

# **Cyclic Phonology–Syntax-Interaction: Movement to First Position in German\***

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This paper investigates the nature of the attraction of XPs to clause-initial position in German (and other languages). It argues that there are two different types of preposing. First, an XP can move when it is attracted by an EPP-like feature of Comp. Comp can, however, also attract elements that bear the formal marker of some semantic or pragmatic (information theoretic) function. This second type of movement is driven by the attraction of a *formal* property of the moved element. It has often been misanalysed as “operator” movement in the past.

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## **1 Introduction and Overview**

For more than two decades, (most) syntacticians took it for granted that syntax and phonology interact in a global way: phonological rules apply as a block to the output of a *complete* overt syntax derivation (Chomsky 1981). However, in the context of the overall shift from representational to derivational models

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(Chomsky 1993, 1995), it seemed natural to assume that the spellout operation (interpreting abstract syntactic structures morphologically and phonologically) is cyclic itself (Chomsky 2000). In this respect, (minimalist) syntax takes up suggestions made more than thirty years ago by Bierwisch (1968) and by Bresnan (1972). Bresnan argued that the cyclic nature of the syntax-phonology interaction was evident even when one considered simple *wh*-questions.

(1a) exemplifies the effects of the *Nuclear Stress Rule* (NSR), that places primary stress on the rightmost/most deeply embedded element in VP. In (1b), primary stress falls on an element that is not part of VP. Still, stress placement in (1b) is not in conflict with the NSR, Bresnan argues: the NSR places the primary accent on *what books* when that phrase is still in VP. If the application of the NSR precedes *wh*-movement, (1b) has a straightforward explanation.

- (1) a. John said that Helen had written this BOOK  
 b. John asked what BOOKS Helen had written

Phonological rules and syntactic rules thus interact cyclically. If phonological rules may be applied prior to Move  $\alpha$ , details of the movement operation should depend on the outcome of phonological rules. This paper argues that this expectation is borne out, e.g., by data as simple as German (2), when it answers questions such as *what happened last weekend?* Elements that can be fronted in a VP- or IP-focus utterance are identified by their phonological properties. The phenomenon that phonological properties determine which categories move is even more widespread, both in terms of constructions, and languages.

- (2) Ein BUCH hab ich gelesen  
 A book have I.NOM read  
 “I read a book”

Our argument is framed in a minimalist syntax<sup>1</sup>, in which the need of checking (formal) features of functional heads triggers the movement of XPs and Xs. We will sketch a model of movement to first position in German main clauses in section 2: XPs move to first position either because they are attracted by an operator feature (an assumption that we revise later), or they do so in the context of a “stylistic fronting” operation placing the leftmost element in IP in front of the finite verb.

In case of operator movement, attraction can be confined to part of the operator phrase. The basic data supporting such a *pars pro toto movement* (ppt-movement) will be introduced in section 3, where we will also show that the category undergoing ppt-movement is picked on the basis of its phonological properties. Operator movement and ppt-movement can be unified if the feature that is attracted in German verb second constructions encodes a formal (phonological, morphological) rather than semantic-pragmatic (“topichood”) property. Section 4 presents some data that show that ppt-movement is not confined to German, while section 5 introduces ppt-movement data with a more complex information structure. In section 6, we compare the ppt-movement approach with remnant movement analyses.

## 2 Two Types of German Main Clauses

German main clauses involve at least two movements: the preposing of the finite V, and the subsequent placement of some XP in front of it, see Thiersch (1978), den Besten (1989), Vikner (1995), among many others.

- (3) a. [Ich [gestern [[ein Buch] gelesen]] hab] →  
 I yesterday a book read have

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<sup>1</sup> Our basic argument is also valid in all models in which movement operations must be licensed, i.e., also in OT syntax models.

- b. [Hab [ich [gestern [[ein Buch] gelesen]] ~~hab~~]] →
- c. [Ein Buch [hab [ich [gestern [[~~ein Buch~~] gelesen]]]]]]  
 “I read a book yesterday”

Den Besten (1989) argues that the finite V moves to C in (3b). Identifying the best theory of verb movement turns out to be surprisingly difficult (see Zwart 2001, Fanselow 2003, G. Müller 2003, Nilsen 2003), but details need not concern us since our conclusions are independent of them. Let us therefore simply assume that the finite V goes to C in verb second main clauses. The placement of some XP to the left of V in C can then be understood as movement to the specifier of CP.

The early literature on German verb second clauses largely ignored the fact that there is little arbitrariness in the identification of the element that is placed into Spec,CP. There are rules to be followed, a fact that is, however, slightly obscured by the existence of two classes of main clauses in German.

### 2.1 Main clause type A: attraction of an operator

Constituent questions such as (4) constitute the most straightforward example of the first class of German main clauses: an operator moves to Spec,CP.

- (4) [CP Was [Comp hat] [IP er gelesen?]]  
       what           has       he read

The following analysis (in line with the wh-criterion, Rizzi 1991) suggests itself: C possesses an EPP-like feature that triggers the attraction of some constituent (see Chomsky 1998), but only those categories are attracted that match further featural specifications of C. Thus, when C has a [+wh]-feature because it heads a constituent question, only wh-phrases will be attracted.

[+wh] is not the only attracting operator feature. (5) is an answer to (4). Focus XPs are attracted by C when C bears a [+foc]-specification. Unlike wh-phrases, focus XPs do not have to move. (6) is as good an answer to (4) as (5).

(5) [<sub>CP</sub> Ein BUCH [ hat [<sub>IP</sub> er gelesen]]]  
 a book has he read  
 “He has read a book”

(6) Er hat ein BUCH gelesen

(7) suggests that C may also have a [+top]-feature: topics can show up clause-initially. According to Frey (2004), topic phrase have to be preposed (but see Fanselow 2003), but they may also land in positions below C.

(7) (Soll ich was über Hans erzählen? “Do you want me to say something about Hans?”)

Diesen Verbrecher hat man endlich verhaften können  
 this.ACC criminal has one finally arrest could  
 “One has finally been able to arrest this criminal”

Operator attraction often involves the pied piping of larger categories, as in (8).

(8) a. An wessen Schwester hat er einen Brief geschrieben  
 at whose sister has he.NOM a.ACC letter written  
 “whose sister has he written a letter to?”

b. An SABINES Schwester hat er einen Brief geschrieben  
 at Sabine’s sister has he a letter written  
 “He wrote a letter to SABINE’s sister”

## 2.2 Main clause type B: Stylistic Fronting

In many main clauses of German, the initial element is neither a wh-operator nor

a topic or a focus. The need for distinguishing a second class of German main clauses was first recognized by Travis (1984). Although many of her arguments may have turned out to be incorrect (see, e.g., Gärtner & Steinbach 2003), it cannot be denied that subject-initial sentences follow conditions of use other than those of the sentences discussed above. E.g., the former can bethetic, uttered in out of the blue contexts. Similarly, subjects may appear in first position when a focus phrase is not in Spec,CP, as (6) illustrates. Subjects may *always* appear clause-initially without being a topic or a focus.

(9) Was ist geschehen? “What happened?”

Ein Kind hat seinen Schlüssel verloren  
 A child has his key lost  
 “A child lost his key”

The analysis of this construction is somewhat obscured by the fact that elements other than subjects can show up in clause initial position without special pragmatic force. Thus, the examples in (10) can bethetic: dative arguments of unaccusative and passive constructions (see Lenerz 1977), and sentential (Koster 1978) and temporal (Frey 2000) adverbs are like subjects in that they can be clause-initial without being a topic or focus (but see also Jacobs 2001).

(10) a. Einem Studenten ist ein Fehler aufgefallen  
 a.DAT student is a.NOM mistake struck  
 “A student noticed a mistake”

b. Wahrscheinlich hat ein Kind geweint  
 probably has a child wept  
 “Probably, a child wept”

c. Früh am Morgen hat ein Eisbär einen Mann gefressen  
 Early in the morning has a.NOM polar bear a.ACC man eaten  
 “Early in the morning, a polar bear has eaten a man”

As Fanselow (2002) and G. Müller (2003) observe, nominative subjects, dative arguments of unaccusative and passive predicates, and temporal and sentential adverbs have in common that they can be the structurally highest phrases in IP (even if they occupy different positions). Relative to (11), (9, 10) are easy to analyze: when C has no semantic or pragmatic feature, its EPP feature attracts the closest (=highest) category in IP. This is what one would expect, given the Minimal Link Condition (12): C cannot attract  $\gamma$  to its specifier position  $\alpha$  in (13) if there is a  $\beta$  closer to C that can move as well.

- (11) a. dass ein Kind seinen Schlüssel verloren hat  
 that a.NOM child his.ACC key lost has  
 “that a child has lost his key”
- b. dass einem Studenten ein Fehler aufgefallen war  
 that a.DAT student a.NOM mistake struck was  
 “that a student noticed a mistake”
- c. dass wahrscheinlich ein Kind geweint hat  
 that probably a child wept has  
 “that probably a child has wept”
- d. dass früh am Morgen ein Eisbär einen Mann gefressen hat  
 that early in the morning a polar bear a man eaten has  
 “that a polar bear ate a man early in the morning”
- (12) MLC: A cannot attract B if there is a C, C closer to A than B, such that C can be attracted by A
- (13) [<sub>CP</sub>  $\alpha$  COMP [<sub>IP</sub>  $\beta$  ....  $\gamma$  ... ]]

This analysis of (9)-(10) in terms of an EPP-feature attracting the closest element is reminiscent of the analysis Holmberg (2000) proposes for Stylistic Fronting in Icelandic, in which an EPP-feature of I attracts the closest DP, PP,

adverb, or participle. In this sense, (9) and (10) exemplify Stylistic Fronting at the CP-level.

In the spirit of a proposal Bhatt (1999) made for Kashmiri, the analysis of type A and type B sentences can be unified:  $\Sigma$  can attract a category only if attraction establishes a checking relation, which presupposes that the features of the attractor and the attractee match. Therefore, C attracts the absolutely closest phrase  $\beta$  if C has no further features (=Type B, *Stylistic Fronting*). However, when C has an additional operator feature [+g], a checking relation can be established with those categories only that possess [+g] as well. Thus,  $\beta$  can be skipped in (14) if  $\gamma$  is the closest category with a matching specification of [+g]. Wh-phrases, and focal and topical material may cross higher phrases when C bears operator features (type A clauses, operator movement).

(14) [CP  $\alpha$  COMP[+g] [IP  $\beta$  ...  $\gamma$ [+g] ... ]]

The idea that the highest element in IP moves to Spec,CP when C has an EPP-feature but no operator feature implies further predictions about what can show up in Spec,CP. Recall that arguments can be placed into a pre-subject position in German by scrambling (see Fanselow 2001, 2003a, Haider & Rosengren 1998, Grewendorf & Sabel 1994, Müller & Sternefeld 1993), e.g., in order to satisfy the word order principle that animate XPs precede inanimate ones (Hoberg 1981, G. Müller 2000). Animate objects can thus precede an inanimate subject as in (15a,c) without having any particular pragmatic function of their own, and they can be placed subsequently into Spec,CP in main clauses when the only attracting feature of Comp is the EPP-feature. There are no restrictions on the category and grammatical function of an element moved to Spec,CP by Stylistic Fronting—it merely must happen to be the highest element in IP.

- (15) a. dass fast niemandem das Medikament geholfen hat  
 that nearly nobody.DAT the medicine helped has  
 “that the medicine nearly hasn’t helped anybody”
- b. Fast niemandem hat das Medikament geholfen
- c. dass niemanden der Vortrag geärgert hat  
 that nobody.ACC the.NOM talk annoyed has  
 “that the talk hasn’t annoyed anybody”
- d. Niemanden hat der Vortrag geärgert

Frey (2004) shows that topic phrases must c-command sentence level adverbs. When *mein Buch* “my book” is a topic as in (16), it must c-command *wahrscheinlich* (16a). (16b) and (16c) are not pragmatically felicitous continuations of the first sentence in (16). By being moved above the sentential adverb, the topic is the highest element in IP, so it will be placed into Spec,CP in main clauses such as (16d) even when C possesses an EPP feature only.

- (16) Erzähl mir was über Dein Buch “Tell me something about your book”
- a. Ich denke, dass mein Buch vielleicht ein Litauer publiziert  
 I think that my book perhaps a Lithuanian publishes  
 “I think that a Lithuanian will perhaps publish my book”
- b. #Ich denke, dass vielleicht mein Buch ein Litauer publiziert
- c. #Ich denke, dass vielleicht ein Litauer mein Buch publiziert
- d. Mein Buch wird vielleicht ein Litauer publizieren

According to Frey (2004), topics occupy the highest position below C. They will thus be attracted to Spec,CP by a bare EPP-feature. Thus, there are also no pragmatic restrictions on what will be placed to Spec,CP by Stylistic Fronting.

### 3 PPT Movement in German Wide Focus Constructions

#### 3.1 First facts

There is one class of German main clauses that is not covered by the model sketched in the preceding section. Surprisingly, even (2), repeated here as (17), turns out to be problematic in contexts when (2) felicitously answers questions such as *what did you do last weekend?* or *what happened last weekend?*, so that *ein Buch* is not the narrow focus of the utterance (and could be attracted relative to a [+foc] feature of C).

- (17) Ein BUCH hab ich gelesen  
 a book have I read  
 “I have read a book”

When the complete VP or IP is in focus, (18a) can be used, since focus movement to Spec,CP is optional in German. The direct object receives primary stress (e.g., by the NSR) since it is the most deeply embedded category in VP. A VP in focus can also be attracted to Spec,CP as in (18b), if C bears a [+foc] feature.

- (18) a. ich hab [<sub>VP</sub> ein BUCH gelesen]  
 b. [<sub>VP</sub> ein BUCH gelesen] hab ich

That (17) is a further option when VP/IP is in focus has not gone unnoticed (see, e.g., Büring 1996: 39). That a direct object can move to Spec,CP *at all* under such circumstances is surprising: the object DP is *not* the focus of the utterance (it is *part of the focus*). It should not have a [+foc] feature, so it is unclear how it can be attracted by C bearing [+foc]. (17) thus illustrates the “opposite” of pied-piping, *pars pro toto movement* (ppt-movement): XP seems to be attracted by a feature of a head, but only *part* of XP actually moves.

Direct objects can, in general, undergo ppt-movement. Both (19a) and (19b) allow wide focus. Only elements bearing primary stress undergo ppt-movement. Therefore, (19c) has no ppt-movement/wide focus interpretation: the PP bears narrow focus. This stems from the fact that the stress placement rules put the primary accent on the direct object rather than the prepositional object in a wide focus interpretation of (19a)<sup>2</sup>.

- (19) a. Ich hab die Bücher ins Regal gestellt  
 I have the books into-the shelf placed  
 “I put the books on the shelves”
- b. Die BÜCHER hab ich ins Regal gestellt
- c. #Ins Regal hab ich die Bücher gestellt

However, ppt-movement is not confined to direct objects. When the direct object is deaccented because it represents given information, primary stress is shifted, e.g., to the indirect object, which can then be preposed by ppt-movement: (20b) can answer (20a), i.e., the whole VP/IP (except for the object pronoun) is in focus. (Of course, (20c) is appropriate as well).

- (20) a. Was ist mit dem Buch passiert “What happened to the book?”
- b. Meiner FREUNDIN hab ich ’s geschenkt  
 my.dat girlfriend have I it given  
 “I gave it to my girlfriend as a present”
- c. Meiner Freundin geschenkt hab ich’s.

Arguably, subjects may undergo ppt-movement as well if the objects are deaccented. (21b) can continue (21a) in a felicitous way. The primary accent on

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<sup>2</sup> In contrast to what one would expect under a simplistic interpretation of the NSR.

*Antje* thus does not presuppose narrow focus on the subject, rather, the whole IP can be read as a comment on the sweater. Since the objects are deaccented, primary stress shifts to the subject, which ppt-movement will then place into Spec,CP. Given that the subject is also the highest element in IP, it is difficult to keep the effects of ppt-movement apart from those of “stylistic fronting”.

- (21) a. Das ist aber ein schöner Pulli! “That is a really nice sweater”  
 b. ANTJE hat mir den geschenkt  
 Antje has me it given  
 “Antje gave it to me as a present”

Even verbs can undergo ppt-movement if everything else is de-accented:

- (22) a. Was ist letzten Sonntag passiert? “What has happened last Sunday?”  
 b. VERLETZT hab ich mich  
 hurt have I myself  
 “I hurt myself”

### 3.2A simple analysis

In ppt-movement constructions, part of an operator rather than the operator itself moves to Spec,CP when C possesses an operator feature. In a certain sense, ppt-movement data are thus reminiscent of *wh*-movement patterns such as (23)-(24). *Wh*-movement normally involves the displacement of a full *wh*-DP, but some *wh*-determiners can also move alone.

- (23) a. **Was für Bücher** hast du gelesen?  
 what for books have you read  
 b. **Was** hast du **für Bücher** gelesen?  
 “What kind of books have you read?”

- (24) a. **Wieviel Geld** hast du dabei  
 how much money have you therewith
- b. **wieviel** hast du **Geld** dabei [ok in certain dialects only]  
 “How much money do you have with you?”

In minimalist theories of movement (Chomsky 1995), heads attract sets of formal features. Movement is covert if nothing else is displaced. Overt movement pied-pipes the phonological (and semantic) information linked to the attracted set of formal features. In the default case, the smallest unit with the attracted feature set (normally: a word) moves. Overt wh-attraction thus triggers the preposing of the *word* that bears the attracted feature (*was*, *wieviel*), as in (23-24b). In many cases, further principles require or allow that more material is pied-piped, yielding full phrasal movement as in the a-examples of (23, 24).

In the optimal state of affairs, this concept of movement characterizes focus movement and topicalization as well. Overt topicalization and focus movement should therefore also either prepose the *word* bearing the topic (focus) feature, or some phrase dominating that word.

While words bear the wh-feature as part of their lexical specification, focus and topic are marked prosodically in German. A word “bears” a focus feature (more precisely: a focus feature manifests itself on a certain word) if that word bears a particular pitch accent. The minimalist perspective implies that the word marking focus prosodically (= *Buch* in (25)) is the smallest unit that can move when a focus feature is attracted, unless the pied piping of larger categories is grammatically required. In (25) and the examples in 3.1., the smallest maximal projection dominating the word marking focus prosodically has to be pied-piped, because normally, maximal projections only move to Spec,CP in German.

- (25) a. [Ein BUCH] hab ich gelesen  
 a book have I read

b. [ein BUCH gelesen] hab ich

A pitch accent on *Buch* can mark a (narrow) focus of the DP object, or focus of the VP and (wide) focus of the IP. The preposing of the object-DP as in (25a) can occur in *all* these focus constellations. The attraction of a word with a *formal* property (a pitch accent signalling focus) is what is relevant, and not the *semantic or pragmatic* status of the phrase that is fronted. The attracting [+foc]-feature of C is thus not an operator feature in a natural sense. It is a feature checking for the *marking* of operator status. Non-stylistic movement to Spec,CP is not operator movement (as we had suspected in sect. 2)—the features that C attracts belong to the formal rather than semantic-pragmatic aspect of language<sup>3</sup>.

Given that focus marking is prosodic in German, the element that is attracted on the basis of a foc-feature is identifiable only *after* the computation of pitch accents. This presupposes the cyclic view of the interaction of syntax and phonology proposed by Bresnan (1972). In order to account for the pragmatic potential of (25a), the computation of the focus which is marked by the primary accent must also precede the (potential) movement of the focus marked element to Spec,CP. From a purely syntactic perspective, the choice among several concrete models seems to be of little importance. We can, e.g., assume a bottom-up computation of focus, which begins with the word bearing accent, and then works its way up the tree with rules for projecting focus marking on dominating categories, which depend on the structural position of the focus marked category, the deaccentuation-status of sister categories, etc.

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<sup>3</sup> The term ppt-movement introduced in Fanselow (2003b) thus refers to the relation between the formal operation and the semantic-pragmatic function of the clause only. We suspect that wh-movement is also due to the attraction of a wh-marker rather than to the need to move an operator, but a discussion of this issue is beyond the scope of the present paper. This view is reminiscent of Bayer (1996) and other approaches that claim that wh-movement serves the purpose of clausal typing (rather than scope assignment to operators).

As we have already said, such a theory of attraction must be complemented by a theory of pied-piping. Typically, the complete minimal maximal projection dominating the attracted word must be displaced. It is unclear, however, what the upper limits of pied-piping are. Thus, (25b) with a fronted VP is not only compatible with VP- and IP-focus. It can also answer a question such as *what have you read*, i.e., the fronting of a VP can occur in situations in which the object DP has a narrow focus.

### 3.3 Focus particles

The ppt movement idea helps to solve a number of further riddles of German syntax some of which we discuss in this subsection, and others, in section 5.

Consider (26) in this respect. It is ambiguous between the two interpretations (27a) and (27b), as noted in, e.g., Fanselow (1993). (27a) (=“the only thing he never read is the bible”) is unproblematic in a straightforward way: *nur die Bibel* constitutes the narrow focus of the sentence, and such a narrow focus can be moved to Spec,CP in all approaches. In the interpretation (27b), however, the scope of the focus particle comprises the *whole* verb phrase: the sentence is felicitous in a situation in which various religious activities are discussed, and in which it is claimed that one of these (reading in the bible) has never been carried out by the subject of the sentence.

(26) Nur die Bibel hat er nie gelesen  
only the bible has he never read

- (27) a. Only for x, x = the bible: he has never read x  
b. Only P, P = bible reading: he has never done P

In our approach, both readings are unproblematic: the different focus assignments share the location of the focus marker, so it is no wonder that attraction to Spec,CP will treat them in the same way<sup>4</sup>.

Büiring & Hartmann (2001) deny that *nur* and the object DP form a constituent in (26). In their account, *nur* is adjoined to the entire CP (with *die Bibel* appearing in Spec,CP) because they assume that focus particles cannot adjoin to arguments. If they are correct, (26) constitutes no additional argument in favor of ppt-movement, but still falls in line with what we have said in the preceding subsections.

As Büiring and Hartmann concede, the need to assume that V shows up in *third* position when focus particles are adjoined to CP is an expensive price to pay for restricting *nur*-adjunction to extended verbal projections. They claim that the adjunction of *nur* to the entire CP is motivated because there is no scope-reconstruction of clause-initial *nur* into the main clause. This claim is factually incorrect, however: (28) and (29) allow a reading in which the subject quantifier takes scope over *nur* + DP. This is hardly expected if *nur* + DP has not been moved to clause-initial position. Therefore, we prefer not to assume the CP-adjunction theory of (26). See also St. Müller (2005a) for more observations that show that *nur* adjoins to argument-DPs and PPs

- (28) Nur zu Weihnachten geht jeder dritte in die Kirche  
 only at Christmas goes each third in the church  
 “For every third person x: x goes to church only at P, P = Christmas”  
 “Only at P, P = Christmas: every third person goes to church at P”

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<sup>4</sup> We need to assume that focus particles such as *nur* ‘only’ may attach to the focus marking category independent of their final scope, so that *nur* can affect VP despite the fact that it is attached to DP. Scope extension for focus particles is needed independent of the German examples under discussion, however, since Japanese focus postpositions such as *mo* may also attach to the direct object when they take scope over VP (Shin Ishihara, p.c.).

- (29) Nur die Bibel liest kein frommer Christ  
 only the bible reads no religious christ  
 “Only for x = x the bible: no christ reads x”  
 “There is no y, y a christ: y reads only x, x the bible”<sup>5</sup>

Scope reconstruction is, of course, possible with ppt-fronting as well, as (30) shows with the interpretation indicated below the example.

- (30) Was seinen Hochzeitstag betrifft:/ “As for his wedding anniversary:”  
 [Nur einen Blumenstrauß] überreicht jeder dritte Ehemann  
 only a bunch of flowers hands over every third husband  
 “For every third x, x a husband: x does only P, P = hand over a bunch of flowers”

#### 4 Other Languages

In German main clauses, C may possess features by which it attracts focus marked phrases. A phrase is focus marked if it bears the relevant pitch accent. The word bearing this accent is the smallest unit that can be attracted. German is not the only language with these properties. In their detailed analysis of Czech focus placement, Lenertova & Junghanns (2004) observe that the focus exponent may be moved to clause-initial position in all-focus utterances:

- (31) [A: What’s new? B:] (= their 25)  
 a. MArtu jsem potkala.  
 Martha.ACC aux1SG met.SGFM  
 b. Potkala jsem MArtu.  
 “I met Marta”

Junghanns (p.c.) may be correct in pointing out that ppt-movement is more widespread/less restricted in Czech than in German, but at the same time,

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<sup>5</sup> The two readings come with clearly different intonations, a fact we will not try to explain here.

Lenertova & Junghanns (2004) observe that the deaccentuation of the subject is often necessary for the availability of a ppt-interpretation in Czech as well, see (32) (=their (37)), similar to what holds for German.

(32) A: Co je nového? ‘What’s new?’ B:

- a. **GULáš** jsem uvařila.  
goulash aux.1SG cooked  
‘I cooked goulash’
- b. #**GULáš** matka uvařila. (#=pragmatically inappropriate)  
goulash mother cooked  
‘Mother cooked goulash’
- c. **Matka** uvařila **GULáš**.

In Russian, objects can also be fronted in all focus utterances, as (33) illustrates. However, ppt-movement seems to go along with special pragmatic effects: (33) seems to express that answering the question is somewhat superfluous (because the answer is obvious, or irrelevant, Katja Jasinskaja, p.c.). The same seems to hold for Croatian (Damir Cavar, p.c.) and Polish (Joanna Błaszczak, p.c.). Hungarian appears to allow for ppt-movement without this additional pragmatic flavor (Beata Gyuris, p.c.).

(33) Chto delaet Petja? Gazetu on chitaet.  
what made Peter Newspaper he read

PPT-movement effects can perhaps also be found in Tangale. Kenstowicz (1985) and Tuller (1992) observe that phonological processes such as vowel elision and left line delinking apply in the verb phrase between the verb and the object, but these processes are blocked when the object is focused. According to Kenstowicz and Tuller, this blocking constitutes indirect evidence for movement of narrow focus objects. Hartmann & Zimmermann (2004) show that the

relevant phonological processes are also blocked when the whole verb phrase is focused. In our model (though not the one proposed by Hartmann and Zimmermann), this can be counted as an instance of ppt-movement.

## 5 More Constructions

### 5.1 Idioms

The behavior of idiomatic expressions may be particularly helpful in identifying the nature of syntactic movement processes. In general, only the whole idiom has a meaning, its parts lack an independent interpretation<sup>6</sup>. The displacement of parts of an idiom should therefore be possible only if attraction affects purely formal properties, and not when operator features in a strict sense are involved.

Subjects (of intransitive verbs) that are part of an idiom go to Spec,CP easily, since they are attracted by the EPP-feature of Comp, as an instance of the “Stylistic Fronting” aspect of German verb second constructions:

- (34) a.   das Ende der           Fahnenstange ist erreicht  
           the end the.GEN flag pole       is reached  
           “it’s enough!”
- b. die Kuh ist vom       Eis  
           the cow is off-the ice  
           “the problem is solved”

As G. Müller (2000a) and St. Müller (2002, 2003), among others, have observed, non-subject parts of idioms can be fronted as well. This is illustrated

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<sup>6</sup> This view needs to be qualified, see Nunberg, Sag, & Wasow (1994) for an illustration and explanation of the fact that many idioms are semi-transparent. To the extent they have a semicompositional meaning, parts of idioms might play different information structure roles. The argument in the above section is therefore strongest for those idioms that defy a semi-decomposition such as *den Garaus machen* “to kill”. I am grateful to Stefan Müller for pointing this out to me.

by the examples in (35). The original observation is attributed to Marga Reis by Buring (1996).

- (35) a. schöne AUGEN hat er ihr gemacht  
 beautiful eyes has he her made  
 “he made eyes hat her”
- b. den GARAUS hat er ihr gemacht  
 the *garaus* has he her made  
 “he killed her”

The direct objects of (35) are not the highest IP-elements, so their fronting cannot be explained as an instance of “Stylistic Fronting”. They can be attracted easily in the context of ppt-movement, however: the pitch accent on the object marks wide focus on the VP/IP. Thus, (35a) can, e.g., answer a question like *Why do you think he loves her?* The whole predicate is in focus, not the object DP (this would make little sense, since the object is just *part* of the idiom). If C attracts a formal feature (as we assume), the explanation of (35) is easy. If C would attract a focus *operator*, however, the analysis of (35) would be unclear, since the idiom parts are not meaning-bearing elements.

Not unexpectedly, idiom parts can be fronted in Czech as well, see (36) taken from Lenertova & Junghanns (2004) (=their 32). Similarly, the idiomatic reading does not get lost when part of the idiom is fronted in Russian, as in example (37) (Katja Jassinskaja, p.c.)

- (36) A: Proč ses s ním tak pohádal?  
 ‘Why did you have such a quarrel with him?’ B:
- a. **BOUdu** na mě ušil!  
 hut.ACC for me he-stitched
- b. Ušil na mě **BOUdu**!  
 “He has cheated me!”

- (37) A chto delali bjurokraty?  
 And what did bureaucrats  
 Da-a... Palki oni emu v kolese vstavljali  
 Well... Stick they him in wheels inserted  
 “Well, they put obstacles in his path”

Dutch allows the fronting of object parts of idioms as well, if the object bears the primary accent of the clause, as was already observed by Koster (1978)<sup>7</sup>:

- (38) Een poets (die) heeft Jan me nog nooit gebakken  
 a prank that has Jan me yet never played  
 “A trick, John has never played one upon me”

When one considers the partial fronting of idioms, it also becomes very clear that it is not just all focus or VP focus utterances in which movement to Spec,CP displaces elements bearing certain accents rather than meaning bearing units. It seems to hold generally that the word bearing the prosodic marker of some information structure function of XP can be fronted independent of the rest of XP. E.g., in the examples in (39), the idiomatic predicates may be contrastive topics (negation being the focus). Their accented elements can be fronted alone. Again, attraction affects the marker of contrastive topicality rather than the phrase that is the contrastive topic.

- (39) a. Ins Bockshorn jagen (intimidate, lit.: “into-the goat horn chase”)  
 Ins Bockshorn hat er sich nicht jagen lassen  
 into.the goat horn has he refl not chase let  
 “He did not let himself be intimidated”

<sup>7</sup> Shin Ishihara points out that Japanese appears to be an exception, as Miyagawa (1997) claims that the idiomatic meaning is lost when its part is long-distance (i.e., A’-)-scrambled. With the clause-internal (i.e., A-)-scrambling the idiomatic meaning is maintained.

- b. Am Hungertuch nagen (to be poor, lit: “to nag at the hunger-cloth”)  
 am Hungertuch müssen wir noch nicht nagen  
 at.the hunger-cloth must we not yet nag  
 “We are not yet really poor”

Of course, it is only the accented part of the predicate that can undergo ppt-movement. As was observed, e.g., by St. Müller (2002, 2003), the verb *cannot* be fronted to Spec,CP in such constructions: the examples in (40) are ungrammatical (or allow an irrelevant literal interpretation only):

- (40) a. \* Jagen hat er sich nicht ins Bockshorn lassen (cf. (39a))  
 b. \* Gemacht hat er ihr schöne Augen (cf. (35a))  
 c. \* Nagen müssen wir noch nicht am Hungertuch (cf. 39b))  
 d. \* Gemacht hat er ihr den Garaus (cf. 35b))

Multipart idioms shed an interesting light on the functioning of ppt-movement. Since semantic/pragmatic differences among the parts of the idiom can play a minor role only (in case of semi-transparent idioms) or no role at all, the mechanisms of fronting by formal features can be observed in its purest form. Consider now the following examples (@ stands for: “literal reading only”)

- (41) a. Wir haben ihm den roten HAHN aufs Dach gesetzt  
 we have him the red cock on-the roof put  
 “We set his house on fire”  
 b. den roten Hahn haben wir ihm aufs Dach gesetzt  
 c. @ aufs Dach haben wir ihm den roten Hahn gesetzt

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- (42) a. Ich will dir keine STEINE in den Weg legen  
 I want you no stones in the way put  
 “I don’t want to place obstacles in your path”
- b. Steine will ich dir keine in den Weg legen
- c. @ In den Weg will ich dir keine Steine legen
- (43) a. Er ist vom Regen in die Traufe gekommen  
 he is from.the rain in the eaves come  
 “He jumped out of the frying pan into the fire”
- b. Vom Regen ist er in die Traufe gekommen ...
- c. @ In die Traufe ist er vom Regen gekommen
- (44) a. Er sollte die Flinte nicht so schnell ins Korn werfen  
 he should the gun not so fast in.the corn throw  
 “He should not give up so quickly”
- b. Die Flinte sollte er nicht so schnell ins Korn werfen
- c. @ Ins Korn sollte er die Flinte nicht so schnell werfen

In spite of the fact that the prepositional object seems to have the more prominent accent in (43)-(44) and other examples<sup>8</sup>, the rule is that only the leftmost accent bearing part of the idiom can be fronted in ppt-movement constructions, see also St. Müller (2003) for this observation. In other words, when a certain focused constituent such as *vom Regen in die Traufe kommen* contains two accents, only the higher one of the two can be moved to the specifier of a C-node that attracts a fm-feature. This is in line with what we expect, because [+foc]-attraction must also be subject to the Minimal Link Condition.

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<sup>8</sup> I am grateful to Susanne Trissler for first pointing this out to me.

Idiomatic expressions thus have helped to establish two points. Quite in general, C attracts words bearing the formal marking of some pragmatic function rather than the XP that bears the pragmatic function. When there is a choice, the leftmost/highest element bearing a relevant accent is attracted.

These finding also suggests a possible explanation for the observation made in Lenertova & Junghanns (2004) that ppt-movement of objects is best when the subject is a deaccented (or inaudible) pronoun. Perhaps, *all* accents in an all-focus utterance are visible to an attracting C, so that only the highest one can move because of the MLC. Therefore, objects cannot cross accented subjects (32). If the subject is deaccented, it will not block the movement of objects. Probably, subjects bearing an accent marking a pragmatic function different from the one that C attracts also trigger no intervention effects.

(45) (brought to my attention by Uwe Junghanns) might argue against this explanation. That (45) can be an all-new utterance is suggested by the fact that it could function as the first sentence of a newspaper article.

- (45) Eine furchtbare Entdeckung machten drei Kinder gestern in der  
 a.ACC horrible discovery made three children yesterday in the  
 Waldstadt  
 forest city  
 “Three children made a horrible discovery yesterday in the Waldstadt”

The object *eine furchtbare Entdeckung* has crossed a non-deaccented subject in (45). This could show that transitive subjects do not exert intervention effects for the attraction of pitch accent of the object, but one might also consider *eine furchtbare Entdeckung* the topic of the sentence, if topicality is understood in a quite extended sense of aboutness. Under this analysis, (45) would not involve ppt-fronting in an all focus context.

## 5.2 Particles

The movement of verb particles to clause initial position constitutes yet another instance of ppt-movement. Like other Germanic languages, German possesses particle verbs such as *mit+nehmen* “with-take”. If the particle is stressed, it is stranded in verb second constructions, as exemplified in (46b). Bierwisch (1963) states that particles cannot move to Spec,CP, and this verdict has frequently been repeated (Haider 1990, Fanselow 1993, Olsen 1997, Eisenberg 1999), despite the fact that it is wrong: particles do undergo movement to Spec,CP, as (46c) illustrates. An illuminating discussion of particle fronting, based on corpus research, can be found in S. Müller (2002, 2003).

- (46) a. dass er Antje nicht mitnimmt  
that he Antje not with-takes
- b. Er nimmt Antje nicht mit
- c. Mit hat er sie schon genommen  
with has he her well taken  
“he took her with him”

The grammatical status of the verbal particle is controversial (see Haiden 2004 for an overview), but researchers seem to more and more concur in the view that the verb-particle combination is syntactic rather than lexical (see St. Müller 2002, 2003, Wurmbrand 2000, Zeller 1999). Independent of whether *mit* in *minehmen* is dominated by a word level verb projection or not, the particle is *not* the highest category in IP. Therefore, (46c) cannot exemplify the “Stylistic Fronting” type of German main clauses.

In some cases, the fronted (semi-) particle has a clear semantic content of its own, which may be in focus or constitute a (contrastive) topic, as in (47).

- (47) ZuRÜCK werde ich dich nicht bringen  
 back will I you not bring  
 “I won’t take you back!”

However, most particle-verb-combinations have an idiomatic non-compositional reading only, in which the particle makes no identifiable semantic contribution. Nevertheless, particles of these verbs may be fronted, as Zeller (1999) and St. Müller (2002, 2003) have amply demonstrated, see also (48).

- (48) a. vor-haben (intend, lit.: “before-have”)  
 Vor haben wir das schon gehabt  
 before have we that well had  
 “We had intended that”
- b. vor-machen (to fool, lit.: “before-make”)  
 Vor kannst du der wirklich nichts machen  
 before can you her really nothing make  
 “You cannot really fool her”
- c. an-kommen (be received, lit.: “at-come”)  
 Gut an kommt dagegen die Rede von Hans  
 well at comes in contrast the speech of Hans  
 “The speech of Hans was well received, however”

The examples in (48) come with a clear information structure, in which the whole predicate (rather than the particle extracted from it) is in focus or constitutes a contrastive topic. Thus, *das vorhaben* (intending it) is the contrastive topic of (48a), while *vormachen* (fooling) is the topic of (48b). The same interpretation is possible for particles extracted from (partially) compositional combinations: a natural continuation of (47c) would be (49), which shows that *mitnehmen* “take along” rather than *mit* “with” is the contrastive topic of (46c).

- (49) Aber getanzt hat er nicht mit ihr  
 but danced has he not with her  
 “But he did not dance with her”

The particle is not the head of the verb-particle combination, but it is the element that manifests the tone/an accent assigned to it. Particle preposing is thus a straightforward instance of ppt-movement.

### 5.3 Complex pragmatics in non-idiomatic constructions

The model developed here also helps to keep the definition of topic tidy. Consider the following dialogues in (50). The context questions make the predicates “not having recognized anyone” and “not having said anything” the topics of the following utterances. As expected, the full topical VP can be moved to Spec,CP (the a’- and b’-examples), but the object can also go there alone. Under our account of attraction to Spec,CP, this is expected: fronting is licensed for all categories that dominate the element bearing the pitch accent marking the pragmatic function. If movement to Spec,CP would be operator movement, we would have to assume that negatively quantified DPs can be topics because of (50a’, b’), clearly an unwelcome result.

- (50) a. Auf dem Klassentreffen haben viele einige der Schulfreunde nach 20 Jahren nicht mehr wiedererkannt. Hat denn jemand gar niemanden wiedererkannt?  
 “At the class reunion, many did not recognize some of their schoolfriends after 20 years. Did somebody not recognize anyone?”
- a’. Gar niemanden hat nur der Hubert wiedererkannt  
 really nobody.DAT has only the.NOM Hubert recognized
- a’’. Gar niemanden wiedererkannt hat nur der Hubert  
 “Only Hubert did not recognize anyone”

- b. A: An der Dativ-Diskussion gestern haben sich fast alle beteiligt.  
 “Nearly all participated in the dative discussion yesterday”
- B: Und wer hat nichts gesagt?  
 “And who did not say anything?”
- b’: A: Nichts hat eigentlich nur die Sabine gesagt  
 Nothing has ptc only the Sabine said
- b’’. A: Nichts gesagt hat eigentlich nur die Sabine  
 “Well, only Sabine did not say anything”

PPT-topicalization is able to affect single words only:

- (51) a. War er Anarchist? “Was he an anarchist?”
- a’. Häuser hat er jedenfalls nie angezündet  
 houses has he in any event never set on fire  
 “He has never set houses on fire”
- b. Ist er gebildet? “Is he educated?”
- b’. Bücher hat er jedenfalls viele gelesen  
 books has he in any event many read  
 “At least, he has read many books”
- c. Ist er ordentlich angezogen? “Is he dressed properly?”
- c’. Krawatte trägt er jedenfalls wieder mal keine  
 tie wears he in any event again once no  
 “Again, he does not wear a tie”

Discontinuous noun phrases as we find them in (51) are common in German (see Fanselow 1988, Riemsdijk 1989, Fanselow & Cavar 2002, van Hoof 2004). Typically, the left part of the discontinuous DP is a contrastive topic, whereas the right part is a narrow focus, as in (52).

- (52) Drosseln hab ich zwei gesehen, Schwalben aber fünf  
 thrushes have I two seen swallows but five  
 “I have seen two thrushes, but five swallows”

The examples in (51) share this basic alignment of the contrastive topic part of the utterance at its left periphery, and the focal part at its right edge, but in the contexts given, the contrastive topic is not constituted by the preposed noun, but rather by the predicate dominating it before movement (setting houses on fire, wearing ties, etc.). Contrastive topicalization of a VP can be marked by only preposing the head of the direct object. This is a clear example of ppt-movement that becomes particularly obvious when one considers sentence pairs with explicit contrasting of topics such as (53)

- (53) Ordentlich gekämmt war er bestimmt, aber Krawatte hat er wieder  
 Properly combed was he certainly but tie has he again  
 mal keine getragen  
 once no wore  
 “Though his hair was certainly combed properly, he again wore no tie”

Together with the preposing of particles, the contrastive fronting of a noun constitutes the purest examples of ppt-movement, then: only the morpheme that bears the relevant accent undergoes fronting.

## 6 Remnant Movement?

The preceding sections have argued that the preposing of focus and topic phrases does not come about by the attraction of an operator feature—rather, the category that marks the pragmatic function prosodically is attracted. It may (and sometimes has to) pied-pipe larger categories, including the full phrase that is a focus/topic. Of course, one can envisage alternative descriptions of the data, and one alternative that deserves special attention is remnant movement.

Descriptively, ppt- and remnant movement have the same overt effect: a category X has a certain pragmatic value and should move to some position, but overt displacement affects part of the phonological material of C only. Remnant movement was proposed as a tool for German syntax by Thiersch (1985) and den Besten & Webelhuth (1987,1990). See G. Müller (1998) for a detailed discussion (and Fanselow 2002a for a critique). In a remnant movement construction, phrases can be extracted from VP before the latter category moves to Spec,CP, as shown in (54).

- (54) a.  $[_{IP} \text{ er nicht}[_{VP} \text{ sie geküsst hat}]] \rightarrow$   
           he not           her kissed has
- b.  $[_{IP} \text{ er nicht sie}_i [_{VP} t_i \text{ geküsst hat}]] \rightarrow$
- c.  $\text{hat } [_{IP} \text{ er nicht sie}_i [_{VP} t_i \text{ geküsst } \_ ]]] \rightarrow$
- d.  $[_{VP} t_i \text{ geküsst}] \text{ hat er sie}_i \text{ nicht} \rightarrow$   
           “he has not kissed her”

Instead of assuming that the bearer of the pitch accent is attracted, a more classical remnant movement account seems possible, in which our standard example might have the structure in (55) (coming close to what was proposed in Fanselow 1993): the fronted material looks like a DP, but in fact, it contains an empty verbal head, making it a VP. Under this analysis, the element moved to Spec,CP *is* the focus phrase.

- (55)  $[_{VP} [_{DP} \text{ Zeitung}] t_V] \text{ hab ich gelesen}_V$

The remnant movement account introduces the process of removing the verb from the VP as a factor influencing the acceptability of the construction. According to Wurmbrand (2001), (56a) is indeed better than (56b).

- (56) a. Vor machte er ihr nichts  
before made he her nothing
- b. Vor hat er ihr nichts gemacht  
before has he her nothing made  
“He has not fooled her”

In (56a), the underlying VP is something like [<sub>VP</sub> *ihr nichts vor-machte*], out of which *ihr* and *nichts* can be scrambled, while *machte* moves to C because of the verb second property. All processes involved are well-motivated in German syntax. This is different with (56b): here, *gemacht* is not the finite verb, hence it does not move to C. It can leave [<sub>VP</sub> *ihr nichts vor-gemacht*] only if we assume there is a rightward movement process for non-finite verbs, adjoining them to I, e.g., This process is not independently motivated, and this might account for any contrast between (56a) and (56b). However, we carried out a questionnaire study and failed to observe any difference in acceptability<sup>9</sup> between these structures.

The availability of a movement operation that extracts non-finite verbs from VP is however crucial for the remnant movement approach. Without such a movement, the phonological material of a DP could never constitute an VP. Haider (1993) and Koopman (1995) argue that there is no such movement of non-finite verbs in German and Dutch. Certain verbs come with two prefixes rather than one, and they typically must not appear in second position, as the contrast between (57a) and (57b-d) suggests. Haider and Koopman derive this and similar contrasts from the assumption that verbs like *voranmelden* cannot

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<sup>9</sup> 48 Subjects (university students) rated 100 sentences on a 7 point scale (1 completely ungrammatical, 7 fully grammatical). Among these 100 sentence, there were 12 items related to the distinction in (56), 4 items belonging to the condition in which the lexical verb was clause final, and 4 items each relating to two conditions in which the lexical verb appeared in second position. Average acceptability of the sentence was between 4.6 and 4.8. The conditions did not differ from each other statistically.

undergo overt movement at all. If this is correct, the wellformedness of (57e) suggests that *voranmelden* has not moved overtly, that is, (57e) supports the idea that non-finite verbs do not adjoin to the heads selecting them in overt syntax.

- (57) a. dass er sein Kind vor-an-meldet  
 that he his child pre-at-reports  
 “that he pre-registers his child”
- b. \* er voranmeldet sein Kind
- c. \* er meldet sein Kind voran
- d. \* er anmeldet sein Kind vor
- e. er wird sein Kind voranmelden können  
 he will his child pre-at-report can  
 “he will be able to pre-register his child”

A discussion of the contrast in (58) can be found in Haider (1997) and Meinunger (2001). Apparently, main verbs must not move out of the scope of certain operators such as *mehr als* “more than”, which implies that these verbs cannot enter simple tense main clauses (58b). (58a), on the other hand, is grammatical since finite verbs stay *in situ* in embedded clauses. By the same logic, (58c) implies that non-finite verbs do not undergo overt head movement either.

- (58) a. dass er den Gewinn [mehr als verdreifachte]  
 that he the profit more than tripled  
 “that he more than tripled his profit”
- b. \* er verdreifachte seinen Gewinn mehr als t
- c. er hat seinen Gewinn mehr als verdreifachen können  
 he has his profit more than triple could  
 “he has been able to more than triple his profit”

Data such as (57)-(58) suggest that movement to C is the only type of overt V movement in German. Because German is an OV-language, this is in line with the typological generalizations uncovered by Julien (2002). If there is no overt movement of non-finite verbs, many ppt-data cannot be reanalyzed as involving remnant movement, because there is no process removing V from VP<sup>10</sup>.

(59) constitutes a further problem for the remnant movement theory. If the preposed material in (59c) is to be analyzed as an instance of remnant VP movement, one not only has to assume that *gesetzt* may move out of VP– we also need to extract the PP *aufs Dach* from VP. There is no independently motivated movement transformation which could do this (note, e.g., that (59b) is indeed ungrammatical). In particular, scrambling cannot be invoked, since the PP is part of the idiom, and therefore meaningless. Scrambling never affects parts of idioms.

- (59) a. Wir haben ihm den roten HAHN aufs Dach gesetzt  
 we have him the red cock on-the roof put  
 “we set his house on fire”
- b. ?\*wir haben ihm aufs Dach [<sub>VP</sub> den roten Hahn t gesetzt]
- c. Den roten Hahn haben wir ihm aufs Dach gesetzt

Consider also (60) in this respect. The verb phrase is merged as [<sub>VP</sub> [<sub>DP</sub> *keine Krawatte*] *getragen*]. The noun must then be separated from the determiner in the derivation of (60) in remnant movement theory. Since German disallows left branch extractions, the separation can only arise by extracting *Krawatte* from the

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<sup>10</sup> Drawing firm conclusions from (57)-(58) and similar data is difficult, however. E.g., the constellation in (57) could also be explained if we assume that particle stranding is obligatory for V to C movement only, but optional otherwise. (57e) could then involve the non-stranding version of verb movement to I, while the optionally stranded particle could still be fronted in (57b) in the context of the movement of a radically evacuated VP.

DP, yielding  $[_{VP} \text{Krawatte } [_{VP} [_{DP} \text{keine } t] \text{ getragen}]]$ . The target remnant VP  $[_{VP} \text{Krawatte } [_{VP} \_]]$  can then be generated by extracting the remnant DP and the verb from VP. This derivation of (60) leaves it open why neither  $[_{VP} [_{DP} \text{keine } t] \text{ getragen}]$  nor  $[_{VP} [_{DP} \text{keine } t]]$  can be found in VP-contexts in German, as (61) illustrates.

(60) Krawatte hat er keine getragen  
 tie has he no wore  
 “He hasn’t worn a tie”

(61) \* keine getragen hat er Krawatte  
 \* keine hat er Krawatte getragen

The attempt to reanalyze ppt-movement as radical remnant movement thus seems to fail because more often than not the movement operations required for evacuating, e.g., VP prior to movement to Spec,CP are not licensed.

Our conclusion only holds for what G. Müller (2002) calls “primary” remnant movement, introduced by Thiersch (1985) and den Besten & Webelhuth (1987) as the interaction of independently motivated operations. “Secondary” remnant movement was proposed by Kayne (1998): it mainly serves to restore constituent order when theory-driven movement operations have yielded incorrect linearizations. Müller (2002) shows that primary and secondary remnant movement have quite different properties. Secondary remnant movement is never feature driven, and is quite unconstrained in grammatical terms.

Obviously, one could postulate a set of secondary remnant movement operations in order to avoid ppt-movement. These operations would extract the verb and other deaccented material from VP, in order to create a VP which contains no phonetic material but a maximal projection with the primary accent. They would neither be motivated independently, nor would they serve the need

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of re-establishing constituent order (as in Kayne 1998). Rather, they only apply because of the need of creating, e.g., focused XPs that contain no overt material but the focus marked phrase. Since the theoretical properties of these secondary operations cannot be those of standard movement (as G. Müller 2002 has shown), the major problem of such an approach is obvious: it is hard to see how it could at all be refuted empirically. Its sole motivation would be to maintain a theoretical postulate (C attracts a focus or topic operator) in the light of empirical counterevidence<sup>11</sup>.

## 7 Some Concluding Remarks

In section 2, we introduced two types of filling the first position in German main clauses: the attraction of the element closest to Spec,CP in case C has no operator feature, and the attraction of an f-operator in case C has an attracting f-feature. This paper has shown that we can maintain this basic dichotomy, but one needs to revise the idea that C attracts operators. Rather, C attracts the word/phrase that bears the marking of an operator.

There are at least two issues that deserve further attention. First, the ppt-movement approach implies that one and the same information structure constellation (say: focus on VP) can be expressed by several different movement operations: it would suffice to prepose the DP-object, but the full VP may be pied-piped, too. Is the choice among these constructions really optional? Note that the pertinent problem is not confined to the ppt-movement theory: in all accounts, the apparent *overall* optionality of focus movement constitutes a problem. Furthermore, in a model in which the driving force for movement is the presence of a focus or topic marker, there is no obvious pre-theoretic sense

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<sup>11</sup> The partial deletion approach of Fanselow & Cavar (2002) could also replace ppt-movement in principle. Just like secondary remnant movement, the partial deletion approach suffers from the fact that it is not restricted enough.

in which the fronting of the object should be more economical than the fronting of the full VP, or vice versa: mere object fronting makes VP discontinuous but leaves base order relations between the verb and the subject intact, while full VP fronting does not create a discontinuous VP, but changes the serialization of *all* elements in VP relative to the rest of the clause. In a way, then, ppt-movement theory predicts the range of choice we have for pied piping in the context of focus or topic movement. In contrast, if attraction would be based on semantic features, DP-fronting for marking VP-focus is difficult to understand and should be highly marked, in contrast to facts.

However, it may be true that (62b) is in a sense more “emphatic” than both (62a,c). The question then is how that impression can be made precise, and how it will formally figure in the attraction account.

- (62) a.   ich hab   ein Buch gelesen  
           I   have a   book read
- b.   ein Buch hab ich gelesen
- c.   ein Buch gelesen hab ich

Some of the examples we have discussed may be characterized by a “topic feature within focus construction” constellation (Caroline Féry, p.c., Lenertova & Junghanns 2004), that may also help to choose between the various fronting options, but, as we have said above, it is dubious whether that affects *all* instances of ppt-movement.

A second area for future research is multiple fronting. For example, as St. Müller (2003) observes, particle fronting co-occurs with a fundamental enigma of German main clauses, viz. “multiply” filled Spec,CP positions, see (63) based on the complex verbs *vor-haben* “to plan” and *an-haben* “to wear”.

- (63) a. [heute abend] [einiges] [vor] dürfte Antje schon noch haben  
 tonight plenty PTC might Antje well still have  
 “Antje may very well have a couple of nice plans for tonight”
- b. viel an hatte er ja nicht mehr  
 much on had he well no longer  
 “he did not really wear a lot”

In our model, the particles are fronted because they are attracted as bearers of the relevant pitch accent. It is unclear, though, what category has been pied-piped in the context of this attraction process. Fanselow (1993) and St. Müller (2003, 2005) offer arguments suggesting that the material preceding the finite verb in (63) is a VP lacking an overt verbal head. However, the arguments against a remnant movement analysis apply to (63) as well, so it is unclear how VP got decapitated in (63). St. Müller (2005) proposes a theory that makes use of some of the technicalities of HPSG that cannot be translated into minimalist and other movement based accounts.

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