

CHAPTER 5

(MULTIPLE) WH-QUESTION FORMATION: MOVEMENT, INTERPRETATION AND TYPOLOGY

This chapter deals with the formation of Wh-questions from two perspectives. On the basis of cross-linguistic variation in the formation of multiple (binary) Wh-questions, I propose a tripartition into zero, singular and multiple Wh-movement languages. The primary criterion is the (non-)availability of single-pair interpretation, which can be made sense of once we dissociate Wh-movement from Q-typing. The different patterns, and the tripartition that emerges, suggest that German is a multiple Wh-movement language, contrary to popular belief. The second part of this chapter consists of empirical arguments for exactly this assumption. In sum, this chapter argues for interpretive differences as the result of Wh-displacement targeting the ω -domain vs. the ϕ -domain.

5.1 Introduction

In the following I will be concerned with a classification of languages into three types of strategies to form multiple Wh-questions. One type of language forms a multiple Wh-question by moving all Wh-phrases to a Wh-licensing position, another type moves only one Wh-phrase, and a third type does not move any Wh-phrase to that position. I

suggest dissociating Wh-displacement from clause typing, so moving a Wh-element is not necessary to license an interrogative interpretation. I further distinguish Wh-fronting from real Wh-movement. The latter targets a specific position, by default a focus position in the ω -domain, while the latter does not. One instance of non-Wh-driven movement is so-called “Wh-scrambling,” as found in e.g. Japanese. In section 5.2 I present the basic facts about multiple Wh-questions, including the relevant data and a brief overview of some approaches. I propose a cleaned up tripartite typology in section 5.3, after reviewing a quasi-tripartition that has been suggested recently. One important aspect of classifying languages into multiple, singular and zero Wh-movement is the interpretation that languages make available. I concentrate on the difference between pair-list and single-pair readings, and compare the availability of especially the latter across languages. One consequence of the tripartition is that German should be viewed as a multiple Wh-movement language: German is like Bulgarian. I provide empirical support for this view in section 5.4. The upshot is that non-topicalizable material cannot occur between two Wh-phrases, supporting the analysis that all Wh-phrases move into the ω -domain. I offer a twist to the proposal in section 5.5, suggesting that German is also like Italian in not forming “real” multiple questions to begin with. The conclusion in section 5.6 wraps up our discussion of the left periphery, addressing also relevant issues for Exclusivity.

5.2 Three Types of (Multiple) Wh-Question Formation

This section introduces the basic background. Data from a range of languages suggest that the strategy to express Wh-questions comes in three guises: languages either move one Wh-phrase, all Wh-phrases or none. After a presentation of the core data, I quickly review current approaches to the syntax of Wh-question formation.

5.2.1 A Brief Overview of Wh-Questions

At first glance, one might be tempted to hypothesize that in order to ask an information question—as opposed to a rhetorical question or one with echo interpretation—languages either move a Wh-phrase (henceforth, WH) or leave it in situ.¹ Before we refine this hypothesis, consider the following two sets of data. (1) represents some languages that move a WH to a sentence-initial position, and (2) others that do not.²

- | | | | |
|-----|----|--|--------------------|
| (1) | a. | What did John buy? | <i>(English)</i> |
| | b. | Was hat Peter gekauft?
what has Peter bought
'What did Peter buy?' | <i>(German)</i> |
| | c. | Qu' a-t-il donné à Jean?
what has-he given to Jean
'What did he give to Jean?' | <i>(French I)</i> |
| (2) | a. | Tanako-wa Mitsue-ni nani-o ageta no?
Tanako-TOP Mitsue-DAT what-ACC gave Q
'What did Tanako give to Mitsue?' | <i>(Japanese)</i> |
| | b. | Zhangsan mai-le shenme?
Zhangsan buy-ASP what
'What did Zhangsan buy?' | <i>(Chinese)</i> |
| | c. | Il a donné le livre à qui?
he has given the book to who
'Who did he give the book to?' | <i>(French II)</i> |

¹ I use “in situ” in the liberal way it is standardly understood, namely roughly as “not moved to the same position as the equivalent element in other languages.” With the rise of functional projections and Checking Theory, the originally in situ interpretation of “base position” has been lost; other factors contribute also, which we will address shortly.

² French I and II designate two strategies available, both used as information questions (i.e. the one that leaves the WH in situ does not yield an echo interpretation, as the English equivalent would).

Since Huang's (1982) seminal work on Wh-questions in Chinese, the "standard" account of Wh-questions is that all WHs are licensed in COMP (CP) at some point in the derivation—some languages do this overtly, others covertly. The Wh-element is taken to be an operator which must scope over the entire sentence at LF and the topmost projection in the clause, CP, is the position where operator-variable chains are created and wide scope can be established. Other things being equal, this view allows for a bipartition of the formation of Wh-questions into overt Wh-movement and Wh-in situ languages.

However, there arise some complications with this view. One is posed by so-called "Wh-scrambling." Some Wh-in situ languages allow displacement of WH's that does not seem to take place to check a Wh-feature (such as Japanese or Hindi). Another comes from languages that move all WHs. As we will see very shortly, these languages differ in the position the WH moves to (e.g. Bulgarian vs. Serbocroatian). A further complication has to do with an appropriate typology of Wh-question formation, a topic I tackle from one particular perspective, namely based on the (non-)availability of single-pair interpretation (Wachowicz 1974). In this context, the question arises whether there are (limited) parameters that can successfully group languages into clear patterns of Wh-formation or not. I suggest there are, given not unreasonable assumptions about the syntax and semantics of Wh-questions, and I will lay out all of these in the following.

5.2.2 Multiple Wh-Questions: Zero, Singular and Multiple Wh-Movement?

The clean bipartition that (1) and (2) suggest gets messy as soon as we add another WH, yielding a multiple Wh-question.³ Some languages move only one WH, others still do not move any, but a third class of languages moves all WHs. Throughout I will

³ To keep the discussion brief but clear, I restrict the discussion to Wh-questions with exactly two WHs, what Pesetsky (2000) calls "binary Wh-question."

refer to the first type as “singular Wh-movement languages,” the second as “zero Wh-movement (or Wh-in situ) languages,” and the third type as “multiple Wh-movement languages.” Moreover, all varieties come in two flavours: those that obey Superiority and those that seem to violate it.⁴

English is a good example of a singular Wh-movement language which exhibits Superiority effects, that is, no lower WH2 may move across a higher WH1.

- (3) a. Who bought what?
b. * What did who buy?

German is an example of a language that seems to move also one WH only, like English, but does not show Superiority effects: either WH may front rather freely (Haider 1983, 1993, 1996, Müller 1995, Grohmann 1997b, Grewendorf 1998, Sabel 1998).

- (4) a. Wer hat was gekauft?
b. Was hat wer gekauft?
what has who bought
'Who bought what?' (German)

Some Wh-in situ languages also lack Superiority effects, others do not (see e.g. Huang 1982, Tsai 1994, Watanabe 1993, Dayal 1996). Compare Japanese and Chinese:⁵

⁴ Chomsky (1973: 246) formulates the Superiority Condition as follows:

- (i) *Superiority Condition*
i. No rule can involve X, Y in the structure ... X ... [_{α} ... Z ...—WYV] ...
where the rule applies ambiguously to Z and Y, and Z is superior to Y.
ii. The category A is ‘superior’ to the category B if every major category dominating A dominates B as well but not conversely.

⁵ I take Superiority purely descriptive here, referring to moving a lower WH2 over a higher WH1, regardless of the type of movement that takes place. That is, neither Japanese nor Chinese would move a WH to SpecCP in these instances, for example, but only the former allows fronting of WH2 over WH1. We will get back to this in detail.

- (5) a. Dare-ga nani-o katta no?
 b. Nani-o dare-ga katta no?
 what-ACC who-NOM bought Q
 ‘Who bought what?’ *(Japanese)*

- (6) a. Shei mai-le shenme?
 b. * Shenme shei mai-le?
 what who buy-ASP
 ‘Who bought what?’ *(Chinese)*

French is an oddball: as mentioned above, it makes two strategies available, singular or zero Wh-movement. The same two strategies are also available in multiple Wh-questions, but regardless of whether one WH moves or none, Superiority must not be violated (see also below).

- (7) a. Qu’ a-t-il donné à qui?
 b. * A qui a-t-il donné quoi?
 to whom has-he given what
 ‘What did he give to whom?’ *(French I)*

- (8) a. Il a donné quoi à qui?
 b. * Il a donné a qui quoi?
 he has given to whom what
 ‘What did he give to whom?’ *(French II)*

The third category consists of languages that move all WHs, which include, for example, the Slavic languages and Romanian (among others, Wachowicz 1974, Rudin 1988, Comorovski 1996, Bošković 1997b, Richards 1997, Citko 1998, Stepanov 1998, Stjepanović 1999). Multiple Wh-movement languages also show the split with regard to Superiority: some must obey Superiority, others can apparently violate it.

Romanian and Bulgarian are languages that are sensitive to Superiority, like English, but front all WHs obligatorily (but see Bošković 1997b, Richards 1997 on relaxation when more than two WHs are involved: apart from WH1, all WHs may be ordered in any combination; I will largely ignore Wh-questions with more than two WHs)

- (9) a. Cine ce a vazut?
 b. * Ce cine a vazut?
 what who has seen
 ‘Who saw what?’ *(Romanian)*

- (10) a. Koj kogo vižda?
 b. * Kogo koj vižda?
 whom who sees
 ‘Who sees whom?’ *(Bulgarian)*

But other, apparently multiple Wh-movement languages, such as Serbocroatian or Polish, may front all WHs in any order.

- (11) a. Ko je šta kupio?
 b. Šta je ko kupio?
 what AUX who bought
 ‘Who bought what?’ *(Serbocroatian)*

- (12) a. Ktgo kogo zobaczył?
 b. Kogo ktgo zobaczył?
 whom who saw
 ‘Who saw whom?’ *(Polish)*

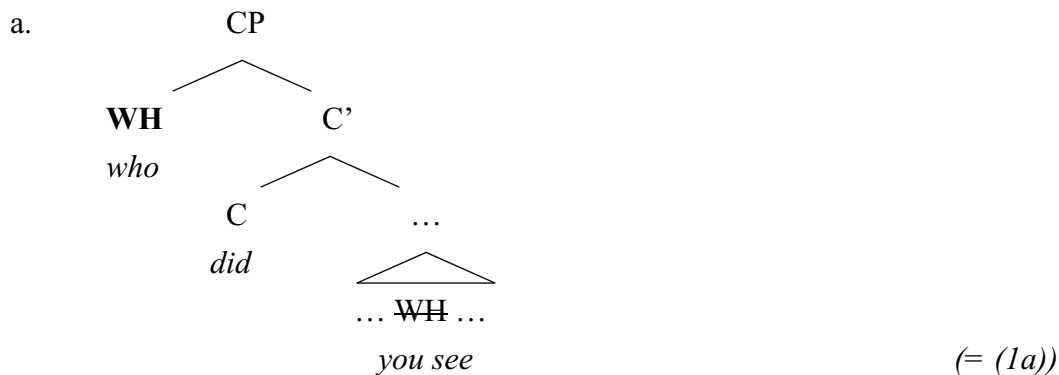
This brief overview shall suffice for an illustration of the phenomenon. I now address briefly some theoretical issues concerning these strategies, consequences that arise, and an outline of the proposal that I present in the remainder of this chapter.

5.2.3 *Clause Typing and Q*

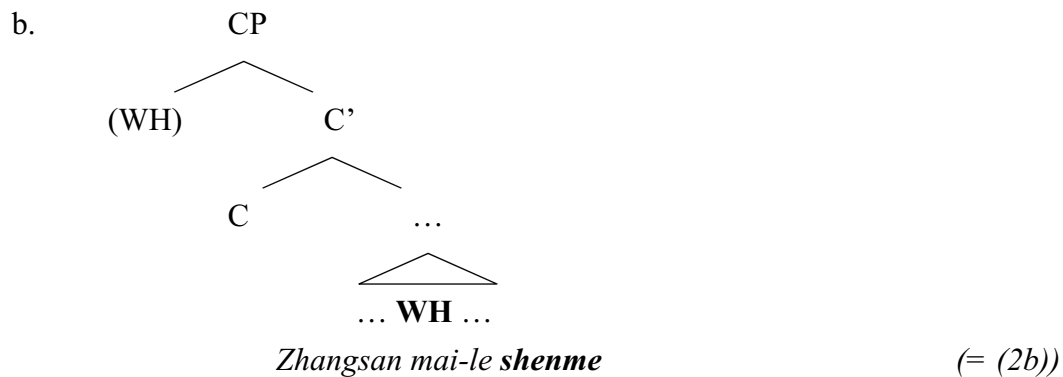
One question is whether Wh-movement is syntactically or semantically driven. Under the view that the Wh-operator (or interrogative clause-typer) sits on the WH, all WHs must move to SpecCP at some point.⁶ This approach goes back to Huang (1982) who proposes LF-movement of WHs in Wh-in situ languages. There is an alternative, namely that another element types the clause, possibly independent of the WH. Baker (1970) suggests a Q-morpheme, elaborating on an idea by Katz & Postal (1964), which was developed further by Cheng (1991). Under the latter analysis, all that is needed to license a question is Q in C, and languages allow either one of two strategies: (i) move a WH, which by default contains Q, to SpecCP or (ii) generate Q in C, which comes in the form of a Q-particle. This Q can be a phonologically pronounced morpheme such as Japanese *no* in (2a) or an unpronounced, empty morpheme. An implementation of this approach need not postulate LF-movement of the Wh-phrases.

We can schematize the possibilities for the generalized movement approach and the Q-typing approach as follows (where the copy pronounced at the point of Spell Out is marked in boldface and the LF-moved WH parenthesized):

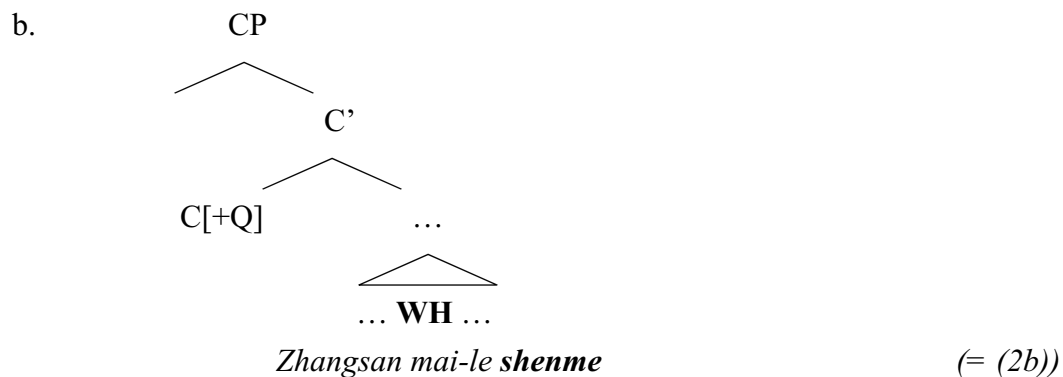
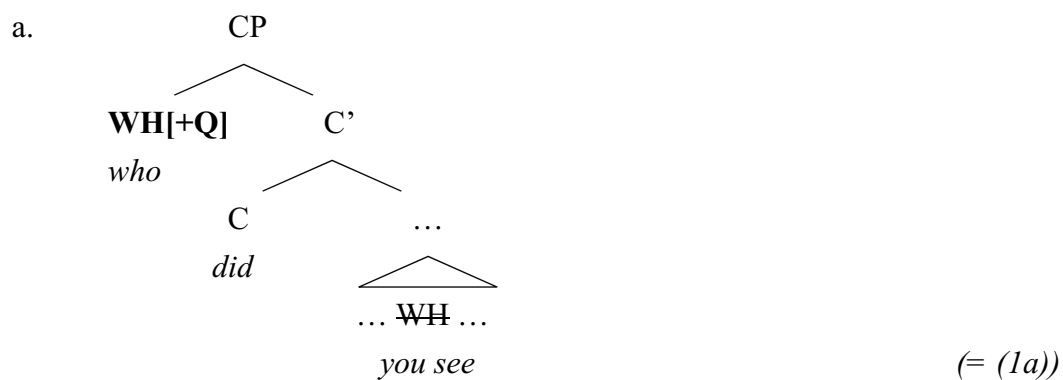
(13) *LF-movement approach*



⁶ Or only one WH in every language, with lower WHs interpreted, for example, functionally (Chierchia 1991, Hornstein 1995) or by absorption (Higginbotham & May 1981).



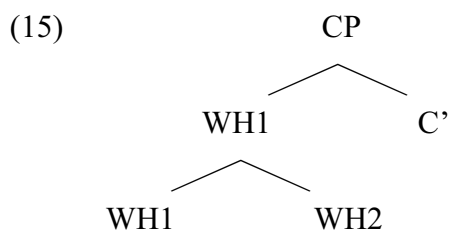
(14) *Q-typing approach*



Thus Q could sit on the WH in SpecP, as in (13a), or in C, as in (13b). The latter can be covert, as in Chinese, or overt, as in Japanese, for example.⁷

⁷ This presentation is, of course, a gross simplification. The goal of this section is simply to motivate the deviation from “standard” approaches that I propose. Apart from the references cited here, see Watanabe (1993), Comorovski (1996), Dayal (1997), Richards (1997), Grewendorf (1998), Sabel (1998), Simpson (2000), and many more.

Another issue concerns the landing site of moved WHs: do all displaced WH's target the same position (such as SpecCP, for scopal reasons)? Under the LF-movement approach of Huang, all WHs target SpecCP. In multiple Wh-questions, all non-moved WHs raise at LF, possibly adjoining to one another (cf. May 1985). Rudin (1988) extends this view and proposes that in multiple Wh-movement languages, all WHs move overtly to SpecCP. In languages like Bulgarian, where Superiority is obeyed, the first element moves into SpecCP and all subsequent Wh-movements right-adjoin to this WH. Those languages that lack Superiority are not taken to involve multiple Wh-movement, but only singular Wh-movement, with the lower WHs adjoining to TP. As this point will be relevant later, I postpone the discussion. In general, this approach is not incompatible with the alternatives outlined above, but the shift of attention is different. The Q-typing/LF-movement approach is concerned with licensing the clause type and establishing the appropriate scope. This approach focuses on the licensing condition for each separate WH, arguing that all WHs must be licensed in CP, and some languages have to do this overtly. We could thus extend the above structure with the following equally rough structure, which holds either at Spell Out or at LF:



A modern implementation of this approach involves multiple specifiers of CP, rather than adjunction structures (Richards 1997, 1999). Under this view, the highest WH targets SpecCP first, and subsequent Wh-movement “tucks in” additional WHs. Again, there are a number of variations available to deal with some of the variation we have seen already, and plenty more. As the multi-Spec approach is untenable in the current frame-

work, I will not discuss the details any further, but will return to some relevant aspects of related proposals by Stjepanović (1995, 1999), Bošković (1997a, 1997b, 1998b, 1999, 2000a, to appear), Citko (1998), and others.

I will argue in the following that Wh-movement is independent of interrogative force. Rather, the clause is typed interrogative by a question morpheme, the famous Q-particle (overt or covert). I am going to integrate Cheng's approach into a more articulate structure of CP (à la Rizzi 1997), here understood as the ω -domain, the domain that encodes certain discourse properties. But the present approach does not require WHs to move to yield a well-formed question, not even in languages that do not make a Q-particle available (see also Hagstrom 1998).

Displacement of WHs takes place for an additional discourse effect, driven by a special feature, the feature [Wh], which might be related to "focus." By separating [Wh] from [Q], we can license the interrogative clause across all languages without resorting to any kind of movement of WHs, and no necessity to move at LF either (see also Brody 1995, Hornstein 1995, Kayne 1998 for arguments against covert A'-movement). If WHs move, they do so for other reasons. It has been argued that languages that move WH to a C-related position (or ω -position), canonically target FocP. One argument comes from the complementary distribution of displaced WHs and displaced focus phrases (Horvath 1986, Brody 1990). I will extend the landing site possibilities by projections motivated by discourse effects. Singular or multiple Wh-movement languages then move one (or all) Wh-phrase(s) into the ω -domain. Zero Wh-movement languages may move WHs to some lower position, within the ϕ -domain. Japanese allows for "Wh-scrambling" and, as we will see, motivation can be found to front WHs in other Wh-in situ languages. As we will see, a distinction between "Wh-movement" (to check [Wh] in the ω -domain) and "Wh-fronting" (movement to a ϕ -position for some other purpose) will be necessary. In sum, WHs may move into one of two Prolific Domains: they may target the ω -domain or the ϕ -domain, and I lay out the syntactic and interpretive differences involved.

Following Wachowicz's (1974) insights, recently recast with minimalist assumptions by Bošković (1998b), I will capitalize on the correlation between overt movement into the ω -domain on the one hand and the availability of single-pair vs. pair-list readings in multiple Wh-questions on the other. I follow Cheng (1991) in assuming that Q types the clause, and I extend Hagstrom's (1998) proposal that the Q-morpheme is inserted in either one of two positions, yet to be specified, and moves to C. I will show that it is possible to tease apart the landing site of WHs. Anticipating the analysis, I will refer to displacement of a WH into the ω -domain and ω -movement and into the ϕ -domain as ϕ -movement. English, thus, ω -moves one WH, Bulgarian ω -moves all WHs, while Chinese does not ω -move any WH. We will see finer grained differences among languages which lead us to the tripartition alluded to:

- (16) *Typo- and topological Wh-displacement*
- i. multiple Wh-movement languages ω -move all WHs
 - ii. singular Wh-movement languages ω -move one WH and might ϕ -move others
 - iii. zero Wh-movement languages do not ω -move any WH, but may ϕ -move them

We will see, though, a peculiar state of affairs in German: this language tends to pattern with multiple Wh-movement rather than singular or zero Wh-movement languages. I propose that German be considered a multiple Wh-movement language and provide empirical support in the second part of this chapter.⁸

This said, we face a number of possibilities, all of which I will explore here, sketched for convenience in (17). I argue that α P refers to some projection within the ϕ -domain and β P within the ω -domain, and I will refine the position and relevance of Q (where "unmoved" refers to Spell Out position, as possibly in Chinese, for example).

⁸ The material in this chapter is an elaboration from early research (Grohmann 1997b, 1998), which evolved in material that I first presented as Grohmann (1999b), and then continued in collaboration (Citko & Grohmann 2000, forthcoming).

5.3.1 *Pair List vs. Single Pair Readings*

Before we address syntactic variation in forming multiple Wh-questions across languages presented above, consider interpretive differences found both in different languages and with different strategies. Wachowicz (1974) found multiple Wh-questions to be ambiguous between a pair-list (PL) and a single-pair (SP) interpretation. An SP answer consists of a single proposition, whereas a PL answer consists of sets of propositions. A question like *Who bought what?* could thus potentially be answered either way:

- (18) a. Mary bought a sweater. (SP)
 b. Mary bought a sweater, Jane bought shoes, Anne bought a skirt... (PL)

The availability of SP and PL readings is subject to cross-linguistic variation, an aspect that Bošković (1998b) considers in quite some detail, following Hagstrom (1998). He proposes a syntactic analysis based on Hagstrom's semantic approach to multiple questions, which allows a tripartition across languages as envisioned here. I extend this analysis, but utilize the ingredients made available by Hagstrom and Bošković as much as possible; I will henceforth refer to this line as the "Hagstrom-Bošković approach."

To illustrate differences in SP-availability across languages, English contrasts with Japanese, for example, in that it disallows SP readings in multiple Wh-questions. Thus, in Scenario I, which requires an SP answer like (18a), the English multiple Wh-question (19a) is infelicitous, while its Japanese counterpart (19b) is a legitimate way of requesting the desired information (leaving aside quiz question contexts for now).^{9,10}

⁹ I indicate infelicitous questions for the particular scenario with a hash mark and add the relevant readings in parentheses on the right-hand side, starring non-available readings.

¹⁰ A conjoined question is acceptable in this situation, leaving aside D-linked questions which I return to. As a general disclaimer, the following judgements might be idealized somewhat, they are certainly subtle. The majority is taken from Bošković (1998b).

- (19) *Scenario I*: John is in a store and off in the distance sees somebody buying an article of clothing, but he does not see who it is, and neither does he see exactly what is being bought. He goes to the shop assistant and asks:
- a. # Who bought what? (*SP)
- b. Dare-ga nani-o katta no? (SP)
 who-NOM what-ACC bought Q
 ‘Who bought what?’ (Japanese)

We thus reach a first descriptive generalization which we will refine and extend as we go along:

- (20) *Descriptive generalization*
 Japanese allows, but English disallows, SP readings in multiple Wh-questions.

As mentioned above, one obvious difference between the English question and its Japanese counterpart in (19) is that the first WH has overtly moved to the clause-initial position in English, but not in Japanese, and it is safe to assume this to be an ω -position (e.g. FocP or CP).¹¹ On the assumption that this movement checks the feature [Wh] in English, but not in Japanese, I will then investigate the following hypothesis, where by “Wh-movement” we understand movement to check [Wh], or—to put it in more general terms—movement targeting the ω -domain:

- (21) *Working hypothesis (to be revised)*
 Overt Wh-movement forces PL interpretation.

¹¹ I will not consider the Vacuous Movement Hypothesis (VMH) of George (1980), Chomsky (1986a). As will become clear in the following, I assume that one WH moves overtly in English, whether subject, object or adjunct. See Agbayani (2000) for recent discussion and relevant references. The issue of the VMH is irrelevant here for other reasons. For example, (i) is equally infelicitous in this context:

(i) #What did you sell to whom?

The Hagstrom-Bošković approach argues explicitly for such a correlation between overt Wh-movement and interpretation. One prediction the hypothesis makes is that French should make both readings available, depending on the strategy employed: French I should behave like English, while French II should pattern with Japanese (cf. (1c) and (2c) above).

Scenario II shows that this correlation is on the right track.¹²

- (22) *Scenario II*: Mary sees John down the corridor. Not wearing her glasses, she notices that John gives something to someone but can't figure out what the item nor who the person is. So she asks her friend to find out:
- a. Il a donné quoi à qui? (SP)
 he has given what to whom
 ‘What did he give to whom?’ (French I)
- b. # Qu’ a-t-il donné à qui? (*SP)
 what has-he given to whom
 ‘What did he give to whom?’ (French II)

Turning to multiple Wh-movement languages, Bulgarian should also behave like English in that it allows only a PL answer—after all, movement of both WHs still falls under (21). This prediction, too, is confirmed:

- (23) *Scenario I* (cf. (19))
- a. # Koj kakvo e kupil? (*SP)
 what who is bought
- b. * Kakvo koj e kupil?
 ‘Who bought what?’ (Bulgarian)

¹² (22) represents basically the same scenario as (19), but as French does not employ subject-verb inversion, it is hard to unambiguously test for Wh-movement of a subject-WH. The observation that overt Wh-movement in French destroys the SP reading is due to Bošković (1998a). See also Boeckx (1999b) and references cited there.

Likewise, Serbocroatian should not make an SP answer available, as both WHs front overtly. This prediction regarding Serbocroatian is not borne out, however:

- (24) *Scenario I* (cf. (19))
- a. Ko je šta kupio? (SP)
- b. Šta je ko kupio? (SP)
- what AUX who bought
- ‘Who bought what?’ (Serbocroatian)

In Bulgarian—a language that fronts all WHs, yet obeys Superiority—a multiple Wh-question is infelicitous in a situation that requires an SP answer (cf. (23a)). Naturally, (23b) is purely unacceptable. Interestingly, in Serbocroatian the situation is different. Not only does it allow either order of the WHs, it also makes available the SP reading. In fact, (24b) *only* makes the SP reading available, while (24a) allows both SP and PL.

Bošković calls the loss of PL interpretation by moving a lower WH2 over a higher WH1 “Interpretive Superiority,” contrasting it with “Syntactic Superiority,” which does not allow non-D-linked WH2 > WH1 to begin with, (holding in English and Bulgarian, for example). To complete the terminology of Superiority types, Bošković calls the possibility of fronting a bare (or D-linked) WH2 over a bare (or D-linked) WH1 “Apparent Superiority,” as German (or English) make available. As I will employ this terminology, consider the breakdown as follows:

- (25) *Types of Superiority*
- i. *Syntactic Superiority*: *non-D-linked WH2 > non-D-linked WH1
(such as English, Bulgarian, Romanian, Chinese, French)
- ii. *Apparent Superiority*: (any) WH2 > (any) WH1
(such as Japanese, German, Serbocroatian, Polish)
- iii. *Interpretive Superiority*: loss of PL reading when WH2 > WH1
(such as English, Japanese, Serbocroatian)

In this respect, Serbocroatian seems to have more in common with languages that do not move any WH—either strict Wh-in situ languages like Japanese or the alternative strategy available in French (i.e. French II): both allow an SP answer.

This observation becomes even more apparent when we consider situations that clearly ask for a PL answer. Consider the following scenario for Japanese, another language that allows for Apparent Superiority:

- (26) *Scenario III*: John sees Jim finishing off his daily sales. He sees a bunch of people that he knows walk away and Jim stacking his left-over merchandise, so he asks:
- a. Dare-ga nani-o katta no? (PL)
 b. # Nani-o dare-ga katta no? (*PL)
 what-ACC who-NOM bought Q
 ‘Who bought what?’ (Japanese)

As observed by Bošković, the only felicitous question is the one which does not exhibit Apparent Superiority, i.e. where the order of WHs is maintained. If the question involves Apparent Superiority, an Interpretive Superiority effect arises: the PL reading gets lost and the SP interpretation is the only one available.

It should come as no surprise that in this PL-provoking context, Serbocroatian shows the same pattern as above, namely like Japanese it makes the PL reading available only with the order WH1 > WH2, conforming to Apparent Superiority:

- (27) *Scenario III* (cf. (26))
- a. Ko je šta kupio? (PL)
 d. # Šta je ko kupio? (*PL)
 what AUX who bought
 ‘Who bought what?’ (Serbocroatian)

We can actually find a similar effect in English. Recall that the ordering that obeys Syntactic Superiority allows for a PL reading (in fact, it does not allow SP). While bare WHs can never violate Syntactic Superiority, a D-linked WH2 may move over a D-linked WH1 (Pesetsky 1987). In this instance of Apparent Superiority in English, however, we can detect Interpretive Superiority:¹³

- (28) *Scenario III* (cf. (26))
- a. Who bought what? (PL)
 - b. Which guy bought which drug? (PL)
 - c. # Which drug did which guy buy? (*PL)

As expected, Bulgarian, a language that is sensitive to Syntactic Superiority, patterns like English with respect to PL-availability, shown in (29) with bare WHs.

- (29) *Scenario III* (cf. (26))
- a. Koj kakvo e kupil? (PL)
 - b. * Kakvo koj e kupil?
- what who has bought
'Who bought what?' (Bulgarian)

¹³ Barss (1990, 1999) notes that the preferred, if not only, reading for (28c) is SP. Apparently, the PL interpretation is not out for all speakers, though. I might thus idealize these cases, for the purpose of presentation. See section 5.5.2 for discussion, however.

In either case, it is noteworthy that (28c) is still infelicitous in a context which forces an SP answer, such as Scenario I in (19). Interestingly, Anna Roussou (p.c.) observes that in “quiz questions” of the sort illustrated in (i), which clearly ask for an SP reading, the multiple Wh-question is well-formed:

- (i) In the battle of Salamina, who defeated whom?

However, as she notes further, this seems to be only possible with a subject-WH:

- (ii) a. * Who did the Greeks defeat in the battle of Salamina when?
b. * When did the Greeks defeat who in the battle of Salamina?

Pending further discussion, it is not unreasonable to assume that the fronted WH in (i) does not undergo movement into the ω -domain, but remains in the subject position, an option which presumably is also available in instances of D-linking (see section 5.5.3).

As Citko & Grohmann (forthcoming) note, Bulgarian D-linked Wh-questions do allow movement of either WH. Furthermore, if WH2 moves over WH1 (i.e. Apparent Superiority), the preferred reading is the PL reading (Roumyana Izvorski, p.c); the same applies to Romanian (Ileana Comorovski, p.c.):

(30) *Pair-list reading*

- a. Koga kniga koj covek e kupil?
 which book which person has bought
 ‘Which book did which person buy?’ (Bulgarian)
- b. La care cînd te ai gîndit?
 of which when you have thought
 ‘Which one have you thought of when?’ (Romanian)

In sum, if Japanese is a well-behaved Wh-in situ language that does not involve movement of any WH into the ω -domain to check [Wh] (standard assumption) and if Serbocroatian patterns alike with respect to interpretation, it should also be a Wh-in situ language (Bošković 1998b). On the other hand, if English moves one WH into the ω -domain and Bulgarian moves all (both standard assumptions), but if the two differ in those contexts which seem to lack ω -movement of a WH in English, but not Bulgarian the patterns we have seen so far allow for an extension of the initial hypothesis:

(31) *Working hypothesis (extension)*

- i. ω -movement of any WH forces PL interpretation, regardless of Superiority
- ii. ϕ -movement of all WHs showing Apparent Superiority destroys PL reading
- iii. ϕ -movement of all WHs without Apparent Superiority allows SP reading

Thus, (31i) denotes instances of high displacement of a WH, presumably triggered by checking a Wh-feature. Instances we have seen here are, for example, Bulgarian or Romanian in any multiple Wh-question (where both WHs move) and English or

French I with bare WHs (where only one WH moves). If a WH moves for any other reason and targets a lower position (which we will both come back to), SP interpretation is available. Hypothesis (31ii) basically yields Interpretive Superiority effects, enforcing the SP reading when a bare WH₂ moves over WH₁, but extends to instances of D-linking in these languages as well. The relevant examples we have seen were from Japanese, Serbocroatian and English. (31iii) addresses multiple Wh-question which conform to any Superiority, i.e. Japanese, French II or even Chinese (not illustrated).

5.3.2 *A Typological Tripartition*

We can summarize the descriptive findings of the Hagstrom-Bošković approach as follows. In Wh-in situ languages, the SP reading is always available, but the PL reading only when (Syntactic or Apparent) Superiority is obeyed. The latter falls under Interpretive Superiority: if a lower WH moves over a higher one, only the SP interpretation is acceptable. An apparent exception to this generalization is Serbocroatian, which allows SP readings although both WHs are fronted. Moreover, in cases of Apparent Superiority (WH₂ > WH₁), the SP reading is actually preferred (Interpretive Superiority)—if the PL reading is at all available (Bošković notes dialectal variation)—just as in Japanese. English also exhibits Interpretive Superiority, once we look at D-linked Wh-phrases. We might want to assume that D-linked WHs do not undergo the same movement as bare WHs (Pesetsky 1987). In this case, we could account for the latter observation: D-linked WHs do not (need to) move into the ω -domain. Arguably, this is true of Japanese regardless of whether the WHs are D-linked: as a well-behaved Wh-in situ language, WHs do not move to check [Wh]—if they move, they do so for other reasons. This gives us one possibility to fit Serbocroatian into the generalization. If the WHs do not move to check a Wh-feature in this language, Interpretive Superiority is explained, and the reason why Serbocroatian patterns with Japanese is because both are Wh-in situ languages.

This is essentially the conclusion Bošković draws, yielding a clear diagnostic for zero Wh-movement languages. The Hagstrom-Bošković approach allows for the following classification of strategies to form multiple Wh-questions across languages:

If a language has:	It allows readings:	But:
<i>Zero Wh-movement</i> (Japanese, Chinese, Serbocroatian, Polish, Russian, French II...)	WH1 > WH2: PL/SP WH2 > WH1: SP (such as <i>Wh-scrambling</i>)	
<i>Singular Wh-movement</i> (English, Greek, Spanish, Italian, French I, German, ...)	WH1 > WH2: PL WH2 > WH1: SP (such as <i>D-linking</i>)	German: WH2>WH1:PL (even <i>D-linking</i>)
<i>Multiple Wh-movement</i> (Bulgarian, Romanian...)	WH1 > WH2: PL WH2 > WH1: PL (even <i>D-linking</i>)	

Table 1: *Quasi-tripartition à la Bošković-Hagstrom*

Apart from the third column, the exceptional one, we have seen everything we need to know to follow this classification.¹⁴ The tripartite split envisioned here seems to fit in nicely with the data. The third column anticipates the following discussion, and is the reason for one half of this chapter: to show that German fits the tripartition without an ad hoc repair strategy. Basically, if German is, as standardly assumed, a singular Wh-movement language just like English, we would expect it to pattern like English with respect to the availability of SP/PL interpretation.

However, German, a language that seems to differ from English mainly in that it apparently need not obey Syntactic Superiority, does not meet our expectations cf. (26)):

¹⁴ I am perfectly aware that this typology is far from complete, and some languages I mention I do not consider further. However, my main goal in this chapter is to revisit the Hagstrom-Bošković approach from a German perspective, which I am going to do next. As such, I take the preceding discussion at face value. I will address some questions that arise at this point in the following, but by and large present the main analysis as close to the original of Hagstrom (1998), extended by Bošković (1998b), as possible.

- (32) *Scenario III*: John sees Jim finishing off his daily sales. He sees a bunch of people that he knows walk away and Jim stacking his left-over merchandise, so he asks:
- a. Wer hat was gekauft? (PL)
- b. Was hat wer gekauft? (PL)
- what has who bought
- ‘Who bought what?’ (German)

In German, which also allows for Apparent Superiority, both orders yield the PL reading. Interestingly, neither order allows SP interpretation: if we replace Scenario III with Scenario I (from (19)), neither question is felicitous, not even with D-linked WHs:

- (33) *Scenario I*: John is in a store and off in the distance sees somebody buying an article of clothing, but he does not see who it is, and neither does he see exactly what is being bought. He goes to the shop assistant and asks:
- a. # Wer hat was gekauft? (*SP)
- b. # Was hat wer gekauft? (*SP)
- c. # Welcher Kunde hat welches Produkt gekauft? (*SP)
- d. # Welches Produkt hat welcher Kunde gekauft? (*SP)
- which product has which customer bought
- ‘Which customer bought which product?’ (German)

While Serbocroatian and Japanese pattern together, German does not pattern with English, which seems to form multiple Wh-questions just like German, namely by moving one WH overtly into the ω -domain and leaving the other one(s) in situ.¹⁵ Instead, it appears to pattern with Bulgarian, another language that fronts all WHs, like Serbocroatian, but unlike Serbocroatian seems to really Wh-move these elements. (32) and (33) resemble all discussion of Bulgarian and Romanian so far, but not the other languages.

¹⁵ Or somewhere inside the ϕ -domain. As mentioned already, “in situ” refers to any position below the ω -domain, be it the thematic position or the agreement position, depending on whether the language moves all arguments overtly or not. We will address the syntactic and positional details shortly

We seem to be forced into adopting one of two possibilities: German is very different, and the odd behaviour with respect to the non-availability of SP readings is due to some other factor, or German is a multiple Wh-movement language, just like Bulgarian. Hagstrom (1998), and by extension Bošković (1998b), adopt the former hypothesis and relate this behaviour to the fact that German is a “scrambling” language. Apart from the fact that we do not really know what “scrambling” really is, Serbocroatian is also a “scrambling” language, and so is Japanese. Unlike Japanese, however, Serbocroatian fronts all WHs, yet we seem to get some mileage out of the hypothesis that Serbocroatian is actually a Wh-in situ language.

By parity of reasoning, I opt for the second possibility: German is like Bulgarian and moves all WHs overtly into the ω -domain. I will lay out the details in the following, suggesting that this approach gets us places and manages to account for some intricate data regarding the interaction of WHs with other elements in the ω -domain.

In the remainder of this chapter I will thus address the following two questions that fall out from the data presented above and the tentative tripartition in Table 1.

(A) Why is there a correlation between syntactic movement, such as scrambling or fronting, and the availability of an SP interpretation in Wh-in situ languages?

(B) Why does German not pattern with other singular Wh-movement or at least scrambling languages regarding the availability of PL in WH2 > WH1 questions?

What is particularly puzzling is the German pattern. If, however, the point could be made that German is actually a multiple Wh-movement language, we would yield a clean tripartition, as shown in Table 2. This is the direction I embark on and argue for in quite some detail next (Grohmann 1999b, Citko & Grohmann 2000, forthcoming).¹⁶

¹⁶ In Citko & Grohmann (forthcoming) we further consider whether Slavic languages like Polish or Serbocroatian always pattern with Wh-in situ languages, and compare these languages with Russian. The conclusion we reach is that all three languages can safely be classified as Wh-in situ languages, in the context expounded here.

If a language has:	It allows readings:
<i>Zero Wh-movement</i> (Japanese, Chinese, Hindi, Serbocroatian, Polish, French II...)	WH1 > WH2: PL/SP WH2 > WH1: SP
<i>Singular Wh-movement</i> (English, Swedish, Spanish, Greek, Italian, French I...)	WH1 > WH2: PL WH2 > WH1: SP
<i>Multiple Wh-movement</i> (Bulgarian, Romanian, German...)	WH1 > WH2: PL WH2 > WH1: PL

Table 2 *An improved tripartition*

Bošković (1997b) argues that Wh-phrases in Serbocroatian do not involve Wh-movement, but focus-driven movement to some position within TP, our ϕ -domain.¹⁷ Wh-movement, i.e. movement that checks [Wh], targets an ω -projection. As Serbocroatian does not move WHs to check [Wh], but nevertheless displaces all WHs, I refer to it as ϕ -movement of WHs. The same goes for rearrangement of WH-ordering in other zero Wh-movement languages (like Japanese or Hindi). What is important is that multiple Wh-movement languages move all WHs into the ω -domain. Implementing ideas from the Hagstrom-Bošković approach to multiple questions, I propose an analysis that motivates all required movements and captures the different landing sites.

We can now revise our working hypothesis from above in a way that seems to not only capture the discussion so far, but exhaustively extends, as we will see shortly:

- (34) *Working hypothesis (revised)*
- i. movement of any Wh-phrase targeting the ω -domain forces PL interpretation
 - ii. movement of any Wh-phrase maximally targeting the ϕ -domain allows SP
 - iii. a. movement of any Wh-phrase within the ϕ -domain forces SP if WH2 > WH1
b. any Wh-phrase within the ϕ -domain also allows PL if WH2 > WH1

¹⁷ See also Stjepanović (1995, 1999) for the original proposal that Serbocroatian Wh-questions involve focus movement, related work by Bošković (e.g. 1997a, 1997b, 1998a, 1999) for more arguments, Rudin (1988) for the original idea that the ϕ -domain is targeted in Serbocroatian, but not Bulgarian, and Bošković (1997c), Boeckx & Stjepanović (1999) for the suggestion that the focus projection is part of the ϕ -, not the ω -, domain.

5.3.3 *A Basic Semantics for Questions and the Role of Q*

The answer to question (A) from above—why there seems to be a correlation between syntactic movement and the availability of SP reading in Wh-in situ languages—follows from the semantics for Wh-questions proposed by Hagstrom (1998) and extended by Bošković (1998b). It relies on the universal existence of a Q-morpheme, which is responsible for interrogative clause-typing. In English-type languages, the Q-morpheme is a covert counterpart of an overt particle found in many Wh-in situ languages, such as Japanese (see Cheng 1991 for a detailed description). As Bošković (1998b) shows, the position of a Q-morpheme correlates with the availability of SP/PL readings with minimal assumptions, an approach I will make critical use of here.¹⁸

The Hagstrom-Bošković approach makes basically two options available for insertion of the Q-morpheme, henceforth [Q]. Next I present what I take to be the most important ingredients of Hagstrom’s semantics to derive the following characterization:

- (35) a. [Q] moves from some clause-internal position to C^0 → *pair-list*
 b. [Q] is generated above both WH’s and moves to C^0 → *single-pair*

Following the assumption that WHs do not need to move, but that [Q] universally undergoes movement (by LF), Hagstrom provides arguments from various Wh-in situ languages that the clause-internal position corresponds to the lowest WH (chapters 2 and 3). I thus take the “low Q” to sit on WH2 in binary Wh-questions. The “high Q” position is somewhere above all WHs, for reasons I lay out momentarily. The structure of the articulated C-layer, our ω -domain, which we assumed so far, looks as sketched in (36):

¹⁸ Out of context, these minimal assumptions make for a rather complex system, however. In the interest of clarity, I will review the gist of Hagstrom’s (1998) proposal along the lines presented by Bošković (1998b), including the latter’s simplified adaptations.

(36) CP > TopP > FocP > TopP > FP

Given that we identified this Prolific Domain with discourse properties, I suggest looking here for a WH-independent position of origin for [Q]. I explore a specific insertion site for high Q, namely F, the lowest C-related head, acting as the interface between the ω - and the ϕ -domains.¹⁹ As we will see next, the SP interpretation is destroyed by any WH crossing [Q] in F. [Q] is thus not only the universal clause-typer for interrogatives but also the determining element for SP/PL-interpretation.

For more on the nature of [Q] and the detailed semantics briefly sketched here, see in particular chapters 5 and 6 of Hagstrom (1998). The gist of the analysis is the following, adapted from Bošković (1998b). A single question is a set of propositions, which can be responded either by choosing one proposition from the set or by denying the presupposition that there is an answer. Call this the rule of “Single Question Recognition.” By extension, the rule of “Multiple Question Recognition” identifies a (pair-list) multiple question as a set of questions, which can also be responded to in two ways: by selecting one proposition from the set A for each member set A by denying the presupposition that there is an answer in A.

The following are the relevant definitions Hagstrom provides.

(37) *Single Question Recognition*

If the semantic value of an utterance is of type <pt> (a set of propositions), then the utterance is a (single) question.

To respond: (a) one proposition from the set is selected,

or (b) the presupposition (that there is an answer) is denied.

(Hagstrom 1998: 148)

¹⁹ As we will see shortly, I will modify the structure of the ω -domain slightly. Moreover, I suggest parameterizing the function of “F” as the mediator between agreement and discourse properties. As such, nothing really hinges on the labels of the projections in this or any other domains for the purposes of discussion.

(38) *Multiple Question Recognition*

If the semantic value of an utterance is of type $\langle pt, t \rangle$ (a set of questions), then the utterance is a (pair-list multiple) question.

To respond: For each member set A ,

- (a) one proposition from the set A is selected,
- or (b) the presupposition (that there is an answer in A) is denied.

(Hagstrom 1998: 148)

Hagstrom treats [Q] as an existential quantifier over a choice function (where the semantic value of a Wh-element is a set of individuals):

(39) *Choice Function*

A function f is a *choice function* if it applies to a (non-empty) set and yields a member of that set.

(Hagstrom 1998: 130)

[Q] always ends up in C by moving from one of two positions: the low position, attached to WH2, or from the high position, here tentatively taken to be F.²⁰ The trace left behind by Q-to-C movement, regardless of its original position, is the choice function variable which determines the interpretation (SP vs. PL).

If [Q] starts out from low position, the choice function variable has only WH2 in its scope; this yields a multiple Wh-question calling for PL interpretation. The SP reading is enforced by merging [Q] high; the choice function variable it leaves behind scopes over all WHs (which are arguably generated lower than the ω -domain).

The following is a very rough outline of the analysis Hagstrom provides, adapted for ease of exposition from Bošković's discussion.

²⁰ This is Bošković's (1998b) simplified adaptation of Hagstrom's analysis which involves more movement, in terms of "Q-migration." The model presented here should be enough for our purposes, though.

Merging with WH2 and moving on to C, the choice function variable left behind by [Q] takes WH2 as its argument—here understood as a set of individuals—and returns an individual, which is taken as an argument by the verb. The value of the higher WH1 is a set, as it is outside the scope of the choice function variable. Further composition of WH1 yields a set of sets of propositions, one set of propositions for each value x in the set of WH1, shown in (40) below. Hagstrom calls this composition “Flexible Function Application,” a repair strategy for semantic type mismatches. It applies in particular when a function receives a set of arguments instead of a single argument, in which case the function is applied to each argument in the set of arguments. The result of this function application yields a set.²¹

By the Multiple Question Recognition rule, an appropriate answer to a question such as (40a)—where [Q] is merged low (attached on WH2)—provides an answer to each of the constituent questions of the set {What did A buy?, What did B buy?, ...} or, more formally, (40b):

- (40) a. Who bought what?
 b. $\{\{A \text{ bought } f_1 \text{ (WHAT), } A \text{ bought } f_2 \text{ (WHAT), ...}\},$
 $\{B \text{ bought } f_1 \text{ (WHAT), } B \text{ bought } f_2 \text{ (WHAT), ...}\}, \dots\}$

Merging [Q] low thus yields a set of questions. Merging [Q] high, though, yields a set of propositions. Both WHs are contained within the argument of the choice function

²¹ The formal definition is as follows:

- (i) *Flexible Function Application*
 $\llbracket f a \rrbracket =$ (where f and a are sisters)
 (i) $f(a)$
 (ii) $\lambda m \exists x. [m=f(x) \wedge a(x)]$
 (iii) $\lambda m \exists g. [m=g(a) \wedge f(g)]$
 (iv) $\lambda m \exists g \exists x. [m=g(x) \wedge f(g) \wedge a(x)]$
 whichever is defined.

(Hagstrom 1998: 142)



variable. Composition of WH2 (qua Flexible Function Application) returns a set of properties which, once applied to the set WH1, yields one proposition for each possible subject with each possible object. In other words:

- (41) {A bought a, A bought b, ..., B bought a, B bought b, ...},
 (where WH1={A, B, ...} and WH2={a, b, ...})

The Single Question Recognition rule then gives an SP answer to this question.

In sum, if the choice function variable left behind by movement of [Q] to C scopes over WH2 only, we get PL interpretation (“low Q”); if it scopes over both WHs, we get SP interpretation of the multiple Wh-question (“high Q”), or expressed as follows, where bold strikethrough indicates the position of the choice function variable:

(42) *Choice Function Variable and Question Interpretation*

- a. [Q]-C ... WH1 ... WH2-~~**Q**~~... (low Q: PL)

- b. [Q]-C ... ~~**Q**~~... WH1 ... WH2 (high Q: SP)


The interesting case for us is high [Q] and the (non-)availability of the SP reading across languages, and this is what I shall concentrate on (for low [Q], see Hagstrom 1998). I assume that all relevant movement is overt, except for [Q].

In the next sub-section I lay out the basic assumptions regarding the derivations of multiple Wh-questions across languages, including the identification of the relevant positions. I suggest on the one hand that all ω -movement targets FocP and FP in the canonical cases, and on the other that all ϕ -internal positions relevant here either involve the regular agreement projections (yielding WH1 > WH2) or a “syncretic” category, one which contains several relevant features (for the order WH2 > WH1).

5.3.4 *The Syntax of Q, Prolific Domains and Anti-Locality*

In this sub-section I tentatively apply the Hagstrom-Bošković approach to the Domain-driven framework presented here. While Bošković's (1998b) discussion centered around a line of reasoning, rather than detail of the analysis, the details of some of the derivations presented in the following will also require additional research. However, I supply some motivation to pursue the current line of reasoning, which I take to be worthwhile for the reason that it offers a way of classifying languages into one of three types of multiple Wh-question formation. In this section I restrict the discussion to a simple conversion of the results from the Hagstrom-Bošković approach.

5.3.4.1 *Zero Wh-movement languages*

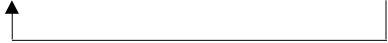

The two options—Wh-scrambling within the ϕ -domain (WH2 > WH1) or retaining base order (WH1 > WH2)—are available to Wh-in situ languages, which explains why both SP and PL readings are felicitous in either context (section 5.3.1). With high [Q], the choice function computed over the variable ranges over all Wh-phrases in situ (yielding SP), whereas with low [Q] it ranges only over WH2 (yielding PL). I suggest (44) to be the relevant structures for a multiple Wh-question in Chinese, such as (43), with a PL reading and an SP reading, respectively (where $CP \approx \omega\Delta$, $TP \approx \phi\Delta$, $vP \approx \theta\Delta$).²²

- (43) Shei mai-le shenme?
 who buy-ASP what
 'Who bought what?' (Chinese = (6a))

²² I will not get too specific about the (syntactic) nature of [Q]. It might not play a role here whether it is a head or something else, or how exactly it moves. The point I make in this section regards a potential solution which takes the liberty of leaving some questions open. I address this issue briefly in section 5.3.4.4, suggesting that [Q] starts out adjoined.

In Japanese, the WHs in multiple questions do not front the way they do in Serbocroatian. In fact, by the look of it, they do not necessarily need to move at all. For simplicity, though, and for comparative reasons, let us assume that WH1 sits in SpecTP at Spell Out, when it is the subject, and WH2 (when it is the object) in the relevant AgrP. (The following structures are further shortened for relevance.)

- (45) a. Dare-ga nani-o katta no?
 who-NOM what-ACC bought Q
 ‘Who bought what?’ (Japanese = (5a))
- b. Ko je šta kupio?
 who AUX what bought
 ‘Who bought what?’ (Serbocroatian = (11a))



- (46) a. $[_{CP} [Q]-C [_{TP} WH1 T [_{AgrP} WH2-~~[Q]~~] Agr [_{vP} WH1 v WH2-~~[Q]~~]]]$ (PL)

- b. $[_{CP} [Q]-C [_{FP} ~~[Q]~~-F [_{TP} WH1 T [_{AgrP} WH2 Agr [_{vP} \dots]]]]]$ (SP)


Suppose that for a Japanese question with $WH1 > WH2$, these structures are legitimate. Abstracting away from the fact that all WHs are fronted in Serbocroatian, and ignoring the position of the verb, for example, similar structures can be envisioned for this language (and, by extension, for Polish and Russian also; see Citko & Grohmann, forthcoming). What might be different are the labels of the projections. We are building on two premises, however, which are worth recalling. First, the hypothesis we are exploring at the moment is that these languages do not involve movement of any WH into the ω -domain. Thus, all WHs are at most in some position within the ϕ -domain. This might turn out to be a wrong hypothesis, of course, but once the entire picture is painted we will see some virtue coming out of this hypothesis. Moreover, this is simply reporting

the result from Bošković's (1998b) study. The second assumption concerns anti-locality. As I have argued in the previous chapters, a tripartite clause structure, following and extending an "intuitive" partition into Prolific Domains, is not unreasonable. In fact, we achieved some results by the proposal, and the Condition on Domain Exclusivity. One aspect of the theory of anti-locality is that Domain-internal movement is ruled out. This second assumption may also turn out to be wrong. But the goal of the present work is to take the framework seriously and explore its merits, predictions and consequences. We can thus assume that, all other things being equal, all WHs in Japanese and Serbocroatian are somewhere within the ϕ -domain at Spell Out, and the only copy each WH relates to resides within the base-generated θ -domain.²⁵

This said, TP and AgrP are possible candidates to host non-scrambled WHs in Japanese. In this case, (46) is a plausible structure relevant for us. Merging [Q] low yields a PL interpretation and merging it high an SP reading, just as for Chinese. However, the order can be reversed. The only (rough) structures we can imagine are thus the following:

- (47) a. Nani-o dare-ga katta no?
 what-ACC who-NOM bought Q
 'Who bought what?' (Japanese = (5b))
- b. Šta je ko kupio?
 what AUX who bought
 'Who bought what?' (Serbocroatian = (11b))

- (48) a. $[\text{CP } [\text{Q}]\text{-C } [\text{AgrP } \text{WH2-}[\text{Q}]\text{ Agr } [\text{TP } \text{WH1 } \text{T } [\text{vP } \text{WH1 } \text{v } \text{WH2-}[\text{Q}]]]]]$ (SP)

- b. $[\text{CP } [\text{Q}]\text{-C } [\text{FP } [\text{Q}]\text{-F } [\text{AgrP } \text{WH2 } \text{Agr } [\text{TP } \text{WH1 } \text{T } [\text{vP } \dots]]]]]]$ (SP)


²⁵ Again, for exposition I restrict the discussion to argument-WHs. Recall also that we explore the hypothesis that LF-movement of A'-elements can be dispensed with. As such, the position at Spell Out is also one of the (two) possible LF positions in these cases.

The derivations sketched in (48) proceed as follows. Following Stjepanović (1995, 1999), Bošković (1997a, 1998b, 1999, 2000a) and others, Wh-fronting in Serbo-croatian is discourse-driven, possibly by some kind of a focus feature. Moreover, as Bošković (1997c), Boeckx & Stjepanović (1999) argue, this projection is within IP, what we call the ϕ -domain. They identify it as AgrP, and I tentatively adopt the label. However, the choice of the label really plays no role: movement from the base position to this position must be in one step. It is possible that the “AgrP” in (48) is different from the “AgrP” in (46) above. What is not possible is that both projections are hosts of the relevant WH. I leave open details regarding a possible implementation of syncretic categories into the current framework (as proposed by Giorgi & Pianesi 1997; see also Zubizarreta 1998, Boeckx & Stjepanović 1999). Let us take (48) as it is for now—again, on the grounds that I am merely reporting other scholars’ work.

In sum, the proposal I have just sketched takes all WHs in Wh-in situ languages to be licensed maximally within the ϕ -domain (following Bošković 1998b), and the assumptions are compatible with the larger framework presented here. In this sense, (48) does indeed account for the facts we have observed in section 5.3.1: merging [Q] with WH2, followed by “scrambling” over WH1, can only result in an SP reading, because both WHs are contained within the argument of the choice function variable. The same situation arises when [Q] is merged above all WHs, into FP, and no WH moves into the ω -domain.²⁶



So far, I have suggested a way of implementing the main result of Bošković’s (1998b) extension of Hagstrom’s (1998) proposal regarding multiple questions and interpretation: Wh-in situ languages do not involve displacement of WHs into the ω -domain and as a result do not make a PL reading available if WH2 moves over WH1.

²⁶ Just to remind the reader, the PL reading is, of course, obtained by merging [Q] with WH2 and not move WH2 over WH1—again, conforming to the data reported above.

5.3.4.2 Singular Wh-movement languages

Our discussion of singular Wh-movement can be kept rather short, basically adopting the Hagstrom-Bošković analysis. If we assume that the approach sketched above is on the right track, we yield the following structures:

(49) Who bought what?

- (50) a. $[_{CP} [Q]-C [_{FocP} WH1 Foc [_{TP} \cancel{WH1} T [_{vP} \cancel{WH1} v WH2 \cancel{[Q]}]]]]$ (PL)
- 
- b. $[_{CP} [Q]-C [_{FocP} WH1 Foc [_{FP} \cancel{[Q]}-F [_{TP} \cancel{WH1} T [_{vP} \cancel{WH1} v WH2]]]]]$ (PL)
- 

These are the only two possible derivations for the English question (49) given that a bare WH2 may never move over a bare WH1.²⁷ Regardless of whether WH2 stays really in situ at the point of Spell Out (here referring to its θ -position) or whether it moves into the ϕ -domain overtly, movement of low Q to C leaves behind the choice function variable which invariably only has WH2 in its scope and thus takes WH2 as its argument, returning a PL interpretation. This much can be achieved without any additional discussion.

We have seen, however, that merging [Q] high and moving WH1 into the ω -domain destroys the SP reading (Interpretive Superiority). This is sketched in (50b). Recall that an SP interpretation is the result of the choice function variable taking an argument that contains all WHs. When [Q] moves over WH1, however, the variable it leaves

²⁷ In fact, this statement can presumably be extended to all singular Wh-movement languages. The option to move a lower WH over a higher WH, if neither is D-linked, seems to be a property common to all singular Wh-movement languages. These also tend to be non-scrambling languages, that is to say, word order in these languages seems to be rather fixed, as opposed to many Wh-in situ languages (Serbocroatian, Japanese, Hindi).

behind has only WH2 in its scope, thus ruling out the SP interpretation, if the boldfaced position of [Q] (the choice function variable) and the non-strikethrough copies of all WHs are the relevant elements to compute interpretation, which I assume to be the case.²⁸

²⁸ This is a simplified version of Bošković's explanation, fitting not only the current framework but also making one less assumption. For Bošković, [Q] and WH1 target the same position, CP. (Note that he Bošković does not specify the position of high Q at all.) As Wh-movement is not necessary to derive interrogative interpretation, which is completely achieved by universal Q-movement, Bošković appeals to a unified LF structure ("interpretive operations at the interface should be as simple as possible," Chomsky 1995b: 359): if a non-moved WH can be interpreted in situ, then a moved WH should also be interpreted in situ. With this assumption, the loss of SP interpretation by over Wh-movement must derive from something else. Bošković suggests that moving WH1 over [Q] results in a relativized minimality violation, further assuming that [Q], WH1 and C all bear the same feature, [Wh]. A number of questions arise with this move.

For one, it is not clear that [Q] really "interferes" with moving WH1 to C. Presumably [Q] moves to C before WH1 moves, and only the choice function variable might interfere (regardless of overt or covert Q-movement). In addition, it need not be the case that [Q] and WH1 really bear the same features. Under the approach endorsed here, they do not: [Q] types the clause in C and WH1 basically moves to FocP, where we take [Wh] to be an interrogative focus feature, a feature that asks for new information (as opposed to a declarative focus feature, one that introduces new information).

In sum, ruling out PL interpretation on the basis of a minimality violation is not feasible here, and neither is the assumption that the moved WH must be interpreted "in situ." I see the same confusion alluded to earlier: "in situ" is employed in the literature with a certain degree of liberty. If we characterize Serbocroatian as a Wh-in situ language, this is certainly not the way we should understand the term, and neither does it apply to Japanese in a straightforward way, unless we analyse all scrambled word orders as base-generated. Basically, an "in situ" element should be one that is interpreted in its base, its θ -position, but clearly that makes the wrong prediction, even for "Wh-in situ" languages (which should really be referred to as zero Wh-movement languages): as in some instances, WH1 moves to TP and WH2 to AgrP, obligatory interpretation of WH1 "in situ" results in the configuration in which the choice function variable would always scope over all WHs—in which case the SP reading would be the only one available:

- (i) [_{CP} [Q]-C [_{TP} WH1 T ... [_{AgrP} WH2-~~[Q]~~ Agr ... [_{vP} ~~WH1~~ v ... ~~WH2~~-[Q]]]]]

Strict "in situ" interpretation takes the θ -positions of both WHs. But the choice function variable is computed over the trace [Q] leaves behind from moving to C from the intermediate Agr-position, *not* from the original θ -position, as indicated here (and, as far as I can tell, assumed by Bošković also).

Furthermore, this approach presupposes that all elements moved into the ω -domain for discourse reasons (and by extension, those that target a ϕ -position for the same reason, as in Serbocroatian) can only ever be interpreted in their base position. Clearly, this is not the direction we want to pursue, scope being only one reason. Admittedly, the Q-approach sketched here leaves many questions open, but if we take the Hagstrom-Bošković approach seriously and scrutinize some predictions it makes—the goal of this chapter—we can only touch on discrepancies in passing. I do exactly this and leave the remaining details to be worked out in future research.

To sum up our current assumptions, we take [Q] to move to C to type the clause, and this movement takes place either overtly or covertly across all languages. We further assume that WHs in English move to check a Wh-feature,²⁹ which Japanese WHs, for example, do not bear.³⁰ Following much research since Horvath (1986) and Brody (1990), we take FocP to be the canonical landing site of overtly moved WHs, which check [Wh]. As we will see below, we can conceptualize this assumption on the grounds that the kind of focus targeting FocP is basically the same kind of focus employed in Wh-questions: new information—in interrogatives this information is inquired, in declaratives it is asserted. Languages simply differ as to whether they must express either type of focus by displacement to a particular position or not.

5.3.4.3 *Interlude: German*

After reviewing the Hagstrom-Bošković approach to zero and singular Wh-movement languages and slightly modifying some details of the analysis fitting current assumptions, it is now time to address the German paradox. As we have seen, if loss of PL reading is indeed the effect of moving a lower WH over a higher one, the only way to account for why German WH2 > WH1 questions retain their PL reading (no Interpretive Superiority effects) is to resort to a Q-stranding mechanism which would allow WH2 to scramble over WH1, but leave the Q-morpheme in situ. This is indeed the line of thought taken by Hagstrom (1998) and Bošković (1998b).

²⁹ Addressing the phenomenon of D-linking in any detail would take us too far afield. The predictions of this, and the Hagstrom-Bošković, approach concerning D-linked WHs is apparent: if, all other things being equal, an SP reading is always possible we might be tempted to not evoke the ω -domain as the landing site of D-linked WHs. That D-linked Wh-phrases should differ in their syntax from bare ones is not unreasonable.

³⁰ The reason for this might lie in the morphological make-up of Wh-words, an idea that might want to be extended to all languages. That is to say, whether a language moves one, all or no WH into the ω -domain could be related to some property other than a stipulated correlation between form and function, but that leads us too far here.

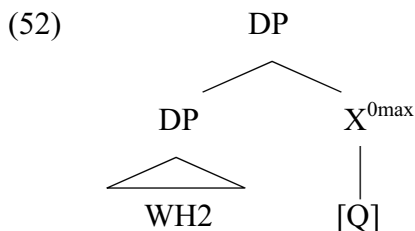
Under the assumption that English and German only differ in that the latter allows WH2 to move over WH1, targeting FocP, the resulting configuration would look like (51) where, unlike (48), WH2 and [Q] move separately:

(51) $[_{CP} [Q]-C [_{FocP} WH2 Foc [_{TP} WH1 T [_{AgrP} \overline{WH2-Q} Agr [_{vP} \dots]]]]]$ (PL)

In this case, Hagstrom (1998) argues, Q-movement is unaffected by Wh-movement and WH1 will remain outside the scope of the choice function variable. Apart from other technical problems, my main objection to this line of explanation is that Q-stranding seems to be an ad hoc mechanism, fixing a mysterious state of affairs for a scrambling language—which differs in this respect from other scrambling languages. It is not clear, for example, why Q-stranding should be allowed only in German, but not in Japanese or Serbocroatian (as illustrated by the contrasts in (26) and (27), respectively). We know that not only do these languages show reordering effects of non-interrogative elements, but they also allow WHs to move freely over one another. If Q-stranding were an option made available by Universal Grammar, we would expect to see it in more cases than German—aside from obvious learnability issues. Moreover, the core case for which Hagstrom proposes this option involves apparent “intervention effects” as noted by Beck (1996a, 1996b) and discussed in much work since (e.g. Grohmann 1998, Boeckx 1999b, Pesetsky 2000, Miyagawa, in press).³¹ I will suggest an alternative approach in the next section and will illustrate the relevant data there. It suffices to anticipate that a non-stranding approach of [Q] in these cases is superior to Hagstrom’s analysis primarily as it allows us to capture these “Beck effects” in a more natural way than Beck suggests.

³¹ Hagstrom also discusses Q-stranding in some (head-final) Wh-in situ languages. A discussion of these data is beyond the scope of the present investigation, however, especially as many ancillary assumption hinge on the analysis, such as overt vs. covert Q-movement and a structural analysis for head-final languages.

Another problem [Q], and stranding of [Q], might pose has to do with structural or even locality complications. Hagstrom suggests that [Q] is a head, supported by the fact that its overt counterpart for the most part is a monosyllabic element (such as *no* in Japanese or *-GA* in Okinawan). However, movement to C, regardless of its launching site (from WH2 or FP) runs into trouble with locality conditions on head movement. While Hagstrom addresses this issue, there is another way of inserting [Q], particularly when it attaches to WH2. I suggest that [Q] is adjoined to the lowest Wh-phrase. As such it may still be a “head” or, basically, an X^{0max} element, very much like a clitic. If [Q] starts out adjoined to WH2, it must move with WH2 and cannot be stranded on structural grounds. This might not be a necessary consequence, though. I will thus (tentatively) assume that low Q looks as follows (where X is the appropriate categorial label of [Q], possibly D):



If this is the structure, Q-stranding is not an option.³² If [Q] is an X^{0max} it does not matter much where within FP high Q is inserted. Movement to the head of CP, which share the same Prolific Domain with FP, is possible in either case: Exclusivity is not jeopardized by moving it to C (see section 2.3.2). I will postpone a discussion of locality concerns for movement of low Q to C to future work, which will also address other “long local” movement operations, such as “scrambling” of the sort necessary to derive (48b), for example. See chapter 6 for initial pointers.

³² Again, this means that Hagstrom’s analysis for Japanese, Okinawan, Sinhala and others must be revisited. It remains to be seen how compatible the present assumptions are with the original idea.

5.3.4.4 Multiple Wh-movement languages

We have seen good reasons to assume that Serbocroatian WHs do not undergo the same kind of movement that Bulgarian ones do, but rather pattern like Japanese “in situ” WHs. Rather than implementing Q-stranding and maintaining that German multiple Wh-questions are formed just like English ones, qua singular Wh-movement, I suggest an alternative explanation.

We have seen above that in singular, but not zero, Wh-movement languages, the SP reading of bare WHs in a multiple Wh-question is disallowed. Given the correlation between the scope of [Q] and the position of Wh-phrases, it becomes clear why this should be the case. Simply, the configuration needed for an SP reading, in which the choice function variable left behind by Q-movement has scope over both Wh-phrases, never arises. Wh-movement always displaces one WH to a position out of the scope of the choice function variable, even if [Q] is generated high (cf. (50b)).

Similarly, in multiple Wh-movement languages, Wh-phrases escape the scope of [Q], which destroys the SP reading configuration. On a par with the structures above, we can sketch this as in (54), where [Q] is merged low in (54a) and high in (54b):

- (53) a. Cine ce a vazut?
 who what has seen
 ‘Who saw what?’ (Romanian (9a))
- b. Koj kogo vižda?
 who whom sees
 ‘Who sees whom?’ (Bulgarian = (10b))

(54) a. $[_{CP} [Q]-C [_{FocP} WH1 FOC [_{FP} WH2-~~[Q]~~ F [_{\phi\Delta} WH1 WH2-[Q] \dots]]]]$ (PL)

b. $[_{CP} [Q]-C [_{FocP} WH1 FOC [_{FP} WH2 ~~[Q]~~ F [_{\phi\Delta} WH1 WH2-[Q] \dots]]]]$ (PL)

Apart from FocP as the canonical position for Wh-phrases in singular Wh-questions or for WH1 in multiple ones, I assume that WH2 targets FP, the specifier of the projection hosting high [Q]. I leave aside more specific motivation, such as an additional focus-like feature or the licensing of “point of view” (cf. Uriagereka 1995a, 1995b; see also Agr1P of Cardinaletti and Roberts 1991 or FinP of Rizzi 1997 for a low C-position).³³ Rather, I build on the intuitive connection between F and Wh-properties in the sense that clause-typing properties must be identified in the finer grained ω -domain of the clause, and if F may host [Q], it might not be an unreasonable landing site for WHs also. We can employ (54) as the rough structure for all relevant questions in multiple Wh-movement languages: WH2 > WH1 is not attested, as the languages in question are sensitive to Syntactic Superiority, and after the discussion about the properties of German multiple Wh-questions in the next two sections, we will have a natural implementation at our disposal for motivating ω -movement of all (fronted) D-linked WHs as well. Thus, if all Wh-elements in these languages target the ω -domain, availability of SP interpretation in multiple Wh-questions is not even expected.

This discussion suffices for the more “traditional” multiple Wh-movement languages. The reason is simple: as I will argue next that German is also a multiple Wh-movement language, albeit with slightly different properties, I will address some issues related to the ω -domain anyway. In addition, as we will see in section 5.5, the trigger to move all WHs in German into the ω -domain turns out to be different from Bulgarian or Romanian, for example, and I will concentrate on these.

³³ Roussou (1998) investigates multiple Wh-questions in Classical Greek and comes to the conclusion that all WHs are fronted into the ω -domain here also. She further identifies two separate C-projections as potential landing sites, providing not only additional conceptual and empirical arguments against a multi-Spec analysis for multiple fronting of WHs (Koizumi 1994, Mulders 1996, Richards 1997), but also evidence in favour of separate projections in the ω -domain. Roussou does not settle on the labels of these heads, but in recent work, she lays out an articulate C-structure which is compatible with the one assumed here, all details aside (Roussou, in press).

5.4 German = Bulgarian: Multiple Wh-Movement

It is now time to subject the claim that German is a multiple Wh-movement language to some scrutiny. If German really were a multiple Wh-movement language, as the data in (32) and (33) suggest on interpretive and, by extension, typological grounds, we might expect certain grammatical reflexes, such as syntactic evidence for this very high occurrence of all Wh-elements as can be found in Bulgarian, for example.³⁴ I show in this section that such evidence can indeed be found and revolves mainly around the relative placement of adverbs and quantifiers with respect to the Wh-phrases in the clause. This suggests that German is like Bulgarian in that both languages obligatorily move all WHs into the ω -domain. The properties of the Wh-elements involved in multiple questions will be scrutinized in the next section; in that section, I consider the equally novel proposal that German is (also) like Italian in that no “real” multiple questions can be formed!

5.4.1 German as a Multiple Wh-Fronting Language

Given what we have seen so far, under a multiple Wh-movement analysis of German we would expect all Wh-phrases to appear in some C-related position at the point of Spell Out, i.e. all Wh-phrases obligatorily move into the ω -domain in the overt syntax. Following, but not necessarily relying exclusively on, the assumption that FocP is the default host for overtly moved Wh-phrases, FP is a possible host for [Q]. Some technical details and predictions will be addressed in section 5.5.3. Let us see now how we could justify both WHs moving there in the overt syntax.

³⁴ Recall that the traditional assumption regarding multiple questions in German is pretty much on a par with English: one WH undergoes movement to FocP, any other WHs stay “in situ” (i.e. the relevant Agr-projections, somewhere within the ϕ -domain in our terms).

Apart from the syntactic evidence introduced momentarily, there are other “grammatical reflexes” worth mentioning. One is semantic in nature and follows the discussion, namely the role of SP/PL interpretations following the Hagstrom-Bošković line. Pushing this approach further turns this point into a typological concern, as suggested throughout. Another is pragmatic in nature and was first explored by Grohmann (1998). It focuses on the observation that the discourse requirements, which allow a multiple Wh-question in German to be felicitous, are different from those applying to English or even the more closely related Dutch. This will be explored in section 5.5.

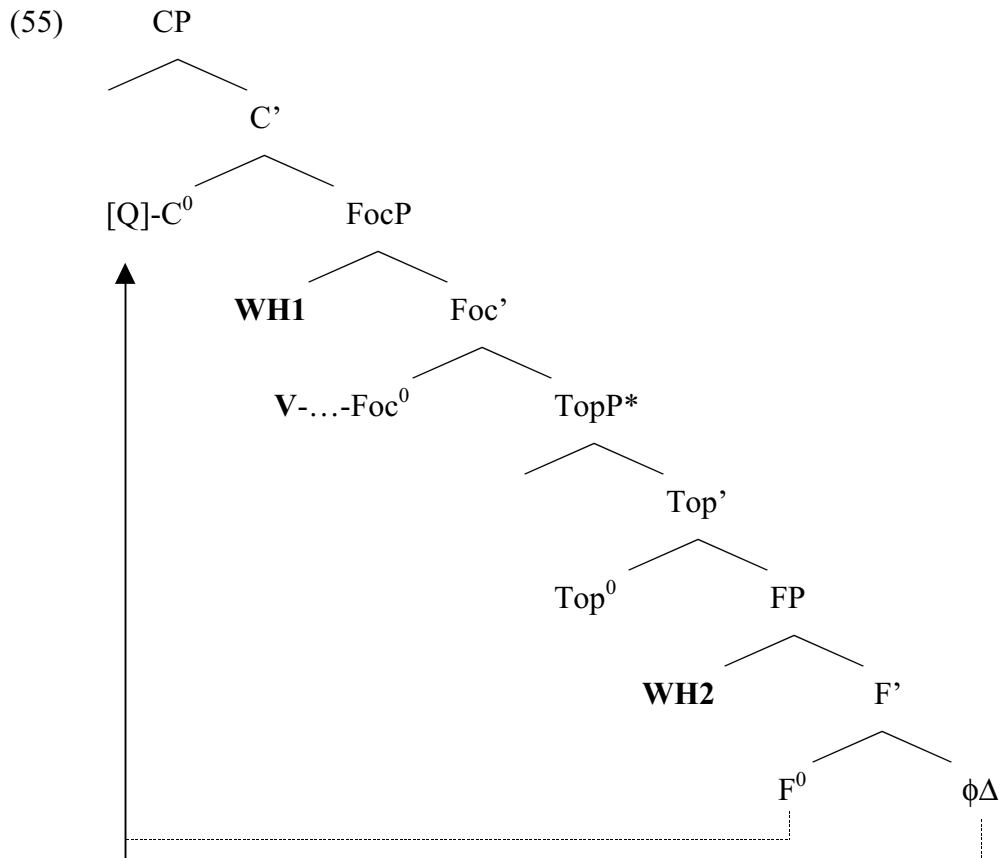
In essence, I propose a structure like (54) above for any multiple question in German, which might now be worthwhile considering in more detail.³⁵

In other words, all Wh-phrases move into the ω -domain in the overt syntax and regardless of whether [Q] is merged high or low, it can never scope over all WHs—leaving only a PL interpretation. As the placeholder ‘...’ between FocP and FP indicate, there is room for material between the two WHs. Following Rizzi’s (1997) structure, this room is reserved for topics (cf. (36)). This suggests that only topics might be placed in between two Wh-elements, and I will capitalize on this prediction in the following. (55) is the structure relevant here, where I indicate the highest possible “second position” as the target for the finite verb, which I will largely ignore in the discussion.^{36,37}

³⁵ I ignore Apparent Superiority constellations or a treatment of D-linking for the purposes of presentation, but also in anticipation of the next section.

³⁶ The situation in the Slavic multiple Wh-movement languages is quite different, of course. I address the difference, and a way to capture it, in section 5.5.3. To anticipate, one major difference regards topic positions: while topics may target a position in between the two WHs (a rather low ω -position), all topics precede WH in Bulgarian.

³⁷ Regarding the V2 position, I assume that whatever derives this phenomenon will ensure proper placement in these cases also. I indicate the two different launching sites for [Q] with the dashed lines: the one coming off F^0 represents high Q and the one originating within the ϕ -domain low Q. An ancillary assumption is that Q-movement from low, WH2-adjoined position must take place from within the ϕ -domain. I cannot discuss the details, but here a minimality effect might be evoked, or possibly economy: given that F is a potential host for [Q], movement of the WH2-[Q] complex past F must be ruled out.



5.4.2 *Quantifier Interaction*

The two WHs in a German multiple question must not only be non-adjacent, but other elements may be placed in between—in some cases even quite a lot of material (a matter I return to in section 5.5.3). Beck (1996b) observes that apart from non-quantificational elements, some quantifiers may appear in between the two Wh-phrases, whereas others may not. I cannot review the details of her analysis here nor delve further into patterns involving other elements than two WHs (cf. Grohmann 1998, Hagstrom 1998, Boeckx 1999b, Pesetsky 2000, Miyagawa, in press). I concentrate on the type of intervention effect that arises from placing a particular quantifier in between two WHs. The essence of Beck's proposal is that negative quantifiers induce a blocking barrier: the WH left in situ at Spell Out must move to CP at LF, and if blocked it cannot do so.

As (56) shows, many different elements can occur between two WHs—even more than one, as the parenthesized adverb indicates—as well as follow them. This is not so for all quantificational phrases, though:

- (56) a. Wer hat Maria/seine Freundin/einen Porsche (gestern) wo geküßt?
 b. Wer hat wo Maria/seine Freundin/einen Porsch (gestern) geküßt?
 who has where Maria/his girlfriend/a Porsche (yesterday) kissed
 ‘Who kissed Maria/his girlfriend/a Porsche (yesterday) where?’ *(German)*
- (57) a. Wer hat alle Bücher wo gekauft?
 who has all books where bought
 ‘Who bought all (the) books where?’
 b. * Wer hat kein Buch wo gekauft?
 who has no book where bought
 ‘Who bought no book where?’ *(German)*

Universal quantifiers seem to be able to appear in between the two WHs, while negative ones do not. If all WHs must end up in CP at one point, one possibility is the barrier-approach. Note that nothing rules out co-occurrence of two WHs and a negative quantifier: if the quantifier follows all WHs, the question is well-formed.

- (58) a. Wer hat gestern wo alle Bücher gekauft?
 who has yesterday where all books bought
 ‘Who bought all books where yesterday?’
 b. Wer hat gestern wo kein Buch gekauft?
 who has yesterday where no book bought
 ‘Who bought no book where yesterday?’ *(German)*

However, not only negative quantifiers are prohibited from “intervening.” And neither is the class of possible interveners restricted to universal quantifiers.

- (59) a. Wer hat viele/die meisten/mehr als drei Bücher wo gekauft?
 who has many/the most/more than three books where bought
 ‘Who bought many/the most/more than three books where?’
- b. * Wer hat wenige/höchstens drei/weniger als drei Bücher wo gekauft?
 who has few/at-most three/fewer than three books where bought
 ‘Who bought few/at most three/fewer than three books where?’ (*German*)

And again, if the quantifiers follow the WHs, everything is alright:

- (60) a. 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?’
- 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?’ (*German*)

These contrasts allow for the following generalization. Monotone increasing quantifiers may appear in between two Wh-phrases, decreasing ones may not.³⁸ As laid out above, we do not share Beck’s assumption on LF-movement of WHs here. Hence, any resort to an intervening or blocking barrier must be discarded immediately, as the lower WH does not raise at LF. There is an additional problem with such an approach, which basically boils down to a reintroduction of (artificial) barriers, a configuration which a minimalist approach would rather deduce than stipulate.

Under the hypothesis that all Wh-phrases overtly move into the ω -domain, such as FocP and FP, we might be able to go another route towards such a deduction, albeit in quite different terms. We can restate the “intervention effect.” Given our architecture of

³⁸ While noted in passing by Beck (1996b: 30), I extend this classification in Grohmann (1999b, to appear), building on Grohmann (1998), where all kinds of constructions were considered, including Apparent Superiority structures and the combination of arguments and adjuncts (see also Citko & Grohmann 2000, and Boeckx 1999b, in progress for quite similar effects found in French II).

this Prolific Domain, as sketched in (55), iterative topic phrases may appear in between the two WHs. It follows that any material intervening between the two WHs must thus target TopP. A natural explanation for the ungrammaticality of the strings shown here, namely *WH > decreasing quantifier > WH* would be that decreasing quantifiers cannot be topicalized, that is, they cannot ever target SpecTopP. This is the route I pursue here.

5.4.3 Topicalizability

If TopP is the projection ranked between the two WHs, we expect only topicalizable material to occur between two Wh-phrases. As it happens, increasing quantifiers fit this condition, while decreasing ones do not. Consider the following data:

- (61) 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 hard-working)
 ‘Many books, Peter read yesterday. (He is a hard worker.)’ (German)
- (62) 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.)’ (German)

Commonly, the first element in a non-subject-initial V2 matrix clause is referred to as the “topic” of the clause, a loose notion that has sometimes also been referred as “focus.” Thus, as we can see in (61a), this can be a contrastive position. However, decreasing quantifiers may not appear in initial position, unless they are contrastively used.

Take the following questions:

- (63) 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?

(63a) asks for new information in a completely out-of-the-blue context. We will get back to that momentarily. (63b) also asks for new information, but in a slightly more restrained way, the discourse already establishes the participant and a time specification related to the event inquired about. In a felicitous answer in German, this new information appears in a default focus position, where the type of focus is “information focus” (see É. Kiss 1998 for discussion and references) and the “default” position is rather low in the structure (see Abraham 1995 and references on theme/rheme structures). In this case the value for ‘what’ is the new information. Neither construction in (61) or (62) can be used to answer this question. Disregarding pitch accents, the only word order of a felicitous answer is the one in (64):

- (64) 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.’

It is not implausible that the position of *viele/wenige Bücher* ‘many/few books’ is not a particular syntactic projection, such as FocP, but related to the information structure in German. I shall largely ignore this point (see Abraham 1995, Meinunger 2000 and many others).

What is of interest here is that (61) and (62) can be used as felicitous answers to questions, namely to something like (64c,d). Here, the value of the new information asked for is specified, either in form of a yes-no question or a Wh-question. Along with many other possible replies, (61a) and (62a) can be uttered in response to (64c), so as to deny the presupposition that Peter read few books (61a) or many books (62a). In this sense, the answer contains a contrastive element as part of the new information.

(61b) and (62b) 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 responses to any of the four questions in (64).³⁹ I will use the notions topic, focus and contrastiveness in this sense.

Under a single COMP structure, we do not need to distinguish the landing site of the first XP in German V2 clauses further. Whether it is a focalized or a topicalized constituent, or something else (such as a Wh-phrase) does not really matter. In a more articulated system, we might want to reserve some projections to certain elements. This is one part of the motivation to split this layer into separate projections. On the basis of Italian, Rizzi, for example, proposes a unique FocP hosting contrastively focalized phrases and recursive TopP for topics, where one distinguishing property between the two is resumption: a topic can be coreferent with a clause-internal clitic (see chapter 4), a focalized element cannot.

To come back to the issue at hand, the difference between (61) and (62) is that some elements can be fronted into the first position as “pure” topics (see fn. 39) as well as contrastively used elements, while others can only be used contrastively. Decreasing quantifiers fall into the latter category, and these are also the elements that cannot appear in between two WHs. I refer to the elements in this class as “non-topicalizable material.”

³⁹ (61b) can be used to respond to a question like *Who read many books?*, but the ungrammatical (62b) cannot serve as an answer to *Who read few books?*

This said, it is interesting to note that once contrastively stressed, the quantifiers identified by Beck as “interveners” become suddenly good, even clearer with *nur* ‘only’. While I abstain from pinning down the exact position of contrastive elements (whether it is an additional topic or focus projection, for example), the absence of contrast in the following data casts serious doubt on a barrier-driven intervention effect.

- (65) a. Wer hat VIELE Bücher wo gekauft?
 who has many books where bought
 ‘Who bought MANY books where?’
- b. Wer hat (nur) WENIGE Bücher wo gekauft?
 who has (only) few books where bought
 ‘Who bought (only) FEW books where?’ (German)

5.4.4 *Adverb Placement*

Beyond the intervention effects of the quantifiers Beck looked at (and additional ones), a similar effect can be found with adverbs: some adverbs may appear in between two Wh-phrases, others may not. Again, it can be independently shown that the illicit configurations arise with non-topicalizable adverbs.

Manner adverbs, rather low in the structure, must follow the object, unless the object is focused:⁴⁰

- (66) a. Peter hat das Buch kaum/komplett gelesen.
 Peter has the book barely/completely read
 ‘Peter <barely> read the book <completely>.’
- b. Peter hat kaum/komplett das BUCH gelesen. (German)

⁴⁰ Without further analysis of adverbial positions, we can take these elements to adjoin to *vP* or *AspP*, for example.

In combination with multiple Wh-phrases, some of these adverbs may not appear in between the two. This might strike us as a surprise, given that focus is commonly construed with Wh-phrases (see also section 5.5). Thus, if this class of adverbs can precede a focalized object as in (66b), it should also be able to precede a (focalized) WH. (67b,c) show that this is not the case. This follows, however, if both Wh-phrases are in the ω -domain (as opposed to a non-interrogative object as in (66)), making only room for topicalizable material to appear in between them, and such adverbs may not be topicalized.

- (67) a. Wer hat was kaum/komplett gelesen?
 who has what barely/completely read
 ‘Who barely read what?’
 b. * Wer hat kaum/komplett was gelesen?
 c. Was hat wer kaum/komplett gelesen?
 d. * Was hat kaum/komplett wer gelesen? (German)

Indeed, these adverbs, as opposed to sentential adverbs, for example, are not topicalizable. (68) illustrates the contrast, where the object is topicalized also to force a topic-reading of the fronted adverb, rather than a high occurrence in the T-domain. In these cases the fronted adverb is presumably in SpecTopP and the verb sits on the Top-head.⁴¹

- (68) a. * Kaum/Komplett hat das Buch der Peter gelesen.
 barely/completely has the book the Peter read
 ‘Barely/Completely, Peter read the book.’
 b. Wahrscheinlich/Gestern hat das Buch der Peter gelesen.
 probably/yesterday has the book the Peter read
 ‘Probably/Yesterday, Peter read the book.’ (German)

⁴¹ The presupposition is that pre-subject scrambled elements in German target a position inside the ω -domain, here roughly equated with TopP, unlike Japanese or Serbocroatian, as hinted at above.

Apart from other combinatorial possibilities, the same contrasts can be found in embedded contexts. Here I indicate with brackets (im)possible positions for the relevant adverbial material. Moreover, the adverbs in question do not underlie some condition that bars co-occurrence, as it is perfectly fine to use both *wahrscheinlich* ‘probably’ and/or *gestern* ‘yesterday’ in combination with *kaum* ‘barely’ and/or *komplett* ‘completely’.

- (69) ... , daß <*kaum/komplett> der Peter <wahrscheinlich/gestern> das Buch
<wahrscheinlich/gestern> <kaum/komplett> gelesen hat.
‘... that probably/yesterday/*barely/*completely, Peter read the book’ (*German*)

5.4.5 Summary

In sum, certain elements are inherently not topicalizable—for reasons that we did not discuss here—and as such not predicted to appear in between two Wh-phrases under the assumption that both Wh-phrases have moved very high, into the ω -domain, making room for topics to occur in between. This prediction is empirically borne out. These facts not only support our hypothesis that German moves all WHs into the ω -domain (and thus allows us to classify multiple Wh-question formation into a clean tripartition), it also captures (one part) of an interesting intervention effect noted by Beck as well as additional effects which are not captured under a barrier-style intervention analysis.⁴²

⁴² Another part of the “Beck effect” concerns “intervention” of the same material in between split partitives or with *was für*-split constructions. See Grohmann (1998) for discussion. A further aspect, noted by Beck (1996a) and Beck & Kim (1997), concerns similar effects in Korean. While there are some differences between the “intervention” effects in Korean and German, much of what has been said here can also be applied. In this regard it is worth mentioning that Lee & Tomioka (2000) find the same effects in Japanese also, first noted in Hoji 1985, and account for both Japanese and Korean “intervention” effects in roughly the same way I suggest for German: non-topicalizable material cannot occur between two WHs. Their emphasis is semantic (and prosodic), while the present one is syntactic. Moreover, Boeckx (in progress) applies the approach in terms of non-topicalizability for similar effects found in French Wh-in situ structures.

5.5 German = Italian: Categorical Absence of Multiple Wh-Questions?

Now that we have supported the proposal that German is a multiple Wh-movement language, I would like to stretch comparisons. Essentially German could now be argued to form multiple Wh-questions very similar to Bulgarian in that all WHs target a left-peripheral position, tentatively identified as FocP and FP. I will now suggest that German (also) behaves like Italian, a language that cannot form multiple Wh-questions at all with the purpose of asking for new information.

5.5.1 *Discourse-Restricted Quantification*

One striking difference in the formation of a multiple Wh-question in German, as opposed to English, for example, is what I dubbed “Discourse-Restricted Quantification” (DRQ; Grohmann 1998). DRQ describes a felicity condition posed on the use of more than one WH by the context. Take a Wh-phrase to represent a set of individuals. DRQ requires not only that this set is a non-empty set for both WHs, but also that the discourse facilitates possible reference to all such sets.

To exemplify, consider the following two contexts:

- (70) *Context I*: A customer comes to a newsstand and just sees three customers leaving in different directions, each fiddling with their purchases. After asking the salesman whether he sold anything interesting, the salesman replies: “I can’t believe it. I just sold a Dutch porno magazine, a Japanese comic and a Bosnian newspaper.”
- a. Who bought what?
 - b. Wer hat was gekauft?
 who has what bought
 ‘Who bought what?’ (*German*)

- (71) *Context II*: A jeweler comes home to his wife and says excited: “I had a great day. I sold a platinum watch, a gold necklace and a brilliant ring.”
- a. Who bought what?
 - b. # Wer hat was gekauft?
who has what bought
‘Who bought what?’ (German)

It appears to be the case that German can only allow 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. Thus, in (70) speaker and hearer can assume that the three previous customers are the buyers of the three items sold. In (71), however, the set of possible buyers is too big to facilitate a possible pairing of buyers and items sold. This description is very intuitive and can remain as such. What I capitalize on is the difference with English, where (71a) is a perfectly reasonable question and a potential answer would be something like (72):

- (72) A businessman bought the watch, an old lady the necklace and a young bride the ring.

A tentative definition of DRQ would run as follows:⁴³

- (73) *Discourse-Restricted Quantification (DRQ)*
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.

⁴³ This definition is slightly changed from the original in Grohmann (1998: 19). See that work for ample illustration of different contexts, and with a variety of Wh-expressions (arguments and adjuncts alike).

In previous work, I employed this observation to further motivate movement of all WHs into a high, discourse-related projection. In a sense, the two WHs in a multiple Wh-question could be construed as “Wh-topics” of sorts. As mentioned briefly in chapter 2, Wh-topics are not contradictory per se. Wu (1996, 1999), and Tang (1988) also, argue that fronted WHs in strict, non-scrambling Wh-in situ languages like Chinese are actually topics.

But note what DRQ essentially says: all WHs in a German multiple Wh-question must be D-linked. While a WH in an information question represents a novel set of individuals (“new information”), the set of individuals represented by D-linked WHs is to some degree known (“old information”). I will now try to make some sense out of this, apparently contradictory, state of affairs.

5.5.2 *Italian Wh-Questions*

In a discussion of Subjacency violations, Rizzi (1978) mentions in passing that Italian does not allow multiple Wh-questions at all. Calabrese (1984), further explored in Calabrese (1992), offers an explanation for the lack of multiple constituent questions in Italian. A multiple Wh-question, if not used as an echo or quiz question, asks for “new information” regarding all WHs; the set of individuals contained in each WH is new. 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 focus, not contrastive focus (see discussion in section 5.4.3 above). In Italian, this position for information focus is unique. If every WH in an interrogative clause must correspond to a focus in the declarative answer, and if the relevant focus in Italian is unique, it follows that multiple Wh-questions are ill-formed: the multiple information requested cannot be realized in the answer.

Consider the following data (from Calabrese 1984: 67; glosses added—KKG):

- (74) 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?’ *(Italian)*
- (75) 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.’ *(Italian)*

The statements in (75) should be possible answers to the questions in (74). As the translations show, this is indeed the case in English. As the stars indicate, however, in Italian neither one is well-formed: a multiple constituent question is as ungrammatical as a multiple focus structure (where focus is marked by capital letters).

This state of affairs is independent of a SP or PL reading, as Calabrese shows:

- (76) * MARIO ha scritto una LETTERA, FRANCO un ARTICOLO, CARLO un LIBRO...
 ‘MARIO has written a LETTER, FRANCO an ARTICLE, CARLO a BOOK...’
(Italian; Calabrese 1984: 67)

Again, the two languages differ. Notice that the intended focus interpretation of (76) is not contrastive, which is fine in Italian, but information. Leaving aside a deeper discussion of prosodic properties, focus and information structure (see e.g. Rooth 1985, Vallduví 1992, Winkler 1997 and references cited), we can detect a similar effect in German. That is, the analogue of (76) can only be used contrastively. It seems that German and Italian pattern alike in this respect.

If this turns out to be the case, a multiple Wh-question should not be able to be formed in German. 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, and if it does so in a syntactically well-formed way, a possible answer is also well-formed syntactically.

What D-linking a WH does is pick out a set of individuals restricted out of all possible individuals to those specified by the discourse—the DRQ condition I suggested earlier. We could then hypothesize that the fact that even bare WHs in German multiple questions must be basically D-linked is related to the absence of multiple Wh-questions in Italian. German is like Italian in that neither allow multiple information focus and hence do not allow multiple information questions.⁴⁴ This still leaves room for DRQ: on the one hand, we can use this term to distinguish a condition of D-linking on all WHs (in German), while employing D-linking to those elements commonly identified as such (e.g. *which*-phrases in English; see Pesetsky 1987). On the other hand, German and Italian apparently differ in this respect. Calabrese notes also that a multiple constituent question in Italian does not get better if the WHs are D-linked:⁴⁵

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

⁴⁴ I would like to thank Željko Bošković for pointing out the obvious and discussing this idea with me.

⁴⁵ It is a well-known fact that there is a large degree of variation among Italian dialects. Not all speakers agree with Calabrese’s judgements, and I simply report the data as presented by Calabrese (1984). Even for those speakers, though, an interesting contrast arises with respect to contextual information. Andrea Gualmini (p.c.) notes that in the situations depicted in (70) and (71), the most appropriate way to inquire both constituents (the pairing of buyers and items sold) in Italian is to use a WH for one and a pronoun for the other, the equivalent of *Who bought it all/them?*—however, only in Context I of (70) can a D-linked multiple Wh-question be asked felicitously. This is very reminiscent of the German DRQ condition. I am aware that for a satisfactory account, other matters need to be resolved first and thus have to leave many interesting issues for further research.

I leave this discrepancy to future research and concentrate on the common properties of German and Italian multiple questions.

If then even a multiple question with two bare WHs in German is a D-linked question, this might provide us with a clue as to why Syntactic Superiority 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 the Superiority Condition. On the other hand, German requires all D-linked WHs to move into the ω -domain, unlike English. As a result, German multiple Wh-question always force a PL reading, where the individuals of each set are contrasted with one another.

The clue to all this comes from pairing the order of WHs and the order of the values for each WH in the answer. Consider the following:

- (78) a. Wer hat was gekauft?
 b. Was hat wer gekauft?
 ‘Who bought what?’ *(German)*
- (79) a. Der Peter hat das Buch gekauft, der Martin hat das Fahrrad gekauft...
 b. Das Buch hat der Peter gekauft, das Fahrrad hat der Martin gekauft...
 ‘Peter bought the book, Martin bought the bicycle...’ *(German)*

If the order of WHs in the question is $WH1 > WH2$, the appropriate answer follows the same order for the values of each WH. However, if the order in the question is $WH2 > WH1$, the order in the answer is analogous (see also É. Kiss 1993: 103f., fn. 6 for Hungarian). As we have established above that the first position in a declarative matrix clause can be a contrastive position, and as we know that contrastive focus can also be assigned in situ, it follows that not only a PL reading is available, but also the two positions are made use of in the same way.

Here we find a contrast with English. Consider the following:

- (80) a. Which man killed which Kennedy? (PL)
 b. # Which Kennedy did which man kill? (*PL)

Following Barss' (1990) observation that D-linked Wh-questions in English which front WH2 over WH1 can only have an SP reading, (80b) is predicted to be ill-formed. Incidentally, (80) is a good example to show that the PL reading is not available in these contexts (cf. fn. 13 above).

Not surprisingly, the analogues of (80) are both well-formed in German:

- (81) a. Welcher Mann hat welchen Kennedy ermordet? (PL)
 which man has which Kennedy killed
 'Which man killed which Kennedy?'
 b. Welchen Kennedy hat welcher Mann ermordet? (*PL)
 which Kennedy has which man killed
 #'Which Kennedy did which man kill?' (German)

However, the felicitous replies in each case are as follows, where (82a) corresponds to (81a) and (82b) to (81b):

- (82) a. Lee Harvey Oswald hat John ermordet und Sirhan Bishara Sirhan Robert.
 'Lee Harvey Oswald killed John and Sirhan Bishara Sirhan Robert.'
 b. John hat Lee Harvey Oswald ermordet und Robert Sirhan Bishara Sirhan.
lit. 'John, Lee Harvey Oswald killed and Robert, Sirhan Bishara Sirhan.'

In sum, while German seems to pattern with Bulgarian in multiple Wh-question formation in that both move all WHs into the ω -domain, it also resembles Italian in not forming an information multiple question, but necessarily D-links all WHs. Unlike English, however, D-linked WHs must be licensed in the ω -domain, a fact we might want to explain by the prolific nature of the left periphery in German, in that it allows much more discourse-related movement into the articulated C-layer.

5.5.3 *Speculations: Discussion, Consequences and Predictions*

The analysis of multiple Wh-fronting languages such as Serbocroatian, Polish and Russian as essentially Wh-in situ languages (Bošković 1998b) allows for a possible account for why these languages do not show Syntactic Superiority effects—unlike other multiple Wh-fronting languages, such as Bulgarian and Romanian. Syntactic Superiority, the ban on moving a non-D-linked WH over a higher one, arises basically when two elements bear a Wh-feature. If the WHs in zero Wh-movement languages do not move to check [Wh], but some other property, such as [focus], the Superiority Condition arguably does not apply. Discourse-driven movement (focalization, topicalization, scrambling) has different properties from Wh-movement. However, as the moved WH in English does check [Wh], and as only one WH moves, this ban applies to English Wh-movement.⁴⁶

If German were like English, we would expect it to be sensitive to Syntactic Superiority as well. It is not. If German were like Bulgarian, we would expect the same. As we have seen that German patterns like Bulgarian with respect to interpretation, and not to Serbocroatian, we might face a problem. However, as the last section suggests, the WHs move into the ω -domain not to check [Wh], but something else. If all Wh-phrases in German are obligatorily D-linked, they are “topic-like.” As such, the feature driving Wh-movement in German is not the same as in Bulgarian, but the Prolific Domain targeted is.

As a final stretch of comparison, we have seen arguments that German is like Bulgarian in moving all WHs into the ω -domain. German is also like Italian in not forming multiple information questions. It now looks like German is also like Serbocroatian or Japanese in that Wh-movement is driven by a discourse feature, rather than [Wh].

⁴⁶ We do not need to specify the technical implementation of Superiority in locality terms any further. Naturally, many questions arise, one of them being why Superiority is only sensitive to Wh-features and not others. I refer the reader to Chomsky (1973)...

The details need to be worked out, but the course of investigation is clear. If Wh-phrases in German do not move to check a Wh-feature, there is no reason why they should be sensitive to the Superiority Condition. The lack of Syntactic Superiority effects in mono-clausal multiple questions is then accounted for in the same way that Japanese or Serbocroatian allow for moving any WH over any other. These languages differ, though, in the landing site: Japanese and Serbocroatian WHs stay within the ϕ -domain, while German ones are very left-peripheral and target the ω -domain. This difference could be tied to scrambling. A possible direction to apply Prolific Domains and anti-locality to scrambling could run along these lines, especially if we take pre-subject scrambled constituents in German always target a topic-like projection inside the ω -domain (Grohmann 1996a and subsequent work), whereas Japanese or Serbocroatian employ the ϕ -domain.

This approach raises an additional question. If German WHs are topic-like (as D-linked Wh-phrases in general are, employing the simple diagnostic of “known” vs. “new” information in this intuitive sense), which position do they actually target? Is it FocP and FP, as in Bulgarian, or does it involve the recursive TopP, or even some other position? In previous work I suggested a derivation that moves both WHs in German to a topic projection, before further moving the higher WH into FocP (Grohmann 1998). However, this followed the assumption that all WHs move to check [Wh] at one point, and it held fast to the belief that even multiple Wh-questions in German are information questions. This lack of understanding of DRQ has now been improved: biting the bullet and taking all WHs to be D-linked in the formal sense removes the additional movement step to FocP. As such, it is perfectly feasible that all WHs actually target TopP. This would not change anything said so far. The strongest argument for multiple ω -movement might come from the “Beck-effect.” But whether all WHs target TopP or some other projections, the predictions laid out in section 5.4.2 can still be maintained. Moreover, FocP, now not occupied by a WH, might serve the purpose of encoding the contrastive element that can appear in between two fronted Wh-phrases (cf. section 5.4.3).

If we take the ω -domain to be really more as envisioned originally by Rizzi (1997), FocP is couched between two topic phrases, each recursive. Assume the two WHs to target the higher and the lower TopP, respectively. In this case, there is room for one contrastively stressed element in between—under the assumption that fronted contrastive elements are unique (Horvath 1986, Brody 1990, Rizzi 1997 and others). This would predict that only one contrastively marked constituent can appear in between the two WHs. This prediction is borne out also:

- (83) * Wer hat MOBY DICK den STUDENTEN wann zu lesen aufgegeben?
 who has Moby Dick to-the students when to read given
 ‘Who gave when the STUDENTS MOBY DICK to read?’ (German; cf. (65))

There is nothing inherently wrong with the information expressed here. We could imagine a context in which several books were assigned to several groups of people to read. In fact, all that seems to be wrong with (83) is that two contrastive elements are fronted. Compare with some grammatical alternatives (and additional information):

- (84) a. Wer hat *MOBY DICK* wann den STUDENTEN (und *WAR AND PEACE*
 den LEHRERN) zu lesen aufgegeben?
 ‘Who gave when *MOBY DICK* to the STUDENTS to read (and *WAR AND PEACE*
 to the TEACHERS)?’
 b. Wer hat den STUDENTEN wann *MOBY DICK* (und den LEHRERN *WAR*
AND PEACE) zu lesen aufgegeben?
 ‘Who gave when the STUDENTS to read *MOBY DICK* (and the
 TEACHERS *WAR AND PEACE*)?’ (German)

I take (85) to be an appropriate answer in both English and German:

- (85) Peter gave the students to read *Moby Dick* yesterday (and John gave the teachers to read *War and Peace* the day before).

Another difference between German and Bulgarian is that topicalized material can intervene between the two WHs in the former, but not the latter. Bulgarian does, however, allow topics to precede both WHs (Rudin 1985). Naturally, many variables are involved, such as a satisfactory understanding of V2 in German, the (alleged) adjacency between Bulgarian WHs etc. But a first pass involves the finer structure of the ω -domain. If WH1 targets FocP in Bulgarian, there is a topic position available above it; but if the higher WH in German targets TopP, there is no such position left.

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

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

The same effects can be found in Romanian (Ileana Comorovski, p.c.). This shall conclude our discussion of some properties of multiple Wh-questions across languages, with special attention paid to German. Naturally, questions regarding the exact positions suggested here remain open, and so do others. The goal of this chapter was, however, to take the Hagstrom-Bošković approach seriously, build on their analysis and see where it leads us when we consider German—the language that seemed rather odd in the initial tripartition of strategies for Wh-question formation under the assumption that only one Wh-phrase moves overtly and the other stays “in situ.” Our discussion of in situ positions, the relevance to Prolific Domains and Exclusivity and others suggest an alternative approach without changing the crucial ingredients of the Hagstrom-Bošković approach.

5.6 Conclusion

In this chapter, I argued primarily for overt, syntactic movement of both Wh-elements in a binary Wh-question in German. I suggested that one WH targets FocP and the other a lower projection FP. In this sense, German patterns more like Bulgarian than English.

Following recent attempt to tie the interpretation of single-pair vs. pair-list in multiple questions to the syntax, such an analysis accounts for why German behaves like other multiple Wh-movement languages in the relevant aspects. We have seen arguments that Serbocroatian, another language that fronts all WHs, actually does not move Wh-phrases to the same positions as Bulgarian does. Bulgarian involves ω -movement of all WHs, while the Serbocroatian WHs remain below, somewhere inside the ϕ -domain. Further comparison allowed us to classify Serbocroatian as a Wh-in situ, or better, zero Wh-movement languages, on a par with Japanese. Other factors are involved, relating to scrambling, but following the Hagstrom-Bošković approach, we were able to classify the three strategies of forming multiple Wh-questions across languages in a clean typological tripartition: some languages move all WHs into the ω -domain (multiple Wh-movement), other only one (singular Wh-movement) and a third class non (zero Wh-movement).

A multiple Wh-movement analysis of German questions makes, of course, certain predictions, especially for the syntax. By adopting an articulated structure for the ω -domain from recent research, we were able to investigate one prediction: if the position between the two fronted WHs is a topic projection, we expect only possible topics to appear in between the two Wh-phrases. This prediction turned out to be borne out. By identifying (non)topicalizable material, independent of Wh-questions, we were able to account for the so-called “Beck-effect” of intervention in a straightforward manner.

Once we established that German is like Bulgarian in ω -moving all WHs, we looked at other properties of German multiple Wh-questions and found a striking restriction, namely that all WHs, regardless of their internal structure, must be D-linked. In this sense, all Wh-phrases represent old information, in the sense that the set of individuals expressed by all WHs must be known to speaker and hearer. This allows for an additional comparison: I suggested that German is like Italian in not allowing multiple constituent questions. This we tentatively linked to the lack of more than one position for information focus, the type of focus expected in a felicitous, non-contrastive answer to a constituent question.