 2003b for detailed discussion. The observation that monotone increasing quantifiers may, but monotone decreasing ones may not topicalize was to my knowledge first made explicit in this context in Citko and Grohmann 2001. Note that Grewendorf (2002: 77-79) comes to virtually the same conclusion.

13. Much the same can be said for focus as for topic above (note 12). Suffice it to say that at this point it is only relevant that focalized elements displaced into the left periphery do *not* target TopP, and that all topics in this domain are adjacent to one another (viz. the notation TopP* in Rizzi 1997). As spelled out below, I also assume that a Foc(us)P may exist, which would then also host an overtly moved *wh*-phrase.

For the following data, I employ contrastive focus, rather than information focus as the response to a question (see É. Kiss 1998 for discussion and literature, and also Brunetti 2003 for more recent work). The latter would work too, but sounds odd for

decreasing quantifiers (as it does in English, indicated in the translations in (i)). I have nothing to say on these facts and am not even sure that they are relevant.

(i) What did Peter read yesterday?

a. Viele BÜCHER hat Peter gestern gelesen.

many books has Peter yesterday read

‘Peter read many BOOKS yesterday.’

a. ??Wenige BÜCHER hat Peter gestern gelesen.

few books has Peter yesterday read

??‘Peter read few BOOKS yesterday.’

14. In this connection it may be interesting to note that once contrastively stressed, the elements identified by Beck as intervenors, monotone decreasing quantifiers, suddenly become good (even clearer with the focus particles *sogar/nur* ‘even/only’):

(i) a. Wer hat (sogar) VIELE Bücher wo gekauft?

who has even many books where bought

‘Who bought (even) MANY books where?’

b. Wer hat (nur) WENIGE Bücher wo gekauft?

who has only few books where bought

‘Who bought (only) FEW books where?’

These questions carry quite a different meaning, however, and I will thus leave them aside. For a recent discussion on focus, see e.g. Brunetti 2003 and references cited.

15. At least not in a direct way: while inherent quantificational power might make them bad topics, what is of interest here is the fact *that* they make bad topics. This property, non-topicalizability, is what gives rise to apparent intervention.

16. The technical details of the previous works cited are as irrelevant here as their differences; see Grohmann 1998, 2000b: ch. 5, 2003a for clarification. In fact, one

can envision a number of alternatives to capture the essentials of the present analysis, including multiple specifiers as well as multiple projections (see also Richards 1997, Sabel 1998, Grewendorf 2001, Bošković 2002, and further literature cited)

17. The present refinement (36c) benefits from Rizzi's own reconsiderations (Rizzi 2004), inspired by much productive work on the left periphery over the past decade. My 'FP' is in fact an adaptation of Uriagereka's (1988) 'Further Projection'; see also e.g. Uriagereka 1995a, 1995b, Boeckx and Stjepanović 2004 for a finer understanding of a discourse-driven, 'point-of-view' FP as endorsed here (relevant especially in section 4.3 below). Grohmann (2000a) presents further amalgamation of the discourse properties of F and the topicality — there, of clitics; here, of *wh*-expressions.

18. This is not at all clear. See Sabel 1996 for discussion and references, but take note that Grewendorf (2002: 234) also employs the idea that German *wh*-movement licenses parasitic gaps. See Webelhuth 1992 for early discussion of basic properties of German parasitic gap constructions, such as restrictions on the adjunct clause which contains it (which e.g. has to be a *zu*-infinitive of the forms shown in (38a-b).

19. In Grohmann 2003a, I present another potential indicator of (high) A'-movement of the lower *wh*-phrase from (the absence of) weak crossover effects.

20. It might be interesting to note that Suranyi (2004) also argues on the basis of parasitic gap-licensing (among other things) that apparent *wh*-in situ in Hungarian must involve movement of WH2, at least to some position licensing the parasitic gap. He shows that the lower *wh*-phrase sits in a focus position and as such would not be expected to interact with topic-marking adverbials the way they do in German, as noted by one reviewer.

21. Peter Svenonius (p.c.) points out that this state of affairs carries over to English. While in a situation that conforms to DRQ (see below), such as (45), even the

structure violating superiority is well formed, it is not so in (46). In other words, English speakers may employ *What did who buy?* in a context that identifies potential referents of both *wh*-phrases (cf. Baker 1970, Pesetsky 1987). This further confirms Haider's (2000) intuition that superiority is not a uniform condition on the grammar, evident in much current research, but rather a complex epiphenomenon of the interplay of various grammatical properties. More has to be said which ones it actually concerns. Haider concentrates on syntax-semantics/parsing, Bošković (2001) on syntactic word order and interpretive constraints, while I investigate the role of discourse proper on the syntax (viz. D-linking/DRQ); others do so too, maybe with a little less syntax (Comorovski 1996), no formal syntax at all (cf. the Sorting Key Hypothesis of Kuno 1982), or something much more in line with the present proposal (Jaeger 2004).

22. The latter refers, of course, to morphologically marked D-linking, for example through the prototypical *which*-phrase. What prevents me from fully admitting that DRQ (or whatever it is that makes German multiple *wh*-questions special) is an *equivalent* of D-linking is that as far as I can see there does not exist an explicit *theory* of D-linking. Pesetsky's instrumental paper notwithstanding, very little has been done to formalize the intuitions expressed there (which can, partially, be already found in Baker 1970 and other earlier work; see also Grohmann 1998), and the disappointingly misleading title of the rather narrow work reported in Hirose 2003 does not help much either; maybe the syntax sketched in Boeckx and Grohmann 2004 will give new impulses. In the absence of such a theory, I develop the analysis independently of D-linking, but with it, and its potential usefulness, in mind. (A footnote to this footnote: funnily enough, there does exist a theory of the opposite of D-linking, also made precise and labeled first in Pesetsky 1987: the syntax and semantics of aggressively

non-D-linked *wh*-phrases in den Dikken and Giannakidou 2002.)

23. However, German and Italian apparently differ with respect to D-linking:

- (i) *Quale ragazza ha dato un bacio a quale ragazzo?
 which girl has given a kiss to which boy
 ‘Which girl kissed which boy?’ (Calabrese 1984: 67)

I leave this discrepancy between both Italian and German as well as D-linking and DRQ for future research. But note that if a multiple question with two bare *wh*-elements is D-linked, it might provide us with a clue as to why the Superiority Condition (Chomsky 1973, though admittedly not topic of the present paper) may be violated in German: the two *wh*-elements are actually D-linked, which — for reasons that are beyond the scope of this discussion — may circumvent superiority (see Boeckx and Grohmann 2004 for suggestions).

24. A great number of theoretically quite different analyses have been proposed for Rudin’s findings, including a modernized version of her original clustering hypothesis (e.g. Grewendorf 2001, Sabel 2002), the implementation of multiple specifiers of C (such as Richards 1997 or Pesetsky 2000), and the interaction of different C-heads or at least different C-related features, such as topic, focus, and interrogative C proper as endorsed here (as in Citko 1998, Lambova 2001, or the work of Željko Bošković; see Bošković 2002 for a summary and ample references).

25. (53a) is also from the cited Richards source, (53b) home-made and confirmed. Lambova (2001) also discusses the interaction of topics and *wh*-phrases in Bulgarian and provides a similar example from a multiple *wh*-question (cited in Jaeger 2004):

- (i) Decata na cirk koj koga šte vodi?
 children.DEF to circus who when will take
 ‘Who will take the children to the circus when?’

26. Boeckx and Grohmann (2004) capitalize on the relation between clitic doubling and D-linking (observed across languages, such as Hebrew and possibly Greek) by syntactically implementing Rullmann and Beck's (1998) proposal on the structure of D-linked *wh*-phrases motivated on semantic grounds, which involves an additional D-head carrying the required presuppositionality (another notion I leave open here).

27. Apparently, Billings and Rudin (1998) restrict this phenomenon to unaccusative verbs, like the structure in (i).

- (i) Koj na kogo mu xaresva?
 who to whom CL.DAT pleases
 ‘Who likes whom?’

Dimitrova-Vulchanova and Hellan (1999: 502ff.) also briefly look at clitics doubling a fronted *wh*-phrase. They offer some relevant data involving a ditransitive verb:

- (ii) a. Knigata na kogo (*mu) ja dadoxa?
 book.DEF to whom CL.DAT CL.ACC gave.3PL
 ‘To whom did they give the book?’
 b. Na kogo kakvo mu dadoxa?
 to whom what CL.DAT gave.3PL
 ‘What did they give to whom?’

To my knowledge, however, Jaeger's study is the first to systematically investigate the relation between (fronted) *wh*-items and (doubled) clitics; see also Jaeger 2002. I will hence concentrate on his data and exposition, and then tie it in with related data in other languages. See his work for further specifics regarding Bulgarian syntax.

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