Contrast and movement to the German prefield*

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Abstract

The paper argues that the German prefield can be filled in three different ways: (i) by "Formal Movement", which takes the highest constituent of the middle field, preserving whatever pragmatic property the constituent has "acquired" in the middle field, (ii) by base-generation of certain adverbials that are not licensed clause internally, (iii) by Ā-movement, which goes together with a contrastive interpretation of the moved item. In view of option (iii), German can be seen to provide support for the claim that contrast has to be considered as an autonomous concept of information structure.

1. Introduction

As is well-known, German is a verb-second (V2) language. In a V2-clause, the finite verb in second position follows what is traditionally referred to as the "prefield". In a finite clause introduced by a complementizer or in a non-finite clause, all verbal elements occur at the end of the clause. Until recently, it was standard in generative syntax to assume that the position of the finite verb in a V2-clause and the position of a complementizer in a verb-final clause are one and the same, the C-position. The part of the clause between the finite verb/complementizer and the verbal elements at the end is traditionally called the "middle field".

(1)   a. *Den*   *Hans*   *wird*   *Maria*   *morgen*   *treffen*
            the^{ACC} Hans   will   Mary   tomorrow   meet
            PREFIELD   VFIN   MIDDLE FIELD   VERB. ELEM.
            'Tomorrow Mary will meet Hans'
      b. *dass*   *Maria*   *morgen*   *den*   *Hans*   *treffen*   *wird*
            that   Maria   tomorrow   the^{ACC} Hans   meet   will
            MIDDLE FIELD   VERB. ELEM.
            'that tomorrow Mary will meet Hans'

According to the standard assumption, the prefield is represented as the specifier position of CP (SpecCP). In a V2-clause, SpecCP has to be filled (in current terminology: C carries an EPP feature). The prefield is seen as a derived position. No contentful element is base-generated there, rather the prefield is the

target of $\bar{\text{A}}$-movement. This movement may not only target the local prefield, as in (2a), but it may also be long distant, as in (2b):[1]

(2)   a.   [$_{CP}$ Den Hans$_1$ [[$_C$ wird$_2$] [$_{IP}$ Maria t$_1$ morgen treffen t$_2$]]]
      b.   [$_{CP}$ Den Hans$_1$ [[$_C$ hat$_2$] [$_{IP}$ Karl [$_{CP}$ dass Maria t$_1$ morgen treffen wird] behauptet t$_2$]]]

In current syntactic theory, movement is supposed to take place to satisfy certain interface requirements. For left peripheral $\bar{\text{A}}$-movement the interface involved is thought to be the external interface with semantics/pragmatics (cf. e.g. Rizzi 2004). Therefore, a natural question to ask is which discourse function(s) the phrases positioned in the prefield have.

The examples in (3) show that different fillings of the prefield may be associated with different pragmatic properties:[2]

(3)   a.   *(Ich   erzähle   dir   etwas   über   Hans.)*
           I   tell   you   something about   Hans
           Den   Hans   wird   eine   polnische   Gräfin   heiraten
           the^{ACC} Hans will   a   polish   countess   marry
      b.   *Dem   Hans   hat   Maria   nicht   geholfen, aber dem   Otto*
           the^{DAT} Hans has   Mary   not   helped   but   the^{DAT} Otto
      c.   *Wem   hat   Maria   geholfen? Hans   hat   sie   geholfen*
           whom   has   Mary   helped   Hans   has   she   helped
      d.   *Fast   jeden   Kollegen   schätzt   der   Hans*
           nearly   every^{ACC} colleague   values   the^{NOM} Hans
      e.   *Fast   jeder   Kollege   schätzt   den   Hans*
           nearly   every^{NOM} colleague   values   the^{ACC} Hans
      f.   *Leider   hat   keiner   dem   alten Mann   geholfen*
           unfortunately   has   nobody   the^{DAT} old   man   helped
      g.   *Fast überall spielen Jungen gerne Fußball*
           'nearly everywhere, boys like to play football'

Given the context, the constituent in the prefield of (3a) can be considered a topic. A prefield element like the one in (3b) is often said to bear "contrastive focus". In (3c), the prefield constituent of the first sentence is a *wh*-phrase; the prefield of the second sentence contains the corresponding answering constituent, which is focussed.

The prefield constituent in (3d) is not a topic since topics need to be referential (cf. e.g. Reinhart 1981), and it does not have to be focussed either. If (3d) is judged in isolation, it is felt to be pragmatically marked, i.e., to be contextually restricted. Its markedness is due to the filling of the prefield by the object of the sentence. However, if put into the right context, (3d) sounds perfectly normal:

(4)   *Hans fühlt sich   wohl an   seinem   neuen   Arbeitsplatz*
      Hans feels REFL   fine at   his   new   working place

Fast	*jeden*	*Kollegen*	*schätzt*	*der*	*berühmte*	*Linguist*
nearly	every^{ACC}	colleague	values	the^{NOM}	famous	linguist

In (3e,f,g), the prefield constituents give rise to sentences which are pragmatically unmarked. (3e) has a transitive subject in its prefield. As (3f,g) show, certain adverbials can also fill the prefield without any special demands on the context. Note that the sentence adverbial in (3f), due to its very nature, cannot be pragmatically designated in any sense. Similarly, the frame adverbial in (3g) does not have to be focussed and it cannot be a topic. Thus, these examples disprove Bresnan's (2001) claim in (5):

(5)   Specifiers of functional categories are the syntacticized
       discourse functions TOP, FOC and SUBJ.

Given data of the kind in (3), we may ask why certain fillings of the prefield induce pragmatic markedness of the sentence, whereas other fillings do not, and how the pragmatic effects arising from by the different fillings of the prefield can be systematized.

The paper is organized as follows: Section 2 investigates which elements moved to the local prefield induce pragmatic markedness and which do not. Building on this investigation, a first way of filling the prefield is introduced, as already proposed by Fanselow (2002). This section also introduces a second way to fill the prefield which arises from the possibility of base-generating certain adverbials there. Section 3 studies the information structural status of prefield elements which have not undergone one of the first two mechanisms. It is argued that German, like Finnish according to Vallduví and Vilkuna (1998) and Molnár (2002), provides evidence that contrast constitutes a separate concept of information structure. Therefore, a third way to fill the German prefield – called "true Ā-movement" – is suggested. The final section proposes a phrase structure for the left periphery of the German clause which encodes the three different ways to fill the prefield.

2. Filling of the local prefield

2.1. Marked versus non-marked filling of the prefield

In Section 1, it was noted that, out of context, a sentence like (3d), in which the object of a transitive verb occupies the prefield, is pragmatically marked, whereas a sentence like (3e), which has the subject in the prefield, is unmarked. There are also sentences with an object in the prefield which are, nevertheless, pragmatically unmarked:

(6)   a. | *Dem* | *Karl* | *hat* | *das* | *Spiel* | *gut* | *gefallen* |
|---|---|---|---|---|---|---|
| the^{DAT} | Karl | has | the | match | well | pleased |

'Karl liked the match very much'

b.	*Einem*	*Mitbewohner*	*wurde*	*die*	*Geldbörse*	*entwendet*
	a^{DAT}	flatmate	was	the	purse	stolen

In (6a), the prefield is occupied by the oblique object of a psych verb, in (6b), by the oblique object of a passive.

The prefields of the unmarked sentences (3f,g) contain a sentence adverbial and a frame adverbial respectively. Note, however, the contrast to the marked sentences in (7) which have other types of adverbial in their prefields:

(7)	a.	*Im*	*Görlitzer*	*Park*	*hat*	*Eva*	*den*	*Grill*	*aufgebaut*
		in (the)	Görlitz	park	has	Eva	the	barbecue	set up
	b.	*Mit*	*der*	*Axt*	*hat*	*Otto*	*den*	*Baum*	*gefällt*
		with	the	axe	has	Otto	the	tree	cut down

In (7a) we find an event-related locative adverbial, and in (7b) an instrumental in the prefield.

What is the difference between the unmarked examples in (3e,f,g) and (6) on the one hand, and the marked ones in (3d) and (7) on the other? The answer becomes clear when we consider the base positions of these prefield constituents in the middle field. The base positions of the prefield elements in (3e,f,g) and (6) each constitute the highest position in the middle field of the respective sentences. For (3e) and (6), this was shown by Lenerz (1977), and for (3f,g) by e.g. Frey and Pittner (1998). Therefore, if we transform the sentences (3e,f,g) and (6) into sentences which have all their sentence constituents in the middle field, but in the same order, we get unmarked sentences. The following sentences illustrate this for (3f) and (6a):

(8)   a. *dass leider keiner dem alten Mann geholfen hat*
       b. *dass dem Karl das Spiel gut gefallen hat*

(8a,b) are as neutral as (3f) and (6a) are.

By contrast, the base positions of the prefield elements of (3d) and (7) do not constitute the highest element in the middle field. It is uncontroversial that the base position of the object in (3d) is below that of the subject. Furthermore, in Frey and Pittner (1998) it was argued that e.g. the base positions of event-related locative adverbials and instrumental adverbials respectively are between the base positions of the subject and the object of a transitive verb. This explains why e.g. the following sentences, which have their phrases in the same order as the sentences in (7a,b) but all occurring in the middle field, are pragmatically marked:

(9)   a. *weil im Görlitzer Park$_1$ Eva t$_1$ den Grill aufgebaut hat*
       b. *weil mit der Axt$_1$ Otto t$_1$ den Baum gefällt hat*

Comparing (7a,b) with (9a,b), we observe that moving an item to the top of the middle field seems to induce the same pragmatic markedness effect as positioning it in the prefield does.

2.2. Formal Movement and base-generation

The observations in the preceding section indicate that there is a mechanism by which the prefield can be filled with the highest constituent of the middle field of the same clause while preserving the semantic/pragmatic properties of the constituent and without endowing it with additional ones. Thus, this mechanism does not seem to be related to the assignment or licensing of any contentful property, but seems to be a purely formal one. Note, furthermore, that this mechanism does not seem to be associated with any (additional) accent on the moved item.

There are other facts that also indicate that German has the option of moving the highest element of the middle field to the "local" prefield in a semantically/pragmatically vacuous manner:

(10)   a. *Es_1 wird t_1 bald   regnen*
           it   will   soon   rain
       b. **Es_1 sagt   Karl, dass t_1 bald   regnen   wird*
           it   says   Karl   that   soon   rain   will
       c. *$Leider_1$ hat t_1 keiner dem alten Mann geholfen*
       d. **$Leider_1$ sagte Karl, dass t_1 keiner dem alten Mann geholfen hat*

The prefield of (10a) is filled with the expletive subject of a weather verb. As shown by (10b), it cannot undergo long movement. The same holds for a sentence adverbial. In (10d), the sentence adverbial in the prefield of the matrix clause cannot be understood as belonging to the embedded clause. Expletives and sentence adverbials cannot be topical, narrowly focussed, emphasized nor can they acquire any other pragmatic or semantic property. Thus, they cannot be endowed with any contentful property in addition to their lexical content. It follows that, since "regular" Ā-movement has semantic or pragmatic effects (cf. e.g. Rizzi 2004), these elements cannot undergo regular Ā-movement. However, these elements may be moved to the local prefield by the formal operation suggested above.

Our observations so far lead us to follow Fanselow (2002) in adopting for German a proposal which was originally made by Bhatt (1999) for Kashmiri. As a starting point, it can be characterized as follows:

(11) $[_{CP}$ XP $[_{C'}$ V_{fin} $[_{IP}$ ... $]]]$ can be derived from $[_{C'}$ $[_{IP}$ XP .... V_{fin} $]]$ (by moving the finite verb to C and) by moving XP as the highest element of IP to SpecCP (Minimal Link) just in order to fulfil the EPP requirement associated with C, i.e., without any additional intonational, semantic or pragmatic effects.

In the following, I will call the operation described in (11) "F(ormal) M(ovement)". FM might be seen as an instance of Ā-movement since SpecCP is an Ā-position. However, it is different from regular Ā-movement because it has no contentful effect. In the following, I will call Ā-movement with effects "true Ā-movement".

FM can be applied to a scrambled phrase if the scrambled phrase occupies the highest position in the middle field. A constituent which is scrambled to the highest position in the middle field induces pragmatic markedness. If such a phrase is moved to the prefield by FM, the markedness status of the construction will be preserved. Thus, e.g. (12c) (= (7b)) can be derived from (12a) by scrambling the instrumental to the highest position of the middle field followed by application of FM:

(12)   a. *(dass) Otto mit der Axt den Baum gefällt hat*   Scrambling
       b. *(dass) mit der Axt $_1$ Otto t $_1$ den Baum gefällt hat*   FM
       c. *Mit der Axt $_1$ hat t $_1$' Otto t $_1$ den Baum gefällt*

On the other hand, a sentence like e.g. (13b) (= (3g)) can be obtained by FM without first scrambling the constituent to be moved by FM to the highest position because the base position of the frame adverbial constitutes the highest middle field position of the sentence:

(13)   a. *(dass) fast überall Jungen gerne Fußball spielen*   FM
       b. *Fast überall $_1$ spielen t $_1$ Jungen gerne Fußball*

(13b) is unmarked because (13a) is unmarked.

Let us next consider a topical element. In (14), the context guarantees that the phrase in the prefield of the second sentence is a topic:

(14)   *Ich   erzähle   dir   etwas   über Hans.*
       I   tell   you   something   about   Hans
       Den   Hans   wird   erfreulicherweise   nächstes Jahr   eine
       the^{ACC} Hans   will   happily   next   year   a
       polnische   Gräfin   heiraten
       polish   countess   marry

In fact, it is often assumed that if a German sentence contains a topic, this topic must be positioned in the prefield (e.g. Molnár 1991, Lambrecht 1994, Reis 1999). However, other authors argue that a topic may appear in the middle field too (e.g. Haftka 1995, Meinunger 2000, Steube 2000, Frey 2004). As is common in discussions about topics, different authors use different notions of topichood. In the following, the notion of an "aboutness topic" in the sense of Reinhart (1981) will be assumed. Assuming this notion, Frey (2004) argues that in German, topics may occur in the middle field, but only in a special position reserved for topics. This position is above the base position of sentence

adverbials, which according to e.g. Frey (2003) have the highest base position of all sentence constituents:

(15) *Ich erzähle dir etwas über Hans.*

    a. *Ich   habe   gehört,   dass   den   Hans$_1$ erfreulicherweise*
       I   have   heard   that   the^{ACC} Hans   happily
       nächstes   Jahr   eine   polnische   Gräfin   t$_1$ heiraten wird
       next   year   a   polish   countess   marry   will

    b. *#Ich habe gehört, dass erfreulicherweise den Hans$_1$ nächstes Jahr eine polnische Gräfin t$_1$ heiraten wird*

In the well-formed (15a), the topical phrase *den Hans* occurs above the sentence adverbial, in (15b), which is not appropriate in the given context, it occurs below the sentence adverbial. Thus, according to Frey (2004) the following holds (see Frey 2004 for various supporting phenomena):

(16) In the middle field of the German clause, directly above the base position of sentential adverbials, there is a designated position for topics: all topical phrases occurring in the middle field, and only these, occur in this position.

In (15a), *den Hans* occurs in the topic position in the middle field and it occupies the highest middle field position of the sentence. It follows that a sentence like the second one in (14), repeated as (17b), with the topic *den Hans* occurring in its prefield can be derived from a sentence like the embedded clause of (15a), repeated as (17a), by means of FM:

(17) a. *(dass) den Hans$_1$ erfreulicherweise nächstes Jahr eine polnische Gräfin t$_1$ heiraten wird*   FM
    b. *Den Hans$_1$ wird t$_1$' erfreulicherweise nächstes Jahr eine polnische Gräfin t$_1$ heiraten*

Therefore, a topic which occurs in the prefield of the clause it belongs to may have reached its surface position by means of FM.

Let us now move to a second way of filling the prefield. Consider the prefield constituents of the following examples (cf. Meinunger 2004):

(18) a. *Am Rande bemerkt   bin ich   etwas   enttäuscht von dir*
       by the way   am I   somewhat disappointed by   you
    b. *Wenn seine Frau sich   nicht irrt,   reist   Karl nach Lund*
       If   his   wife REFL not   is wrong travels Karl to   Lund
    c. *Kein   Wunder   spricht   Peter   so gut   Französisch*
       no   wonder   speaks   Peter   so well French
    d. *Ein   Glück   habe ich   den   Regenschirm   dabei*
       a   luck   have I   the   umbrella   with me

In (19) the prefield constituents of (18) appear in the middle field:

(19) a. *Ich bin am Rande bemerkt etwas enttäuscht von dir*
   b. *weil   jeder Linguist₁,   wenn sich   seine₁   Frau nicht*
      since   every linguist   if   REFL   his   wife   not
      irrt,   nach Lund reist
      is wrong to   Lund travels
   c. *Peter spricht kein Wunder so gut Französisch*
   d. *Ich habe ein Glück den Regenschirm dabei*

These sentences are ungrammatical unless the items in question are being used as parentheticals, which would have to be marked intonationally. Since in the case of (19b) this is not so clear on the basis of intonational evidence alone, the absence of binding into this kind of *wenn*-clause is employed to reinforce the point. With a regular conditional clause such a binding relation would be fine.

It follows that the prefield constituents in (18) must be base-generated in their surface position. This is interesting because, under standard assumptions, one would not expect semantically contentful elements to be base-generated in SpecCP.

The prefield constituents in (18) do not seem to be integrated into the proposition expressed by the clause. In (18a,b), the prefield constituents are used to make a meta-linguistic statement. This is immediately clear for the discourse adverbial in (18a), but it is also true for what Haegeman (2003) terms a "premise-conditional" as in (18b). This sentence can be paraphrased as: *Wenn Eva sich nicht irrt, trifft die folgende Behauptung zu: Karl reist nach Lund* ('If Eva is not wrong the following statement holds: Karl will travel to Lund'). The prefield constituents in (18c,d) transform the structure into a kind of exclamative clause. The sentences share with regular exclamatives the property of factivity and the emotive attitude of the speaker towards the proposition expressed. In the analysis of exclamatives, the specification of C plays a crucial role (cf. e.g. Zanuttini and Portner 2003). Thus, it seems reasonable to assume that all the prefield constituents in (18) do not enter into a licensing relation with the verb or with any verb-related functional projection, but are licensed by C. Therefore, I tentatively formulate the following condition as a second way to fill the prefield in German:

(20)   In German, there exists a class of elements whose appearance in the syn-
       tactic structure is licensed by C. These elements can only appear in
       SpecCP, and they are base-generated there.

In addition to those listed in (11) and (20), the next section considers a further possibility for filling the prefield, involving true Ā-movement.

3. True Ā-movement to the prefield

Let us start by comparing a topic positioned in its local prefield, as in (21a), with a topic which has undergone long movement to the prefield of an upper clause, as in (21b):

(21) *Ich erzähle dir was über Max.*
    a. *Den   Max sollte   der   Chef mitnehmen*
       the^{ACC} Max should   the   boss take along
    b. *Den   Max meint   Eva, dass der   Chef mitnehmen sollte*
       the^{ACC} Max thinks   Eva   that the   boss take along   should

There are remarkable differences between the prefield constituents in (21a,b). First, in (21a) *Max* does not have to receive a pitch accent, whereas in (21b) it needs one, although for both sentences it holds that *Max* is given.[3] The fact that long movement of a constituent is associated with accentuation was observed by Andersson and Kvam (1984) and is confirmed by the following data:

(22) *Ich   habe etwas   über   das   Verbrechen in der*
     I   have something about   the   crime   in the
    Wrangelstraße gehört.
    Wrangel Street heard
    a. *Es   hat   anscheinend   keiner   bemerkt*
       it   has   apparently   no one noticed
    b. **Es sagt die Polizei, dass anscheinend   keiner   bemerkt hat*
       it says the police   that apparently   no one   noticed had

In the right context, the weak object pronoun *es* can be moved to the local prefield, cf. (22a). However, as (22b) shows, it is not possible for *es* to undergo long movement. It is well known that, in German, the pronoun *es* cannot be stressed. Thus, the fact that a long-moved item receives stress explains why *es* cannot be long-moved.

Going back to (21a,b), we can also observe that the difference with regard to accentuation is related to a difference in the options of interpretation. (21a) can be understood just to be a statement about Max without any reference to other persons. This is different to (21b). (21b) is felt to be appropriate only if the referent of *Max* is understood as standing in a relation of contrast to other persons which are already under discussion or who are accommodated to be under discussion. Thus, the referent of the moved constituent is understood as being taken out of a set of alternatives the speaker has in mind. Furthermore, (21b) is understood as having the implicature that the sentence does not hold for these alternatives to Max.

Given these observations, we can state the following claim:

(23)   In German, a long-moved topic receives a contrastive interpretation.

The notion *contrast* can be characterized as follows:

(24) If an expression in a declarative sentence S is contrastively interpreted, a
set M of expressions, | M | 2, is assumed to exist which contains and
the expressions which denote salient alternatives to the denotation of .
   The utterance of a declarative clause S containing a contrastively inter-
preted expression has the implicature that S is not true if is replaced
by any x M, x .

A long-moved element cannot have reached its final position via FM. Rather,
it must have undergone true (cyclic) Ā-movement. (21b) shows that long Ā-
movement of a topic induces a contrastive interpretation of the topic. The
question now arises of whether, in German, true Ā-movement is in general
associated with contrastiveness.

Let us therefore look at other examples with constituents that have under-
gone true Ā-movement to the prefield. In German, there are elements which
cannot be scrambled:

(25) a. *dass   Maria   grün₁   die   Tür   t₁   streichen   wird
        that   Maria   green   the   door   paint   will
    b. *dass   Otto   unfreundlich₁   sehr   oft   t₁   gewirkt   hat
        that   Otto   unfriendly   very   often   come across as   has

Thus, these elements cannot get to the highest position in the middle field. It
follows that they can only reach the prefield via true Ā-movement:

(26) a. *Grün wird Maria die Tür streichen*
    b. *Unfreundlich hat Otto sehr oft gewirkt*

The prefield constituents in (26) are stressed and interpreted contrastively.
Thus, true Ā-movement is again associated with accent and a contrastive
interpretation of the moved item.

Another example of a type of prefield that cannot have been derived via FM
but must instead involve true Ā-movement is the answer to a *wh*-question as in
(27a):

(27) *Was   hat   Otto   heute   auf   dem   Markt   gekauft?*
    what   has   Otto   today   on   the   market   bought
    a. *Zwei Kilo Äpfel hat Otto heute auf dem Markt   gekauft*
        two   kilos   apples has Otto   today on   the   market   bought
    b. *??Otto hat zwei Kilo Äpfel heute auf dem Markt gekauft*

As observed in Lenerz (1977), the constituent which answers a *wh*-question
cannot be scrambled in the middle field, cf. (27b). It follows that the prefield
constituent in (27a) did not get to the prefield by means of FM but has

undergone true Ā-movement. Besides (27a) there are, of course, other ways to answer the *wh*-question:

(28) *Was hat Otto heute auf dem Markt gekauft?*
      a. *Otto hat heute auf dem Markt zwei Kilo Äpfel gekauft*
      b. *Zwei Kilo Äpfel*

In (28a), the answering phrase remains in situ. In (28b), we find a one term answer.[4]

What is of interest to us now is whether we can find any difference regarding contrastiveness between an answer like the one in (27a), which involves true Ā-movement, and an answer like (28a), in which the answering term remains in situ. It is clear that we cannot expect significant differences since any answer to a *wh*-question chooses from among alternatives and has the implicature that it constitutes an exhaustive answer. However, we can detect minor differences. Consider the following examples:

(29) *Wen   hat   Maria   getroffen,   den   Karl   oder   den   Otto?*
      Who   has   Maria   met   the^{ACC} Karl   or   the^{ACC} Otto?
      a. *Maria   hat   den   Karl   getroffen*
          Maria   has   the^{ACC} Karl   met
      b. Den Karl hat Maria getroffen

Of the two answers in (29), informants prefer (29b). This indicates that if the context presents a set of alternatives triggering a contrastive interpretation of the answering term, one wants to position this term in the prefield rather than in its base position.

Let us now consider answers to a pure information seeking question:

(30) Wo liegt eigentlich Köln?
      'Where is Cologne situated then?'
      a. *Köln   liegt   am   Rhein*
          Cologne   is situated   on the   Rhine
      b. *Am Rhein liegt's*
      c. *Am Rhein liegt Köln*

Regarding a question like (30), one does not have a set of alternatives for the answering term in mind and one does not want to emphasize its contrastive interpretation. It is therefore of interest that in this case the option with the answering term moved to the prefield, i.e. (30c), is dispreferred.

Why is (30b) as appropriate as (30a) is? To answer this question let us consider the following sentences:

(31) a. *weil   es   den   Otto   friert*
          since   EXPL   the^{ACC} Otto   cold is
      b. *Den Otto friert es*

c.   *weil den Otto es friert

As (31c) shows, *den Otto* cannot be the highest element in the middle field. Nevertheless, in (31b), this phrase occupies the prefield without any pragmatic effect. So, it seems that it is moved to the prefield by FM.

There is evidence that, in German, pronouns appearing right-adjacent to what is standardly called the "C-position" have the status of a clitic.[5] As heads, such elements are not visible for FM, i.e., FM 'overlooks' a cliticized pronoun in looking for the highest element in the middle field. It follows that in (31b), FM can move *den Otto* to the prefield. By the same reasoning it follows that in (30b), the prefield has been filled by FM. Thus, the prefield constituent does not undergo any marking of contrast. It follows that, in the given context, (30b) is as natural as (30a).

Let us next consider the behaviour of two constituents which are lexically marked for a contrastive interpretation:

(32)   a.   *[Bügeln   jedoch]   möchte   Maria   dem   Otto   beibringen*
              (to) iron   however   wants   Maria   the^{DAT} Otto   (to) teach
       b.   *[Den   Hans   aber]   sollten   wir   einladen*
              the^{ACC} Hans   however   should   we   invite
       c.   *??Maria möchte dem Otto [Bügeln jedoch] beibringen*
       d.   *??Wir sollten [den Hans aber] einladen*

If particles like *jedoch* and *aber* follow a constituent, they mark this constituent as contrastive. As shown by (32), a constituent marked this way should not remain in the middle field. Rather, it has to undergo Ā-movement to the left periphery.[6]

So far, we have seen that different instances of true Ā-movement in German have the effect that the moved item receives a pitch accent. Furthermore, we have seen that an item moved in this way, regardless of whether it is topical, focal or has another status, is contrastively interpreted.[7] The notion *contrast* can be taken in the sense of (24).

Molnár (2002) argues on the basis of evidence from languages different to German that contrast has to be considered an autonomous concept of information structuring (cf. also Frascarelli and Hinterhölzl to appear for a similar point based on phonological evidence in Italian). Our findings show that contrast also has an independent status in German since, e.g., a topical or a focal element necessarily becomes a contrastive topic or a contrastive focus, respectively, when positioned in the prefield by true Ā-movement. This suggests that German should be added to the list of languages which call for the enlargement of the set of information-structural categories.

The following section draws consequences from our findings for the structural analysis of the left periphery of the German clause.

4. The left periphery in German

4.1. The three ways to fill the prefield

Our observations suggest the condition in (33):

(33) The German prefield can be filled either
    (i)   by base generation of adverbials which are licensed by C, or
    (ii)   by means of FM, which may move whatever is the highest consti-
           tuent in the middle field – be it base-generated there or scrambled
           to this position – to the local prefield, and has no semantic or prag-
           matic effect, or
    (iii)   by means of true Ā-movement, which may move (cyclically) any
           constituent in the middle field, and which always has the effect of
           inducing a contrastive interpretation of the moved item.

In what follows I will justify the claim embodied in (33) that these are in fact the only options for filling the prefield. Consider the sentences in (34):

(34) *Hans und Maria haben geheiratet.*
    Hans and Maria have married
    a. *Bald wird ein Baby schreien*
       soon will a baby cry
    b. *#Ein Baby wird bald schreien*

In the thetic construction (34a), the temporal adverbial has its base position above the base position of the subject. Therefore, *bald* may be moved to the prefield from its base position by FM, or, being stressed, it may be moved by true Ā-movement. Why is (34b) inappropriate? Its prefield constituent has its base position below the adverbial and there are thus two ways in which this element could have reached the prefield. The first option consists in scrambling of *ein Baby* to the highest middle field position, followed by FM. However, scrambling, is not an option here:

(35) *Hans und Maria haben geheiratet.*
    #Ich denke, dass ein Baby₁ bald t₁ schreien wird
     I think that a baby soon cry will

The second sentence of (35) is deviant because scrambling of the indefinite subject to a position higher than the temporal adverbial results in a specific reading of the indefinite (e.g. Diesing 1992). This is not compatible with the intended reading of the sentence.

According to (33), the second option for deriving (34b) is via true Ā-movement. However, given our thesis that true Ā-movement involves contrastiveness, this is not an option either. Due to the intended reading of the example, it does not make sense to assign *ein Baby* a contrastive reading.

Thus, if we assume the correctness of (33), we get a straightforward explanation of why (34b) is not well-formed in the given context. All options available for moving *ein Baby* to the prefield yield a deviant interpretation.

On the assumption that (33) is correct we also get a simple explanation for the grammatical status of the following examples:[8]

(36) a. *Leider   wird keiner   heute   arbeiten*
          unfortunately will no one   today   work
     b. *Keiner wird heute arbeiten*
     c. *KEIner / *Keiner wird leider heute arbeiten*

(36a,b) are grammatical and unmarked. In Section 2.2, it was shown that a V2-clause with an unmarked filling of the prefield relates to a structure in which this prefield constituent appears in its base position, which is also the highest position in the middle field. FM moves this element to the prefield. In (36a), this is the sentence adverbial, in (36b), it is the subject (which is base generated above the temporal adverbial).

Let us now focus on (36c), which contains the sentence adverbial *leider* in the middle field. A quantified DP cannot be an aboutness topic. Thus, given that scrambling to a position above the sentence adverbial targets the designated position for aboutness topics (cf. (16)), the quantified phrase *keiner* cannot scramble in front of the sentence adverbial. Therefore, (36c) cannot be derived by FM. According to (33), the only option left to derive the sentence is by means of true Ā-movement, which has the effect that the prefield constituent receives main stress. Thus, with unstressed *keiner* in the prefield, (36c) is ungrammatical.

4.2. Is there true Ā-movement to a position in the middle field?

Let us now move to examples involving true Ā-movement which at first sight seems to target a position inside the middle field. Normally, the middle field of a German clause is thought to be exclusively the realm of scrambling, which I consider an instance of A-movement (as do e.g. Haider and Rosengren 1998, Meinunger 2000, Frey 2004). Scrambling is clause bound in German. Thus, in the standard case, we do not find long movement to a position inside the middle field of an upper clause:

(37) *da   Eva   den   Max₁ meint,   dass der   Chef   t₁
       since   Eva   the^{ACC} Max thinks   that the   boss
       mitnehmen   sollte
       take along   should

(37) is severely ungrammatical. So, it is surprising that there are cases of long movement to a position inside the middle field, cf. (38). It is crucial, however,

that in the sentences in (38), the long-moved element is stressed or contains a stressed element resulting in a contrastive interpretation:

(38) a. *da den MAX$_1$ Eva meint, dass der Chef t$_1$ mitnehmen sollte*
  b. *dass SO$_1$ Paula   glaubt,   dass   die   Wahl   t$_1$ ausgeht*
    that   that way Paula   thinks   that   the   election   results
  c. *weil [sie   zu   TREFfen]$_1$ keiner   glaubt,   dass er sich*
    since her to   meet   no one   believes that he REFL
    t$_1$ leisten   kann
      afford   can

Furthermore, it is crucial that in (38) the target position of the long-moved elements is at the very left edge of the middle field. If the target position were further to the right this would result in ungrammaticality, cf.:

(39) a. **da Eva den MAX$_1$ meint, dass der Chef t$_1$ mitnehmen sollte*
  b. **dass Paula SO$_1$ glaubt, dass die Wahl t$_1$ ausgeht*
  c. **weil keiner [sie zu TREFfen]$_1$ glaubt, dass er sich t$_1$ leisten kann*

Thus, the target position of the apparent "middle field" Ā-movement has to be immediately below the position hosting the complementizer. In Frey (2004), it is claimed that this position is between C and the middle field's topic position characterized in (16).[9]

In Section 3, we considered true Ā-movement to the prefield. Here we have considered (long) Ā-movement to a position right-adjacent to C. At first sight these two instances of Ā-movement seem to involve different targets. However, the question arises whether it is a coincidence that both instances of Ā-movement involve contrastiveness. In the next section, I will propose that these movements target one and the same position.

4.3. A proposal for the structure of the left periphery in German

Consider the sentences (21b) and (38a), repeated here for convenience:

(40) a. *Den MAX$_1$ meint Eva, dass der Chef t$_1$ mitnehmen sollte*
 b. *da den MAX$_1$ Eva meint, dass der Chef t$_1$ mitnehmen sollte*

Usually, the middle field is conceived of as beginning right below the position of the complementizer. However, data like (40b) were not considered when the so called "field theory" of the German clause was developed. Given the special properties of *den Max* in (40b), especially its having undergone long movement, it makes perfect sense to assume it does not belong to the middle field (cf. Brandt et al. 1992, Haider and Rosengren 1998), i.e. to the region which is typically reconstructed as being minimally dominated by IP (or an equivalent node), but to the "C-domain", i.e., to the region above the node

which minimally dominates the middle field. If so, it is very likely that *den Max* occupies the same position in (40b) as in (40a). Thus, I will propose that in both sentences, *den Max* is Ā-moved to the specifier-position of a functional projection which hosts contrastive elements. Under this assumption, the difference between the relevant parts of the sentences (40a,b) is due to the different positions that the finite verb and the complementizer, respectively, occupy in these sentences.

Furthermore, as argued in Section 2.2, the element which occupies the highest position of the middle field can be moved by FM to what is typically called the prefield without any further semantic or pragmatic effect. In the following, the projection which hosts such an element in its specifier position will be called "FinP", the reason for this name just being that in Rizzi's (1997) proposal for the structure of the left periphery, FinP is the functional projection which is not committed to only hosting elements with a certain pragmatic property in its Spec position.[10]

Finally, as also argued in Section 2.2, certain adverbials can be base-generated in what is called the prefield. I assume that these adverbials are hosted in the specifier position of a projection which will be called "CP".

(41) shows the structure which I propose for the upper part of the German clause:

(41)
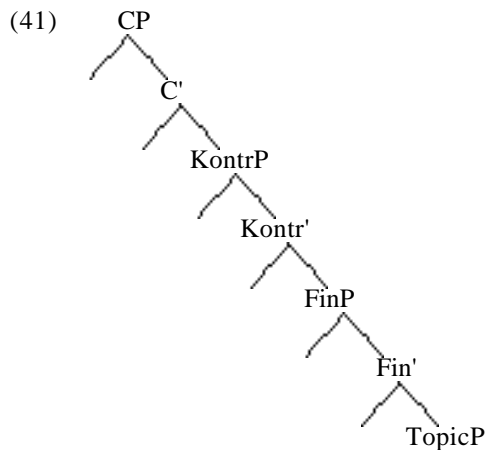
With regard to (41), the following assumptions are made:

(42)

(i)   CP, KontrP and FinP are Ā-projections. They constitute what is often called the "C-domain".

        TopicP does not belong to the C-domain. Rather, TopicP is an A-projection. According to Frey (2004), SpecTopicP represents the middle field topic position characterized in (16) (cf. Holmberg and Nikanne 2002 for a similar proposal for Finnish).

(ii) Complementizers are generated in C.

(iii) There can be only one EPP feature in the C-domain. It holds:
    the EPP feature in Fin is a pure EPP feature,
    the EPP feature in Kontr is associated with the feature KONTRAST,
    the EPP feature in C is associated with a feature licensing C-related adverbials.

(iv) Verb-movement to the C-domain is possible only to a head which carries an EPP feature and, at the same time, is the highest realised head of the structure.

(v) Structure is generated only if necessary.

Let us see which structures are assigned to some of the examples considered above. According to (41), (3f) has the following structure:

(43) $[_{FinP}$ leider$_1$ $[_{Fin'}$ hat$_2$ $[_{TP}$ t$_1$ $[_{TP}$ keiner dem alten Mann geholfen t$_2$]]]]

Although not crucial here, in (43) it is assumed that sentence adverbials in the middle field are adjoined to TP (cf. Frey 2004). What is relevant for our purposes is that (3f) has an analysis in which the trace of the sentence adverbial *leider* constitutes the highest position in the middle field. Because of this, *leider* can have been moved to SpecFin by FM.

Let us next consider (17b), which has a sentence topic in its local prefield. In the relevant parts, it gets assigned the structure in (44):

(44) $[_{FinP}$ den Hans$_1$ $[_{Fin'}$ wird$_2$ $[_{TopicP}$ t$_1$' $[_{TP}$ erfreulicherweise $[_{TP}$ nächstes Jahr eine polnische Gräfin t$_1$ heiraten t$_2$]]]]]

According to (16), the topic position in the middle field is above the base position of the sentence adverbial. The topical *den Hans* checks its topic feature there. Since the topic position is the highest position in the middle field, *den Hans* can be moved further by FM to SpecFinP.

Let us now consider a long-moved phrase like the one in (21b) with the structure in (45):

(45) $[_{KontrP}$ den Max$_1$ $[_{Kontr'}$ meint$_2$ [Eva $[_{CP}$ t$_1$" dass $[_{TopicP}$ t$_1$' $[_{TP}$ der Chef t$_1$ mitnehmen sollte]]] t$_2$]]]

In (45), den Max has been moved to SpecKontrP.[11] According to our assumptions, SpecKontrP is the only possible target for a long-moved item.

Almost the same structure can be assigned to (38a), one of the sentences which seem to show long movement targeting a middle field position:

(46) $[_{CP}$ da $[_{KontrP}$ den Max$_1$ [Eva meint $[_{CP}$ t$_1$" dass $[_{TopicP}$ t$_1$' $[_{TP}$ der Chef t$_1$ mitnehmen sollte]]]]]]

(46) makes it clear that *den Max* is not part of what should be referred to as the middle field. Rather, in (46) den Max occupies the very same position as in (45). However, a crucial difference to (45) is that in (46) there is an additional layer hosting the complementizer above KontrP. Thus, (46) constitutes evidence that the C-domain is split in German as given in (41).

A sentence like (39a), repeated here for convenience, cannot be assigned any structure:

(47)   *Da Eva den MAX$_1$ meint, dass der Chef t$_1$ mitnehmen sollte*

According to (41), there is no position available between the complementizer and the long-moved *den Max* in SpecKontrP. The same kind of reasoning rules out (39b,c).

Consider now the following example:

(48)   *Eva hat den MAX$_1$ gemeint, dass der Chef t$_1$ mitnehmen sollte*

Whereas in (38a) (= (46)) the long moved item *den Max* is right below a complementizer, in the ill-formed (48) it is below the finite verb of a V2-structure. Above *den Max* in SpecKontrP is only the C-projection, but SpecCP is not a position which the phrase *Eva* in (48) could occupy.

Certain adverbials may be base-generated in SpecCP. Thus, we should consider a sentence like the following:

(49)   *Offen   gesagt   hat   den   MAX$_1$ Eva   gemeint, dass   der*
        frankly   speaking   has   the^{ACC} Max   Eva   thought that   the
        Chef   t$_1$ mitnehmen   sollte
        boss   take along   should

(49) is ungrammatical too. This fact follows from (42iii). In German, only one EPP-feature may be realized in the C-domain.

The same pattern of grammatical and ungrammatical examples as with a long moved item can be demonstrated with elements which cannot be scrambled but can be Ā-moved to the prefield. Such elements were presented in (25) and (26). Let us, for example, consider a selected manner adverbial:

(50)   a.   *UNfreundlich hat Otto sehr oft gewirkt*
        b.   *weil UNfreundlich Otto sehr oft gewirkt hat*
        c.   **Otto hat UNfreundlich sehr oft gewirkt*
        d.   **weil Otto UNfreundlich sehr oft gewirkt hat*

As shown in (50a), the selected manner adverbial may be moved to the prefield if stressed and contrastively interpreted. In this case, it occupies SpecKontrP. In (50b), the adverbial is again in SpecKontrP, the complementizer occurs in the C-position above KontrP. (50c) is out for the same reason that (48) is. There is no position for *Otto* above SpecKontrP. Finally, (50d) is out for the

same reason that (39a) (= (47)) is. Since *unfreundlich* cannot be scrambled it has to target SpecKontrP.

In concluding this section, let us shortly turn to questions. As stated in (42ii), I assume that a complementizer like *ob* is generated in C. Furthermore, I assume that Kontr may host a *wh*-feature associated with an EPP-feature. In this case, a *wh*-phrase has to be moved to SpecKontrP.

There is an interesting difference between short and long *wh*-movement with regard to weak crossover (Frey 1993):

(51) a. *Wem$_1$ hat   seine$_1$ Tante   eine   Rom-Reise   finanziert?*
    who   has   his   aunt   a   trip to Rome   financed
    b. **Wem$_1$ hat   sein$_1$ Bruder   gesagt   t$_1$' dass   die   Tante t$_1$*
    who   has   his   brother   said   that   the   aunt
    eine   Rom-Reise   finanziert?
    a   trip to Rome   financed

Short *wh*-movement as in (51a) does not show a weak crossover effect, long *wh*-movement as in (51b) shows weak crossover with regard to a pronoun in the matrix clause. This difference can be accounted for if we observe that a *wh*-phrase functioning as a question word may be scrambled to a position in front of the pronoun such that it can bind the pronoun:

(52) *Ich   weiß, warum   wem$_1$ seine$_1$ Tante   eine   Rom-Reise*
    I   know   why   whom   his   aunt   a   trip to Rome
    finanziert   hat
    financed   has

For the purpose of binding theory, Ā-movement, in contrast to A-movement, is reconstructed. We can assume that in the derivation of (51a), the *wh*-phrase has been scrambled to an A-position in front of the co-indexed pronoun. The *wh*-phrase is reconstructed to this position, which c-commands the pronoun, in order the check the binding relation. In contrast, in the derivation of (51b), there is no A-position c-commanding the co-indexed pronoun which the *wh*-phrase could have occupied and to which it could be reconstructed for binding reasons. (This account for the difference illustrated in (51) was suggested by G. Fanselow (p.c.) some years ago.)[12]

5. Conclusion

In the preceding sections, I have shown that in German true Ā-movement to the position that is usually called the prefield is associated with a contrastive interpretation of the moved element. Furthermore, I have argued that elements that move to the prefield without acquiring a contrastive interpretation have arrived at their surface position by means of a process called "Formal Movement", which fronts whatever is the highest element in the local middle

field to the prefield in a semantically and pragmatically vacuous manner. Finally, there is a third option for filling the German prefield. Certain adverbials licensed by C are base-generated there. The paper argues that these three options each involve different structural positions in the C-domain of the German clause. This explains why it is possible to have true Ā-movement to a position right-adjacent to a complementizer.

These claims entail the following hypotheses about German:

(53)   (i)   the marking of a (non-contrasting) topic takes place exclusively in the middle field,
       (ii)   pure informational focus is licensed in the middle field,
       (iii)   Ā-movement which is relevant for the LF interface is always related to a contrastive interpretation of the moved item,
       (iv)   contrast is an autonomous concept of information structure.

With (53iv), it is claimed that German confirms a thesis which was put forward by Vallduví and Vilkuna (1998) and Molnár (2002) mainly on the basis of Finnish data.

Notes

1.   In (2b), it is assumed that the embedded clause is base-generated to the left of the subcategorizing verb. It would have to be subsequently extraposed to yield a perfect surface structure.
2.   This paper is only concerned with the prefield of declaratives and, briefly at the end, of *wh*-questions. Cf. e.g. Reis (1999) for examples of imperatives and exclamatives with a filled prefield.
3.   In (21b), *Max* is not the only phrase carrying a pitch accent. In particular, the prefix *mit* bears the sentence accent. There are two ways such an intonational structure can be realized. In the first one, the accent on *Max* is the German equivalent of the famous fall-rise accent (sometimes called "B accent") resulting in a hat-contour for the whole sentence. In this case, it seems, the prefield constituent forms its own intonation phrase, Caroline Féry, (p.c.). In the second one, the whole sentence forms one intonation phrase with the accent on *Max* perceived as the most prominent accent of the sentence.
4.   A one term answer constitutes the most natural way to reply to a *wh*-question like the given one. However, there are *wh*-questions which demand a full answer:

       (i)   *Was   möchte   Otto   studieren,   und   was   Ottos Bruder?*
              what   wants   Otto   (to) study   and   what   Otto's brother
              Physik   möchte   Otto   studieren   und   Musik   Ottos Bruder
              physics wants   Otto   (to) study and   music   Otto's brother

5. One piece of evidence is given by the following data:

(i) a. *Heute hat Peter ihn ihr zum Glück vorgestellt.*
today has Peter him[ACC] her[DAT] luckily introduced

b. *Heute hat Peter ihr ihn zum Glück vorgestellt.*

c. *Heute hat ihn ihr Peter zum Glück vorgestellt.*

d. **Heute hat ihr ihn Peter zum Glück vorgestellt.*

In (ia,b), the pronouns follow the topical subject. The order of the pronouns differs in these two examples. Comparing this with (ic,d), when the pronouns precede the topical subject, interestingly only the order 'accusative – dative' is possible. Across languages, clitics tend to build clusters, i.e., the privileged clitic position can contain a number of clitics, usually in a fixed order. Thus, the difference between (ia,b) on the one hand and (ic,d) on the other makes some sense if we assume that the pronouns between the C-domain and the topical subject are clitics, i.e., X^0-elements, whereas the pronouns following the topical subject are XPs.

Another piece of evidence is given by the data in (ii). Cardinaletti and Starke (1996) recall the fact that, in many languages, an accusative $1^{st}/2^{nd}$ person clitic cannot cooccur with a dative 3rd person clitic. In German, this ban holds for pronouns appearing right-adjacent to the C-position, cf. (iia). This ban does not hold if the pronouns occur further to the right, cf. (iib):

(ii) a. **Heute hat mich ihm Peter zum Glück vorgestellt.*
today has me[ACC] him[DAT] Peter luckily introduced

b. *Heute hat Peter mich ihm zum Glück vorgestellt.*

6. It is certainly possible to have contrastively interpreted items occurring in the middle field:

(i) *Maria will PAUL das Buch schenken, und nicht KARL*
Maria wants Paul the book give and not Karl

However, the present paper is not concerned with such examples. Future research has to determine whether in German, the marking of contrast in the middle field has the same pragmatic effect as the marking of contrast in the prefield. Examples like (32) suggest that there might be differences.

7. In many cases, relative pronouns resist long movement:

(i) a. *Dort steht jemand, den₁ Eva gestern t₁ gesehen hat*
There stands someone who Eva yesterday seen has

b. **Dort steht jemand, den₁ Eva meint, dass sie gestern t₁ gesehen hat*

However, examples with long-moved relative pronouns do exist. Andersson and Kvam (1984) cite the following real life examples:

(ii) a. *Ich würde vorschlagen, dass Sie … Striche machen, dort,*
I would propose that you strokes make there
wo₁ Sie meinen, dass ein neuer Abschnitt t₁ beginnt
where you think that a new paragraph starts

b. *Wir suchen uns die Gruppen aus, mit denen₁*
we choose (for) ourselves the groups PRT with whom
wir meinen, dass wir t₁ gemeinsame Sache machen können

		we think	that	we	(a)	common	thing	make	can

The long-moved relative pronouns in (ii) cannot be stressed. So, there is a difference to the long-moved elements considered in the text. Nevertheless, Andersson and Kvam (1984) assume that in (ii) the relative pronouns are focussed constituents. Note that the DPs to which the relative clauses belong contain a stressed element and are interpreted contrastively. It makes sense to assume that in (ii), it is the long moved relative pronouns that trigger the necessity of the contrastive interpretations.

8. In (36) and in following examples, only those primary accents that are crucial for the surrounding discussion are indicated (by capitals).

9. The target position may be to the right of a deficient pronominal, though:

(i)	*dass*	*sie/se*	*SO*	*glaubt,*	*dass*	*die*	*Wahl*	*ausgeht*
	that	she	that way	thinks	that	the	election	results

However, given that in German, deficient pronouns occurring adjacent to the C-position have the status of a clitic (cf. fn. 5), the wellformedness of (i) is to be expected.

10. An anonymous reviewer suggests that FM might be just a phonological rule since it does not have any semantic or pragmatic effects. This is an important suggestion which should be pursued. However, because the implementation of this idea seems to have far reaching consequences for the syntax-phonology interface of the German left periphery, I have to leave it for future research.

    In a more conservative approach, one could assume that FM does belong to narrow syntax although it only moves the phonological features of the highest element leaving behind its formal and semantic/pragmatic features. Such an approach is developed by Holmberg (2000) for the analysis of stylistic fronting in Icelandic and Faroese.

11. The intermediate trace in the embedded clause is licensed by a so called "left peripheral deficient feature" (Chomsky 2001).

12. Another account for the difference between (51a) and (51b) is offered by Grewendorf (2002), who assumes the split C-domain as proposed by Rizzi (1997). Grewendorf argues that in overt syntax, short movement of a *wh*-phrase targets the position SpecFinP, whereas a long moved *wh*-phrase targets SpecFocP. (SpecFinP and SpecFocP are taken in Rizzi's sense.) Furthermore, he assumes that SpecFinP is a non-operator position, whereas SpecFocP is an operator position. A phrase in a non-operator position does not induce weak crossover-effects, a phrase in an operator position does.

    At the heart of the difference between the account indicated in the text and that in Grewendorf (2002) lies a difference in the analysis of scrambling. Whereas in this paper, it is assumed that scrambling in German is an instance of A-movement and does exhibit A-properties like sensitivity to binding, Grewendorf (2002) assumes that scrambling in German is movement to an Ā-position and does not induce binding effects.

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