Interpretive Properties of Multiple Wh-Fronting and the Syntax of Multiple Wh-Questions

Chomsky (1977) introduced a number of diagnostics for Wh-movement, the movement rule that was subsequently generalized as A'-movement (such as Wh-movement proper, topicalization, relativization etc.). With increased studies of Relativized Minimality effects (Rizzi 1990), the relevance of separate movement operations for each of these constructions has increased. In this paper, I address the relevance of clause-internal A'-movement operations and their interplay. In particular I investigate the impact of discourse properties on the syntax in multiple Wh-questions.

I propose and defend two theses which might at first sound both unexpected and contradictory. I will first argue that German falls into a typological category with true multiple Wh-fronting languages like Bulgarian (1). Then I suggest that German actually resembles Italian (2):

(1) German = Bulgarian: German Wh-phrases all move into the C-domain of the clause overtly.
(2) German = Italian: German does not form true multiple constituent questions to begin with.

Evidence for (1) comes from cross-linguistic patterns of single pair and pair list readings of Wh-phrases (“WHs”) in multiple Wh-questions (cf. Wachowicz 1974) and a particular account (Bošković 1998, building on Hagstrom 1998). Concentrating on binary questions, the tentative proposal is that the two WHs target FocP and FP, within a richer structure of CP adopted from Rizzi (1997): \( CP \to \text{TopP}^{\ast} \to \text{FocP} \to \text{TopP}^{\ast} \to \text{FP} \). This analysis makes predictions, in particular that only topics can appear in between two fronted WHs. This is shown to be indeed the case with empirical evidence from interaction with certain quantifiers and adverbs. However, there is a sense in which multiple Wh-questions do not really exist in German (i.e. (2)), namely in that both WHs must be obligatorily D-linked, even if occurring in “bare” form. This is reminiscent of Italian dialects that don’t permit multiple constituent questions, relating to non-contrastive focus.

(Non-)availability of single pair readings

One argument in favour of overt multiple Wh-movement in German comes from typological considerations following a recent study by Bošković (1998, 2002), who extends Hagstrom’s (1998) syntax and semantics of multiple questions and applies it to the (non-)availability of single pair readings witnessed across languages. WHs in the Hagstrom-Bošković approach to questions are licensed by a question particle \([Q]\) (which may or may not be overtly realized), rather than by movement. Displacement of WHs is thus driven by other properties of the grammar (e.g. focus: Horvath 1986, Stjepanović 1995). \([Q]\) always moves to C to type the clause interrogative (Cheng 1991), and it may do so from one of two positions: a high position, c-commanding all WHs, or a low position (adjoined to the lowest WH). The trace left behind by movement to C serves as a choice function variable driving the semantics of questions.

What Bošković finds is that languages fall into two categories, whether they allow single pair (SP) readings in a multiple questions or not. Applying Hagstrom’s analysis, the generalization emerges that syntactic movement of a WH over high \([Q]\) destroys the SP reading and only allows a pair list (PL) interpretation. Bošković interprets this as allowing for the following tripartition:

(3) i. multiple Wh-movement languages never allow SP interpretation
   (on the assumption that all WHs move into the C-domain — Bulgarian, Romanian).
ii. singular Wh-movement languages allow SP interpretation only with D-linked WHs
   (which arguably do not have to move so high — English, French I);
iii. Wh-in situ languages always allow SP interpretation
   (Japanese, Chinese, French II — and, under this criterion, Serbocroatian, Russian);

Against all odds, German seems to behave like the languages of the first group. Rather than introducing another operation into the grammar (such as Hagstrom’s “Q-stranding”), this is captured most naturally in this framework by analyzing both WHs displaced into the C-domain:

(4) \[ \text{CP \ [Q]-C \ [FocP \ \text{wer} \ \text{hat}-\text{Foc} \ [FP \ \text{was} \ \text{[Q]-F \ [[TP \ \text{wer} \ \text{... was} \ \text{... gekauft \ []]]}]}} \]

who has what bought

I will suggest that the distinctions made in (5) correspond to the cut depicted in (3) and argue specifically that German falls under (5i), rather than (3i).

(5) i. Multiple Wh-movement languages A'-move all WHs in the overt component
ii. Singular Wh-movement languages A'-move one WH and might A-move others
iii. Zero Wh-movement languages do not A'-move any WHs, but may A-move them

Coupled with the arguments put forward next, this is evidence for a refinement of the Wh-movement rule: not all movement of Wh-phrases is driven by the need to check a Wh-feature.
Another type of argument comes from apparent “intervention” effects. Beck (1996) observes that certain quantificational elements may not appear in between two WHs, but may well follow them. Her account postulates a barrier created by these “intervening” quantifiers, on the assumption that all WHs must move to CP at LF. This assumption is not shared here, and indeed, it will be shown that the phenomenon is more general. Consider first the relevant data for quantifiers:

(6) a. Wer hat alle/viele/die meisten Bücher wo gekauft?
   ‘Who bought all/many/most books where?’

   b. * Wer hat kein Buch/wenige/höchstens drei Bücher wo gekauft?
   ‘Who bought no book/few/at most three books where?’

If the analysis is correct that the two WHs in German target FocP and FP, respectively, we predict that only elements than can be topicalized may occur in between (see above). As it turns out, the class of elements that cannot “intervene” is also non-topicalizable in general:

(7) Viele / *Wenige Bücher hat Peter gestern gelesen. (Er ist fleißig. / Er ist faul.)
   ‘Many / *Few books Peter read yesterday. (He is a hard worker. / He is lazy.)’

In other words, monotone decreasing quantifiers cannot be topicalized and cannot occur in between two WHs, a state of affairs that under the present assumptions can be dealt with on purely syntactic grounds. Moreover, as Citko & Grohmann (2001) show, certain adverbs may not “intervene” either (such as kaum ‘barely’, komplett ‘completely’), and it can be shown that these, too, are non-topicalizable (a fact that cannot be captured under a barrier-approach). As it turns out, however, non-topicalizable elements may be fronted if they are contrastively stressed (8), a fact not noted in the relevant literature. In these cases we would expect them also to be legitimate in between two WHs. This prediction, too, is borne out (9).

(8) a. VIELE / WENIGE Bücher hat Peter gestern gelesen (, nicht alle / viele).
   ‘MANY / FEW many books Peter read yesterday (, not all / viele).’

   b. Wer hat VIELE / (nur) WENIGE Bücher wo gekauft?
   ‘Who bought MANY / (only) FEW books where?’

Discourse restrictions

One further observation about multiple questions in German is that all WHs are subject to a felicity condition, which Grohmann (1998) calls Discourse-Restricted Quantification. In essence, this condition says that in multiple questions, all WHs behave as if D-linked. In contexts such as (10) for example the German question would be infelicitous (#); German, unlike English, requires mentioning of potential buyers in this case — in other words: possible referents to all WHs have to be identified in the discourse in order for a multiple Wh-question to be felicitous in German.

(10) 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?

One way of understanding such D-linked WHs is in terms other than fully quantificational (focus), but more discourse-related (topic-like). If so a plausible syntactic reflex is that movement of WHs in German is not driven by the need to check a WH-feature. However, unlike languages in which focus plays a fundamental role to motivate displacement of WHs, German multiple WH-questions seem to involve a more topic-like property, something arguably related to D-linking in general. In this context it is interesting to note a remark in passing by Rizzi (1978) that Italian does not permit multiple WH-questions, an observation explored further by Calabrese (1984, 1992) who relates the absence of multiple WHs to the absence of multiple focus positions. The relevance of this fact is that German is not unique in disallowing proper multiple WH-questions.

Consequences

Bošković (2002) argues that multiple Wh-fronting languages don’t show multiple Wh-movement. Rather, at most one element fronts for the purpose of “Wh-movement proper;” all other WHs fronted do so for the purpose of checking a focus feature. The present proposal for German follows suit and extends the types of non-WH-driven A’-movement operations that displace WHs (topicalization). But he also suggests to eliminate the classification of “multiple Wh-fronting” from a typology of Wh-movement altogether, subsuming the relevant languages into a universal tripartition of moving one WH, moving no WH or choosing either. In this respect, it will be enlightening to weigh the approach emerging from (5) against such a
hypothesis.