

Ā-Movement and conventional implicatures: About the grammatical encoding of emphasis in German

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Abstract

The paper argues that the notion of emphasis has to be part of the grammar of German. It is demonstrated that in German, Ā-movement to the left periphery of a declarative clause is associated with a conventional implicature which encodes the emphatic interpretation of the moved item. The appropriate notion of emphasis is characterized and it is shown how it differs from a coarse concept of contrast. The paper also studies some IP-internal constructions whose elements' interpretation has been assumed to be related to emphasis/contrast. It is argued that for the description of these phenomena, the standard notion of focus is adequate. The paper concludes that the syntactic marking of emphasis is a characteristic feature of Ā-movement.

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1. Introduction

Among the concepts belonging to the information-structural analysis of sentences, the notion of contrast seems to be the most controversial one. There are influential authors who dispute the necessity and fruitfulness of this concept for linguistics (e.g. Lambrecht, 1994). On the other hand, many authors claim that certain constructions in different languages necessarily involve the contrastive interpretation of a specific item and that a notion of contrast is an integral part of linguistic theory (for example, É. Kiss, 1998; Vallduví and Vilkuna, 1998; Arregi, 2003; López, 2009; Winkler, 2005; Molnár, 2006; Frey, 2006a).

The question whether the notion of contrast is necessary for the description of a given language is easy to answer if the language employs some formal marking which functions to indicate a contrastive interpretation of a certain item. Formal markings can be achieved by prosodic, morphological or syntactic means. It is beyond dispute that in German, the language considered in this paper, contrastiveness is not marked morphologically. It is less clear whether or not contrast is marked by prosodic means. Alter et al. (2001) show that in corrections, which usually are considered as special forms of contrastive contexts (see, however, section 4 below for a modified view), speakers of German realise contrastive pitch accents with a steeper rise, a lower onset, and a higher peak than pitch accents marking new information. However, they also show that hearers usually accept so-called contrastive accents in contexts which license new information foci.¹ With

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¹ See, however, Sudhoff (2010), who shows that not all speakers produce a 'contrastive' intonation in corrections, and who interprets the perception data somewhat differently.

Hartmann (2008), this can be interpreted as showing that the correlation between the shape of the accent and the information-structural status of the accented constituent is not strong, and that the difference between contrastive and non-contrastive accent is not categorical but rather gradient.

So the question arises whether German makes use of any syntactic means that unambiguously designate an item as to be contrastively interpreted. In the following, I want to argue that, in fact, there exists at least one operation whose interpretative effect seems to call for a description in terms of contrastivity (cf. Frey, 2006a). However, a closer evaluation of the data reveals that the coarse notion of contrast is not quite appropriate and should be replaced by a more flexible concept of emphasis, which will be explicated.

The paper is organised as follows. Section 2 argues that there are two ways by which the prefield in German can be filled: movement of the highest element of the adjacent middle field, called Formal Movement (FM), and \bar{A} -movement. It is shown that the former process is not associated with stress on the moved item whereas the latter is. Section 3 demonstrates that the processes also differ with regard to interpretation. Whereas FM has no interpretative effect, \bar{A} -movement has one. The section investigates this effect and characterizes it in terms of emphasis. The emphatic effect of \bar{A} -movement in German is due to a conventional implicature associated with this very construction. Section 4 addresses the issue whether a notion of emphasis (or contrast) is necessary to account for the effects of stressed elements in the middle field that have been assumed to be related to contrast. It will be argued that for the description of these phenomena, such notions are not necessary. I conclude that the syntactic marking of emphasis is a characteristic feature of \bar{A} -movement. The final section deals with the phenomenon called *focus scrambling*. It is argued that focus scrambling is not an IP-internal process but is nothing else but an instance of \bar{A} -movement to the C-domain, which is studied in sections 2 and 3.²

2. \bar{A} -Movement and stress

Consider the constituents in the prefields of the following German sentences (i.e. in the positions in front of the finite verbs):

- (1) a. GRÜN will Maria bald die Tür streichen.
green wants Maria soon the door paint
'Soon, Mary wants to paint the door green.'
- b. PräsiDENTin möchte Julia im Sommer werden.
president wants Julia in.the summer become
'Next summer, Julia wants to become president.'
- c. ZerSTREUT hat der Professor heute die Besucher empfangen.
absent-minded has the professor today the guests received
'Today, the professor received the guests absent-mindedly.'
- d. Karl hat um 10 Uhr das Paket weggebracht.
Karl has at 10 o'clock the parcel taken.away
'Karl took the parcel at 10 o'clock.'
- e. Einen Kollegen hat heute ein Polizist verhört.
a^{ACC} colleague has today a policeman interrogated
'A policeman interrogated a colleague today.'
- f. Mit einem Hammer hat Otto das Fenster eingeschlagen.
with a hammer has Otto the window smashed
'Otto smashed the window with a hammer.'

² The paper will not discuss the construction called I-topicalization, illustrated in (i), which is phonetically characterized by a steep rise and a steep fall:

- (i) /GRÜN will Maria die TÜR\ streichen (und /ROT die WAND\
green wants Maria the door paint and red the wall
'Maria wants to paint the door green, and the wall, red.'

Although I believe that a prefield element like the one in (i) has properties which are in accordance with the results of the paper, the construction I-topicalization has many special additional features compared to the more standard construction studied in the present paper. Therefore, I-topicalization should be discussed separately, as it has been and is done in the vast literature on this topic.

There is a remarkable difference between these examples. In order to establish a grammatical structure, the prefield elements in (1a)–(1c) need to be stressed. This is different with the prefield elements in (1d)–(1f): the latter sentences are acceptable even if the prefield elements are not stressed beyond the word accents. (To be sure, the prefield elements of (1d)–(1f) can be stressed. However, this variant of the sentences is of no concern in the present section.) Note that this is also true if the sentences occur in adequate contexts. In (2), this is illustrated for (1e) and (1f):

- (2) a. Die Tür braucht eine neue Farbe.
 ‘The door needs a new paint.’
 GRÜN/*Grün will sie Maria streichen.
 ‘Maria wants to paint it green.’
 b. Wir konnten in die Hütte nicht reinkommen. Sie war verriegelt.
 ‘We couldn’t enter the barrack. It was bolted.’
 Mit einem Hammer/mit einem HAMMer hat Otto schließlich das Fenster eingeschlagen.
 ‘With a hammer Otto finally smashed the window.’

There is a discrepancy between (1a)–(1c) on the one hand and (1d)–(1f) on the other which is likely to be relevant for the observed difference regarding the necessity of stress. The prefield elements in (1a)–(1c) have low base positions (indicated in (3) by ‘ t_1 ’) and cannot be scrambled in the middle field, i.e. they cannot be reordered inside the IP-domain (see section 5 for their behaviour under so-called *focus scrambling*), cf. (3):

- (3) a. *Anscheinend (‘apparently’) will grün₁ Maria bald die Tür t_1 streichen.
 b. *Anscheinend möchte Präsidentin₁ im Sommer Julia t_1 werden.
 c. *Anscheinend hat zerstreut₁ der Professor heute die Besucher t_1 empfangen.

The situation is different with the elements which occupy the prefields in (1d)–(1f). Either they take a base position which constitutes the highest position in the middle field of the sentence in question, (4a), or they can be scrambled to the highest middle field position, (4b) and (4c):

- (4) a. Anscheinend hat Karl um 10 Uhr das Paket weggebracht.
 b. Anscheinend hat einen Kollegen₁ heute ein Polizist t_1 verhört
 c. Anscheinend hat mit einem Hammer₁ Otto t_1 das Fenster eingeschlagen.

Fanselow (2002) and Frey (2006a) offer theories which account for the difference between (1a)–(1c) and (1d)–(1f) on the basis of the difference between (3) and (4). These papers argue that one option to fill the prefield consists in what Frey (2006a) calls *Formal Movement (FM)*. By FM, the highest maximal phrase in the middle field is moved to the adjacent prefield. FM is a process without any intonational or interpretative effects of its own. It retains the properties the proposed item had before FM has been applied. Thus, its sole effect is to fill the prefield of a German V2-clause.³

If an element occupies the highest position in the middle field and, therefore, can be attracted by FM, this highest position may be the element’s base position, or the element may have been scrambled to this position. In (1d), FM attracts the unstressed subjects sitting in its base position. In (1e) and (1f), the prefield elements are first scrambled to the highest position in the middle field. These scrambled phrases do not have to be stressed. In the next step

³ Under a recent understanding of the concept of an A-position, it seems reasonable to conceive FM as an instance of A-movement since its whole purpose is to fulfill the EPP-requirement associated with the first position of a V2-clause. However, for our purposes this issue is of no relevance.

In Zwart (2005), a system is sketched which allows a different formal implementation of the conception which in Frey (2006a) and in the present paper is implemented by FM. Zwart’s (2005) proposal for V2-languages is that in a structure in which the last Merge operation has taken place (i.e. in a root clause), the finite verb moves to the beginning of that constituent which follows the constituent which was merged last. Such a system would render FM superfluous because here, the finite verb in a V2-clause does not have to target a position in the C-domain but may also target an IP-internal position as long as it immediately follows the position of the phrase merged last.

The FM approach is more conservative than Zwart’s proposal in that FM just adheres to Attract Closest and the fulfilment of a pure EPP-feature, whereas Zwart’s proposal is acyclic and sensitive to the last Merge operation. Given the facts discussed in the present paper, the two approaches are empirically equivalent. However, since I see problems for Zwart’s proposal to account for d-pronoun left dislocation in Dutch or German, which is a verb-third construction (cf., e.g. Frey, 2005), I stick to the FM-approach.

of the derivations of (1e) and (1f), the scrambled elements are moved to the prefield by FM, again without being stressed.

This kind of derivation is not possible for the sentences (1a)–(1c). The prefield elements of these examples have base positions which do not constitute the highest position in the middle field. Furthermore, these elements cannot be scrambled to the highest middle field position. It follows that FM cannot apply. Thus, these elements must have arrived at their surface position by another operation. In the following, this operation will be called \bar{A} -movement.

The data in (1a)–(1c) indicate that \bar{A} -movement involves stress on the moved item. Let us see whether this claim is confirmed by further data. A phrase which has undergone long distance movement cannot have been affected by FM, because FM can only attract a sentence constituent which is closest to the targeted prefield. (5) shows that a constituent moved over a long distance has to be stressed⁴:

- (5) Den CHEF₁/*Chef₁ meint Maria, dass Paul zur Party *t_I* einladen sollte.
 the^{ACC} boss thinks Maria that Paul to.the party invite should
 ‘Maria thinks that Paul should invite the boss to the party.’

This also is shown by the data in (6):

- (6) a. Es₁ wird *t_I* bald regnen.
 it will soon rain
 b. *Es₁ sagt Karl, dass *t_I* bald regnen wird.
 it says Karl that soon rain will
 c. Es₁ hat *t_I*’ zum Glück niemand *t_I* mitgekriegt.
 it has luckily nobody noticed
 ‘Luckily, nobody noticed it.’
 d. *Es₁ glaube ich, dass zum Glück niemand *t_I* mitgekriegt hat.
 it think I that luckily nobody noticed has

The German neuter pronoun *es* cannot be stressed. (6a) and (6c) show that *es* can appear in the local prefield. As indicated in (6a) and (6c) by traces, *es* may very well appear in the first position of the middle field. Thus, we can assume that in (6a) and (6c), the prefield position of *es* is brought about by FM. Now, (6b) and (6d) show that *es* cannot be moved over a long distance. The explanation is that \bar{A} -movement involves stress on the moved item.

Another piece of evidence for the claim that \bar{A} -movement involves stress on the moved item can be seen in the following data (cf. Cardinaletti, 1990):

- (7) Wird sich Otto das Spiel anschauen?
 will REFL Otto the game watch
 a. Ø wird Otto sich bestimmt anschauen.
 will Otto REFL definitely watch
 ‘Otto will definitely watch it.’
 b. *Ø glaube ich, dass Otto sich anschauen wird.
 believe I that Otto REFL watch will

As is well known, German has a so-called topic-drop construction, illustrated in (7a): a topical element sitting in the prefield can be left unpronounced if it is contextually recoverable. In (7a), the dropped phrase in the prefield *das Spiel* (‘the game’) has its origin in the adjacent IP-domain. Thus, we can assume that it was brought to the prefield by FM. (7b) shows that topic drop cannot take place if the dropped element would have to be extracted from an embedded clause by means of \bar{A} -movement. Since a stressed constituent cannot be made phonetically non-realised, the ungrammaticality of (7b) finds an easy explanation if \bar{A} -movement involves stress.

⁴ This observation holds for all of those varieties of German which allow this kind of movement in the first place.

3. The interpretative effect of \bar{A} -movement

In the previous section, it was observed that in German, \bar{A} -movement to the prefield is accompanied by stress on the moved item, whereas the attraction called FM is not. There is another difference between the two operations. As mentioned above, according to Fanselow (2002) and Frey (2006a), FM does not have any interpretative effects on the moved item. Consider, for example, the sentences in (8):

- (8) a. dass Karl um 10 Uhr das Paket weggebracht hat
that Karl at 10 o'clock the parcel taken.away has
b. Karl₁ hat t_1 um 10 Uhr das Paket weggebracht.
c. dass einen Kollegen₁ heute ein Polizist t_1 verhört hat
that a^{ACC} colleague today a policeman interrogated has
d. Einen Kollegen hat t_1 heute ein Polizist t_1 verhört.
e. dass mit einem Hammer₁ Otto t_1 das Fenster eingeschlagen hat
that with a hammer Otto the window smashed has
f. Mit einem Hammer₁ hat t_1 Otto t_1 das Fenster eingeschlagen.

If we compare (8a), (8c), (8e) with (8b), (8d), (8f), respectively, intuition tells us that the preposing of the highest middle field elements to the prefield by FM does not affect the interpretation of these items or of the whole sentences. This intuition can be confirmed by tests. For example, consider the sentences in (9):

- (9) Was gibt es Neues?
'What's new?'
a. Nun hat [das Paket, von dem ich dir erzählt habe]₁ Karl endlich t_1 zur Post gebracht.
now has the parcel of which I you told have Karl finally to.the post.office brought.
'Now, Karl has finally brought the parcel I told you about to the post office.'
b. [Das Paket, von dem ich Dir erzählt habe]₁ hat t_1 Karl endlich t_1 zur Post gebracht.
c. Laut Maria konnte [mit dem Hammer den er von Dir
according.to Maria could with the hammer that he from you
geliehen hat]₁ Otto t_1 die Tür einschlagen.
borrowed has Otto the door break
'According to Maria, Otto could break the door with the hammer that he
borrowed from you.'
d. [Mit dem Hammer, den er von Dir geliehen hat]₁ konnte t_1 Otto t_1 die Tür einschlagen.

The phrases which in (9a) and (9c) are scrambled to the highest middle field position are identical to the non-stressed phrases in the prefields of (9b) and (9d). All four sentences are possible answers to a discourse-initial 'what's-new'-question. To be sure, the scrambling of a phrase has to be licensed. Therefore, to make the sentences (9a) and (9c) natural in the given context, the scrambled object in (9a) and the scrambled instrumental in (9c) are enlarged by appropriate relative clauses. However, the point here is that if scrambling of a phrase is licensed, its further movement to the prefield by FM is licensed too. The examples in (9) show that no further licensing requirements regarding discourse-givenness come up because of FM. In a similar vein, it could be shown that other pertinent interpretative properties an item positioned in the left edge of the middle field may have, such as being a topic (cf. Frey, 2006a), or its semantic status regarding specificity remain unchanged if the item is moved by FM.

In contrast to the intuition concerning the effect of FM, speakers of German have the feeling that there is a special interpretative effect associated with \bar{A} -movement as it occurs in (1a)–(1c) or (5). So the question arises what the interpretative contribution of \bar{A} -movement is. Let us start with the fact that \bar{A} -movement goes together with stress on the moved item. In German, stress normally marks focus. Focus on an item α indicates that alternatives to the denotation of α are relevant for the interpretation of α (cf., for example, Krifka, 2007). Thus, the question to ask is whether the interpretative effect of \bar{A} -movement can be fully captured by saying that \bar{A} -movement triggers the focal interpretation of the moved item or whether one has to envisage an additional interpretative component.

To approach this issue, let us first look at phrases functioning as answers to *wh*-questions. Such phrases are the standard example for focal phrases. In (10a), the answering term, an object, sits in its base position. As observed in Lenerz (1977), a constituent which answers a *wh*-question cannot be scrambled in the middle field, cf. (10b). In (10c), the answering terms appears in the prefield. According to the results of the preceding section, it must have arrived at this position via \bar{A} -movement since it cannot have occupied the highest position in the middle field.

- (10) Was hat Otto heute auf dem Markt gekauft?
 what has Otto today on the market bought
 a. Otto hat heute auf dem Markt zwei Kilo Äpfel gekauft.
 Otto has today on the market two kilos apples bought
 b. ?? Otto hat zwei Kilo Äpfel₁ heute auf dem Markt *t_l* gekauft.
 c. Zwei Kilo Äpfel₁ hat Otto heute auf dem Markt *t_l* gekauft.

At first glance, it seems that there is no interpretative difference between an answer with the answering term in situ and one with the answering term \bar{A} -moved to the prefield. However, in Frey (2006a) it is observed that it is not always true that the answering term to a *wh*-question may appear in situ or ex situ. Sometimes, it has to stay in its base position:

- (11) Wo liegt eigentlich Stuttgart?
 ‘Where is Stuttgart situated then?’
 a. Stuttgart liegt in einem TAL.
 Stuttgart is.situated in a valley
 b. #In einem TAL liegt Stuttgart.

Thus, it cannot be the case that the interpretative effect of \bar{A} -movement is nothing else than to mark the moved item as focal. This condition would be fulfilled in (11b).

Note, by the way, that in contrast to (11b), the following sentence constitutes a perfect answer to the question in (11):

- (12) In einem TAL liegt ’s/ es.
 in a valley is.situated it

In German, weak pronouns can appear as XPs (as for example in (6) above) or as clitics (e.g. Frey, 2006b). As clitics they only can occur attached to the lexically realized head of the C-domain. In (12), the subject is realized by a clitic pronoun. FM attracts the closest maximal projection, i.e. it is not sensitive to an intervening X^0 -element. Thus, (12) does not have to be derived by \bar{A} -movement, but can be derived by FM since FM is not hampered by the intervening clitic pronoun.

In Frey (2006a), it was proposed that the interpretative effect of \bar{A} -movement consists in inducing a contrastive interpretation of the moved item with regard to a salient set of alternatives. The conditions in (13) and (14) were assumed to rule the filling of the prefield in German.

- (13) The German prefield can be filled either
 (i) by means of FM; or
 (ii) by means of \bar{A} -movement, which has the effect of inducing stress on a constituent β contained in α and of inducing a contrastive interpretation of α .
- (14) If in a sentence S, an expression α containing a stressed constituent β is contrastively interpreted, a possibly open set M, $|M| \geq 2$, of expressions referring to salient denotations becomes part of the interpretation process of S. M includes α and expressions referring to alternatives to the referent of α varying in the denotation of β .
 The utterance of S has the implicature that S is not true if α is replaced by any $x \in M$, $x \neq \alpha$.

The reason why in (14) the exhaustiveness requirement, which is customarily associated with contrast, merely has the status of an implicature is because a question like the one in (10) could also be answered by *Zwei Kilo Äpfel hat Otto heute auf dem Markt gekauft, und drei Pfund Bananen* ('Otto has bought two kilos of apples on the market today, and three pounds of bananas'). Here, the exhaustivity associated with the first conjunct's answer is cancelled out by the second conjunct.

To explain the deviance of (11b), Frey (2006a) argues that in (11b), the answering term does not denote an element picked from a set of salient alternatives, thereby violating condition (14). The idea is that the denotatum of *in einem Tal* ('in a valley') does not belong to a dimension according to which the question in (11) could be expected to be answered.

The examples (16) and (17) could be taken as further evidence for the condition in (14):

- (15) *weil Geld₁ Hans *t*₁ hat
since money Hans has
- (16) Wer bezahlt die Rechnung?
who pays the bill
a. *GELD hat HANS.
b. HANS hat Geld.
- (17) Wer hat Barvermögen, wer hat Grundbesitz?
who has liquid.funds who holds property
BARvermögen hat KARL, GRUNDbesitz hat ERwin.

(15) shows that the existentially interpreted mass noun *Geld* ('money') cannot scramble across the subject. Thus, in (16a), it must have arrived at the prefield by \bar{A} -movement. Given (14), it could be said that (16a) is bad because a contrastive interpretation of *Geld* is not justified in the given context. This is different for (17). Here, the context makes a contrastive reading of the prefield elements in the answer suitable, and therefore, the sentence is fine.

Although (13) and (14) make some sense of data like (11), (16), and (17), the condition in (14) cannot be correct. Consider again (11). As mentioned above, to explain its deviance, Frey (2006a) assumes that in (11b) the answering term does not denote a salient referent. However, this approach leaves unexplained why the answer in (18) is fine. Its prefield element is the same as in (11a)⁵:

- (18) Wo liegt eigentlich Stuttgart?
In einem TAL liegt dieser Sündenpfuhl.
in a valley is.situated 'this sink.of.iniquity'

Consider next the following set of examples, which mentions the two German football teams Bayern München and Hansa Rostock. The judgements for these sentences were taken at a time of a season of the German football league at which every German interested in football knew that Bayern München is likely to win its matches and Hansa Rostock is likely to lose them. The informants who have been asked to judge these sentences are interested in football.

- (19) Wie hat Bayern München gespielt?
how has Bayern München played
a. GeWONnen₁ hat Bayern München *t*₁.
won has Bayern München
b. Bayern München hat GeWONnen.
- (20) Wie hat Hansa Rostock gespielt?
a. #GeWONnen₁ hat Hansa Rostock *t*₁.
b. Hansa Rostock hat GeWONnen.

Interestingly, the preposing of the answering term is better in the case in which the answer complies with the expectation than in the case in which it does not. Obviously, this cannot be explained by (14). A contrastive interpretation of the preposed item would just demand that the sentence is not true if the \bar{A} -moved item is replaced by a

⁵ The example (18) is owed to Gisbert Fanselow.

term denoting a salient alternative. This condition is fulfilled in both examples. Thus, (11)/(18) and (19)/(20) show that condition (14) has to be replaced by something which represents a better understanding of the interpretative effect of \bar{A} -movement in German.

(19)/(20) makes it clear that one has to assume that among the contextually salient referents evoked by the \bar{A} -movement of α , α refers to a denotatum with a special status. In (19)/(20), this special status is relative to an expectation shared by speaker and hearer. Note, however, that for the other examples containing \bar{A} -movement considered so far, expectation does not seem to play the crucial role. Here, the special status of the denotatum of the proposed phrase must arise because of other reasons.

In the following, I want to argue that the distinguished status of the referent of the \bar{A} -moved item is expressed by a C(onventional) I(mplicature) (cf. Potts, 2007) which is associated with the movement. Potts (2007) lists the following characterizing properties of CIs:

- (21) a. CIs are part of the conventional (lexical) meaning of words.
 b. CIs are commitments, and thus give rise to entailments.
 c. These commitments are made by *the speaker of the utterance* “by virtue of the meaning of” the words he chooses.
 d. CIs are logically and compositionally independent of what is “said (in the favoured sense)”.

A CI is different from a conversational implicature in being not cancellable, and it is different from a presupposition in being not backgrounded and in letting the regular assertive content of the sentence be independent from its own content.

With the help of the notion of a CI, so I want to suggest, the interpretative effect of (true) \bar{A} -movement in German can be characterized in an insightful way. As above, I assume that there are two principal ways to fill the German prefield⁶:

- (22) In German, the prefield of a declarative clause can be filled by means of either
 (i) FM; or
 (ii) \bar{A} -movement of a phrase α containing a prosodically prominent sub-constituent β .

The interpretative effect of \bar{A} -movement emerges from the facts that a set of salient alternatives including the referent of the moved item is evoked and that a CI is generated which operates on this set of alternatives.⁷

- (23) Let S be a declarative sentence involving \bar{A} -movement of a constituent α containing a stressed subconstituent β . A set M denoting salient referents becomes part of the interpretation process, $|M| \geq 2$. M contains α and expressions denoting alternatives to the referent of α , varying in the denotation of β . S is associated with the CI in (24).

- (24) CI: The speaker expresses that α is ranked highest in a partial ordering which holds among the elements of M pertaining to S and which contains one element which is highest.

As already indicated above, I want to claim that the ordering which is relevant for the CI associated with S is dependent on the context in which S appears. (25) lists some examples of such orderings which we have to allow for and which will be commented on in the following:

- (25) Depending on the context and on the content, $S[\alpha]$, $S[\alpha']$, $S[\alpha'']$, ... could be ordered according to expectation, relevance, likelihood, mere truth value ...

⁶ There is a third way to fill the prefield, which is discussed in Frey (2006a). It consists in base generation of certain elements with an extra-clausal semantics. These elements cannot appear in the middle field.

⁷ I assume that the CI is associated with the (empty) head of the functional projection whose Spec is targeted by \bar{A} -movement. In Frey (2006a), this projection was called ContrastP.

I take the CI in (24) to be an explication of the notion of emphasis. By assigning highest rank to α , the speaker leads the focus of attention to α , i.e. (s)he puts a special emphasis on α . However, it is obvious that (24) also involves the notion of contrast. The ordering appealed to has a highest element, and S holds for this element. Thus, (24) expresses exhaustivity although its exhaustivity requirement does not have to hold with regard to truthfulness, but may hold with regard to other criterions. In the following it should be borne in mind that the notion of emphasis employed here comprises a certain explication of contrast according to which an element is contrasted to others because it is highest ranked on a scale.

Let us now reconsider the examples above assuming (23) and (24), and let us start with (10c). Without any further background, the effect of the associated CI seems to be weak. The hearer will assume that the denotation of the answering term is highest ranked for the speaker just because the speaker knows that it yields a true answer and that the alternatives do not yield a true answer. However, the same effect seems to arise with (10a), which has the answering term in situ. In the given context, the answer given in (10a) can be expected to be complete. But there is a difference. In (10c), exhaustivity is grammatically encoded as a CI, in (10a) it is just the result of an implicature generated by general Gricean reasoning. This difference becomes apparent in (26):

- (26) Was hat Otto heute auf dem Markt gekauft?
- a. FLEISCH hat Otto heute gekauft, und 3 Pfund BaNAnen.
meat has Otto today bought and 3 pounds of bananas
'Today, Otto bought meat, and 3 pounds of bananas.'
 - b. Otto hat heute FLEISCH gekauft, und 3 Pfund BaNAnen.

In (26a) and in (26b), the second conjunct of the answer makes clear that the first conjunct does not constitute a complete answer. In (26b), this just leads to the cancellation of the first conjunct's conventional implicature that the answer is complete. No further interpretational effects arise. This is different with (26a). (26a) is associated with the CI in (24), which cannot be cancelled. The CI depends on an ordering with a highest element. Thus, in contrast to (10c), in (26a) the CI associated with the first conjunct cannot depend on the ordering according to truthfulness because the second conjunct denies that Otto only bought meat. So, some other ordering must be relevant. This is the reason why by uttering (26a), the speaker is considered to judge the buying of the meat as somehow more remarkable than the buying of the bananas, i.e. the speaker ranks the buying of the meat higher than the buying of bananas in some ordering different to the ordering just based on truthfulness.

In (10) and (26), the variant with the answering term in situ and the variant with the answering term in the prefield are both perfect. However, if the question demands that a certain ordering between the answering term and its alternatives is taken into account, the variant with the answering term in the prefield is preferred:

- (27) Was hat Otto dieses Mal Besonderes auf dem Markt gekauft?
- 'Which extraordinary thing did Otto buy on the market this time?'
- a. PaPAyas₁ hat er dieses Mal *t_l* gekauft.
Papayas has he this time bought.
 - b. Er hat dieses Mal PaPAyas gekauft.

In (27a), by preposing the answering term the speaker indicates that (s)he adopts the ranking introduced in the question. Therefore, (27a) fits smoothly into the context. With (27b), the speaker does not express any ranking between the alternatives. Thus, this answer is less appropriate in the given context.

Let's move on to the examples (11) and (18). The answer in (11b) is not felt to be appropriate. It is very hard for the hearer to imagine that with regard to some ordering, the given answer should be the highest element in a set denoting salient alternatives. If the ranking were simply according to the truth value, it would operate on a set containing the denotations of *in einem Tal* ('in a valley'), *auf einem Berg* ('on a hill'), *in der Ebene* ('in the plain') and perhaps more elements picked up from the very same dimension. That in the given context, the speaker should take such a set as salient is highly implausible. The same would be true if the hearer assumed that the speaker takes another ordering as relevant. Again, it would be unclear how the speaker could take any pertinent set of alternatives as salient.

The situation is different for the answer in (18). Here, the speaker uses a descriptive DP to refer to Stuttgart. To see what is going on in such a case, first consider (28):

- (28) Wo liegt eigentlich Stuttgart?
 a. In einem TAL liegt diese schöne Stadt.
 in a valley is.situated this beautiful city
 b. Diese schöne Stadt liegt in einem Tal.

Here, the positioning of the answering term in the prefield leads to a very natural answer. The hearer easily accepts that for the speaker, there exists a ranking among salient alternatives according to which the answering term is ranked highest. For example, the hearer might assume that the speaker considers it the most plausible that the location of Stuttgart, classified as beautiful, is situated in a valley because (s)he takes this location as the primary reason why (s)he judges Stuttgart as beautiful.

Something similar happens in (18). By the epithet, the speaker introduces a new predication on Stuttgart. The hearer now accepts that relative to this new property, the speaker might consider a set containing the denotation of *in einem Tal* and alternatives as salient and that for the speaker, there might exist a ranking among the alternatives according to which the fact that this sink of iniquity is situated in a valley is ranked highest.

Let's move to (16) and (17). The strangeness of (16a) is straightforwardly captured by (23) and (24). Since the prefield element is \bar{A} -moved, a set of salient alternatives to its denotation becomes part of the interpretation process. Given the context, making reference to a set of alternatives does not make any sense. This is different with (17). Making reference to a salient set of alternatives by preposing the answering terms is motivated since this very set is introduced by the question. Without any further background information, the underlying ranking of the CIs associated with the answers can be taken to be according to the truth value such that the exhaustiveness of the respective answer is grammatically encoded.

A case similar to (17) is (29a):

- (29) Was möchte Paul? Ein Eis oder einen Kuchen?
 ‘What does Paul want? Ice cream or a cake?’
 a. Einen KÜchen₁ möchte Paul *t₁*.
 a cake wants Paul
 b. Paul möchte einen KÜchen.

Here, the question introduces a pair of contrasting alternatives from which the answer should be chosen. Informants slightly prefer (29a) to (29b). The answer in (29a) mirrors the contrastive setting of the question by grammatical means in that the CI associated with the preposing expresses a contrast between the alternatives by ranking them according to the truth values of the answers containing them. In (29b), the contrast between a cake and an ice cream, i.e. the fact that a cake will yield a true sentence, but an ice cream will not, is not grammatically encoded; it is just an effect of general conversational reasoning.

With (24), the judgements about (19) and (20) become plausible too. As mentioned above, the sentences have been judged by football fans. Football fans normally have expectations with regard to the results of matches; this shows that they are experts. In (19) and (20), there is no context given beyond the question. Therefore, the hearer can assume that the ranking which is part of the CI of (19a) and (20a) expresses the expectation the speaker had. With (19a) and with (20a), the speaker expresses that according to her/his expectation, the highest ranked predicate to make the answering sentence true was ‘win’. The speaker's attitude makes sense to the hearer in the case of (19a) because the hearer can take the underlying ranking as reasonable. However, (20a) must be puzzling to a hearer informed about German football at the time of the questioning because the speaker's attitude does not match what the hearer can take as knowledge belonging to the ‘common knowledge’ of people interested in football. Note that (19b) and (20b) both are good. Given the context, the speaker does not have to impose a ranking on the set of alternatives.

The next examples demonstrate how different answers to the same question may give rise to very different rankings.

- (30) Was hast Du heute Nacht gemacht?
 ‘What did you do last night?’
- Ich habe geSCHLAFen.
I have slept
 - GeSCHLAFen hab ich.
 - Ich war auf einer BerliNAle-Party.
I was at a Berlinale-party
 - Auf einer BerliNAle-Party war ich.

With normal focal stress on the answering terms, the answers in (30a) and (30c) are felt to be standard information giving answers without any special effect. This is different with (30b) and (30d). These answers have additional meanings, albeit different ones. The reason is that the rankings which are part of the CIs associated with the preposings occurring in these answers are different. The ranking naturally assumed to underlie (30b) is according to expectation. Thus (30b) highlights the fact that the answer could be expected. The effect is different with (30d). Berlinale-parties are not open to everyone. Thus, (30d) highlights the fact that it is something special that the answerer was at a Berlinale-party.

After having seen how (23) and (24) account for different data, it has to be shown that, as (24) claims, the interpretative effect associated with \bar{A} -movement in fact is a CI. CIs are entailments, and therefore, their content is not deniable (cf., for example, Potts, 2007). Let’s see whether the interpretative effect of \bar{A} -movement conforms to this criterion:

- (31) Wie hat Maria ihre Tür gestrichen?
 ‘How did Maria paint her door?’
- GRÜN hat sie ihre Tür gestrichen. #Aber das ist ja nicht weiter erwähnenswert.
 ‘She has painted her door green. However, this is not worth further mentioning.’
 - Sie hat ihre Tür GRÜN gestrichen. Aber das ist ja nicht weiter erwähnenswert.

The follow-up sentences in (31a) and (31b) show that the speaker considers the content of the answer not worth mentioning. In (31a), (24) contributes to the meaning of the first clause: by preposing the answering term, the speaker expresses that according to her/him, there exists a ranking among green and its alternatives according to which the fact that Maria chooses green for the painting of the door is ranked highest. Normally, if one considers a fact to be highest ranked according to some standard one considers this fact worth mentioning. So, if the latter is denied the former is denied too. Thus, a conflict arises in (31a). Note that there is no conflict in (31b), where the answering term is not preposed.

The fact that the sequence in (31a) is not well formed demonstrates that the interpretative effect associated with \bar{A} -movement cannot be cancelled. Non-cancellability is a signum of CIs. In contrast, conversational implicatures are cancellable. Thus, (31a) shows that the effect on meaning we find associated with \bar{A} -movement is in fact grammatically encoded and does not just arise by virtue of general conversational reasoning.

Another property of CIs is their anti-backgrounding requirement (Potts, 2007). As is well known, a presupposition may very well be part of the background. Thus, the anti-backgrounding requirement distinguishes CIs from presuppositions. How does (24) behave in this respect? Consider the following example:

- (32) Jeder weiß, dass die Bayern Deutschlands erfolgreichste Fußballmannschaft sind. Wie haben sie denn an diesem Wochenende gespielt?
 ‘Everyone knows that the Bayerns are Germany’s most successful football team. How did they play this weekend?’
- #GeWONnen haben die Bayern.
won have the Bayerns
 - Die Bayern haben geWONnen.
 - VerLOren haben die Bayern.
lost have the Bayerns

In (32), the context makes explicit which answer is expected. The answer given in (32a,b) confirms this expectation. So, the hearer will assume that the ranking which is part of the CI associated with the preposing in (32a) is expectation,

and that the given answer is the highest element of this ranking. Therefore, in (32a) the associated CI already belongs to the background of the sentence. As a result, the anti-backgrounding requirement of the CI is violated, and the sentence is inappropriate. In (32b), no CI is generated and the fact that the given answer confirms the explicitly stated expectation causes no problem. The answer in (32c) contradicts the expectation expressed by the context. Thus, the ranking belonging to the CI of (32c) is different to expectation. It is likely that the ranking employed in (32c) is according to surprise. In any case, the CI associated with (32c) is not part of the background and the anti-backgrounding requirement is fulfilled.

The last phenomenon to be considered in this section concerns thematic predicates in the prefield, which, at first sight, seem to be problematic for the account of the interpretative effect of \bar{A} -movement given in this paper. However, first consider predicates in the prefield which behave as expected:

- (33) a. Tanzen tut Tanja immer noch häufig.
 (to) dance does Tanja still often
 ‘Tanja still often dances.’
 b. Gesehen habe ich sie schon, aber kennen tu ich sie nicht.
 seen have I her ModPart but (to).know do I her not
 (Duden 9, 1997)
 ‘I have seen her, but I don’t know her.’

Verbal elements cannot be scrambled; therefore they only can get to the prefield via \bar{A} -movement. Thus, in sentences like (33), their preposing is associated with the CI in (24). This explains the emphatic/contrastive interpretation the sentences in (33) have (cf. Duden 9, 1997).

Now, consider the following examples, which do not behave as expected⁸:

- (34) a. Unbekannte Täter beschädigten einen Mercedes-Benz SLK.
 unknown offenders damaged a Mercedes-Benz SLK
 Abgestellt war der Wagen auf dem Parkplatz eines Baumarkts.
 parked was the car on the car.park of.a do-it-yourself.store
 ‘Unknown offenders damaged a Mercedes-Benz SLK. The car was parked on
 on the car park of a do-it-yourself store.’
 b. Die Universität hat eine Stellenanzeige geschaltet. Gesucht wird ein Hausmeister
 the university has a employment.ad placed looked.for is a caretaker.
 ‘The university has placed an employment ad. A caretaker is looked for.’

Abgestellt in (34a) and *gesucht* in (34b) need not to be stressed and associated with an emphatic or contrastive interpretation. Since these verbal forms seem to be positioned in the prefield and to be \bar{A} -moved, the sentences in (34) appear to contradict our claims regarding \bar{A} -movement in (23)/(24).

However, I believe that it is not true that in (34) *abgestellt* and *gesucht* are located in the prefield and that in the derivation of (34), \bar{A} -movement is involved. What I want to argue for is that the second clauses in (34a) and (34b) are instances of the construction called ‘Linksversetzung’ (German Left Dislocation) with a dropped resumptive pronoun (RP).

Note, first, that a verbal element can undergo German Left Dislocation with *das* as the RP, cf. (35a). Note, secondly, that the RP can be the highest element in the middle field, cf. (35b), and, therefore, in (35a) *das* may have been moved to the prefield by FM.

- (35) a. Abgestellt, das war der Wagen auf dem Parkplatz eines Baumarkts.
 b. Abgestellt, unglücklicherweise (‘unfortunately’) war das der Wagen auf dem
 Parkplatz eines Baumarkts.

⁸ Thanks to Marga Reis, Volker Gast, and Florian Haas for pointing out this type of examples to me.

As already illustrated in (7a) above, German offers a so-called topic-drop construction: a topic in the prefield can be left unpronounced if it is contextually recoverable. It can be shown that the RP of a German Left Dislocation is a topic (cf. e.g. Frey, 2005). Thus, a sentence like (36) can be derived from (35a) by topic drop:

(36) Abgestellt, Ø war der Wagen auf dem Parkplatz eines Baumarkts.

An important restriction on the proper use of the German Left Dislocation is that the left-dislocated phrase is, in a broader sense, anaphorically related to material which is explicitly introduced into the discourse (cf. e.g. Frey, 2005). Now, in a broader sense, *abgestellt* in (34a) and *gesucht* in (34b) are anaphorically related to the preceding discourse. Therefore, the second clauses in (34a) and (34b) could also be constructed as an explicit German Left Dislocation:

- (37) a. Unbekannte Täter beschädigten einen Mercedes-Benz SLK. Abgestellt, das war der Wagen auf dem Parkplatz eines Baumarkts.
 b. Die Universität hat eine Stellenanzeige geschaltet. Gesucht, das wird ein Hausmeister.

In (37) *abgestellt* and *gesucht* can be unstressed and can have a neutral interpretation without any emphatic or contrastive effect.

Given these different observations, we can assume that the second sentences in (34) are derived from the second sentences in (37) by topic drop of the RPs sitting in the prefields. Note that under this assumption, we expect that a verbal element in the left periphery which has a neutral interpretation cannot be related to an embedded clause, the reason being that long distant movement of a topic-dropped element is ruled out.

(38) Die Universität hat eine Stellenanzeige geschaltet. Gesucht meint Max, dass ein Hausmeister wird.
 ‘The university has placed an employment ad. Max says that a caretaker is looked for.’

In fact, the second sentence only is good if *gesucht* is stressed and receives the emphatic/contrastive interpretation we have assigned to \bar{A} -movement (which in case of (38) leads to a somewhat strange reading). Thus, in (38) the predicate is placed in the prefield and is moved there by \bar{A} -movement. Only a thematic element immediately preceding the clause it belongs to can be analysed as a left-dislocated element sitting in a position in front of the prefield. In this case, the prefield can be filled by an empty element, the empty element being the result of topic drop of the resumptive pronoun of the Left Dislocation.

Let me finish this section with a remark on Zimmermann’s (2007) and Hartmann’s (2008) explication of contrastive and emphatic focus, respectively. Zimmermann assumes that marking a constituent α as contrastive indicates that the speaker considers the assertion containing α to be unexpected by the hearer. Hartmann assumes that emphasis on a phrase α indicates that the assertion containing α is considered as an unexpected discourse move. Our discussion in this section has shown that we cannot adopt any of these explications. In only one of our examples, cf. (32c), it was clearly unexpectedness which constituted the ranking among the alternatives. To be sure, it certainly would be easy to find more examples showing that the speaker ranks the alternatives according to unexpectedness. However, the crucial point is that we have seen that there does not exist one single ranking which underlies the interpretation of all emphasised phrases. Therefore, in (24) it is left to the context which ranking the hearer assumes to be relevant for the speaker.⁹

⁹ Let me add a remark on Fanselow (2008). On the one hand, Fanselow (2008) seems to deny that there is any interpretative effect in preposing a focussed constituent, on the other hand he formulates a condition on preposing, albeit a very weak one. He speculates that the function of fronting a focussed constituent lies “in increasing the listener’s attention by the choice of an unexpected syntactic construction”.

Again, we cannot adopt this explication. For one thing, to move a focussed constituent to the German prefield certainly does not result in an unexpected syntactic construction, for another, as can easily be verified, Fanselow’s suggestion cannot account for several data considered in this section (cf. (11), (19)/(20) or (27)).

4. The IP-domain and the notion of emphasis/contrast

In the preceding section, it was claimed that \bar{A} -movement, i.e. semantically/pragmatically contentful movement to the C-domain, is necessarily associated with stress and with an interpretative effect characterised by means of the notion of emphasis, which in turn refers to the concept of contrast between ranked alternatives. In order to find out the interpretative properties of \bar{A} -movement, often a comparison was made between an example with an \bar{A} -moved element and an example which has the same element in situ in the IP-domain. In this section, I want to consider some further examples which demonstrate an interpretative difference between items \bar{A} -moved to the prefield and stressed items inside the IP-domain, thereby emphasising that (24) expresses a characteristic property of \bar{A} -movement.

Let us start by looking at the pair of examples in (39). (39b) contains an \bar{A} -moved and stressed element in the prefield; in (39a), the same stressed element occurs in the IP-domain:

- (39) Ich habe vorher Otto getroffen.
 I have before Otto met
 a. Er hat gesagt, dass er gerade für MaRIA ein GeSCHENK gekauft hat.
 He has said that he just.now for Maria a present bought has
 b. #Für MaRIA hat er gesagt, dass er gerade ein GeSCHENK gekauft hat.

The phrase *ein Geschenk* ('a present'), which in both examples carries the neutral sentence accent, is not of concern here. What is of interest is the phrase *für Maria* ('for Maria'). (39b) shows that in the given context, the \bar{A} -movement of this phrase yields an unacceptable result. This is accounted for by condition (23). According to (23), the set of alternatives which is evoked by \bar{A} -moving a phrase has to be salient. Thus, (39b) is bad because in the given context, there exists no salient set of alternatives to which Maria belongs. Compare (39a), in which the stressed phrase *für Maria* is positioned in the middle field. This sentence is possible in the given context. We can assume that in (39a), the stressing of *für Maria* leads to a standard case of focussing. The focussed phrase evokes a set of alternatives of the right semantic type the existence of which has to be accommodated. In contrast, the stronger requirement associated with (39a) cannot be satisfied by accommodation because it demands the existence of a *salient* set of alternatives.

In the literature, different phenomena are brought into relation with the notion of contrast, regardless of whether the pertinent constituents are positioned in the prefield or in the IP-domain (cf. among many others, Alter et al., 2001; Molnár, 2002; Winkler, 2005; Grewendorf, 2005; Zimmermann, 2007; Hartmann, 2008). One of these phenomena is selection, which was already considered in the last section, cf. (29), repeated here:

- (29) Was möchte Paul? Ein Eis oder einen Kuchen?
 'What does Paul want? Ice cream or a cake?'
 a. Einen KUchen₁ möchte Paul *t₁*.
 a cake wants Paul
 b. Paul möchte einen KUchen.

There, we observed that informants prefer (29a), in which the selected term is \bar{A} -moved to the prefield. Why (29a) is preferred was explained in section 3 by appealing to the CI associated with \bar{A} -movement. Why is (29b), although not preferred, still possible? This already follows if we assume that *einen Kuchen* is just focussed. A focussed constituent evokes a set of alternatives. Given the context in (29), this set will contain an ice cream and a cake. By general conversational reasoning, which takes the answer in (29b) as a complete one, it follows that Paul does not want an ice cream. This shows that with the help of general conversational reasoning, the focussed phrase in the answer of (29b) can fulfil a selective function. Thus, the notion of contrast or emphasis is not needed to account for the fact that (29b) is possible in the given context.

The notion of contrast is also often employed for the analysis of corrections, which are illustrated in (40) and (41):

- (40) A: Maria hat eine Hose gekauft.
 Maria has a pair.of.trousers bought
 B: Nein, Maria hat ein KLEID gekauft.
 no Maria has a dress bought
 ‘A: Maria bought a pair of trousers. B: No, she bought a dress.’
- (41) Peter ist mit der StrASsenbahn gekommen, nicht mit dem Auto.
 Peter has with the tram come not with the car
 ‘Peter came by tram, not by car.’

Consider B’s statement in (40). At first sight, it seems that the stressed element in the middle field (in the IP-domain) is not just a focus because, by using this sentence, B corrects A’s statement with regard to the content of the stressed item. However, the impression that the stressed phrase is the correcting element might be misguided. Consider the following examples with a regular nuclear stress on *Kleid* (‘dress’)¹⁰:

- (42) A: Maria hat eine Hose gekauft.
 a. B: #Maria hat ein KLEID gekauft.
 b. B: Ein KLEID hat Maria gekauft.

If the intended meaning is correcting A’s statement, informants clearly prefer (42b) to (42a). This shows that for the purpose of correcting a preceding statement, it is not enough to stress an element occurring in the middle field in a standard way. This in turn indicates that in the perfect example (40), the corrective interpretation is due to the negation. (42b), which does not contain any negation and which has the standardly stressed item \bar{A} -moved to the C-domain, can very well fulfil a corrective function. Given our findings in section 3, this is not hard to explain. The preposing in (42b) is associated with the CI in (24). Thus, the speaker B expresses that (s)he considers the contextually relevant set of alternatives, which is likely to just contain the denotations of *eine Hose* and *ein Kleid*, to be ranked with the denotation of *ein Kleid* as the highest element. Without any further background information, the hearer will take the ranking as the default one, which is in accordance with the truth. According to this ranking, the speaker expresses that *ein Kleid* yields a true sentence and *eine Hose* a false one. It follows that by (42b), B is correcting A’s statement.

Since B’s statement in (40) contains a negation, the stressed element only has to indicate at which position in the clause the correction is to be made and what the right filler for this position is. Obviously, if the stressed item is just a focus, which evokes a set of alternatives, it can fulfil this task. However, as shown by (42a) a focused phrase by its own has a hard time fulfilling a corrective function. The focussed phrase, just evoking a set of alternatives, does not tell that it denotes the only one of the alternatives that yields a true answer. The general conversational maxim that a speaker will present all relevant information that (s)he has will not yield the effect of a correction. To be sure, if the accent on *Kleid* is very strong, (42a) can fulfil the function of correcting A’s statement, too. It seems that with extra-strong stress, the speaker indicates emotional involvement by which (s)he can indicate that (s)he wants to contradict the preceding statement. However, the point for our discussion is that (42b) can fulfil this function without the help of negation or an extraordinary strong accent on the preposed phrase.

Concerning (41), we observe the same as for (40): it is not the stressed item *Strassenbahn* by itself which triggers the corrective interpretation, but the negation inside the supplementary remark. Again, it seems that *Strassenbahn* is just a focus. Nothing in addition has to be assumed.

Among the phenomena often related to contrast are parallel constructions. Let us finally have a brief look at two of them. (43a) is a so-called right node raising construction (RNR), (43b) is an instance of gapping.

- (43) a. Heute hat Eva ein HAUS ihrem CHEF und eine JACHT ihrem KolLEgen geschenkt.
 today has Eva a house her boss and a yacht her colleague given
 ‘Today, Eva gave a house to her boss and a yacht to her colleague.’
 b. Vorher hat Otto mit MAX gesprochen, und MaRIA mit KATrin.
 previously has Otto with Max spoken, and Maria with Katrin
 ‘Previously, Otto spoke to Max, and Mary to Kathrin.’

¹⁰ These examples mirror Catalan examples in López (2009).

In RNR, the stressed elements normally are the elements in the first conjunct with a counterpart in the second conjunct and the counterparts in the second conjunct themselves. The corresponding (stressed) elements of the first and second conjuncts are said to stand in the contrast relation to each other (e.g. Féry and Hartmann, 2005). In a gapping construction, the remnants carry stress. Furthermore, the remnants and their correspondents in the first conjunct have to be semantically different:

(44) * Vorher hat Otto mit MAX gesprochen, und Otto/OTto mit KATrin.

This often is explained by the claim (cf. among many others, Hartmann, 2000) that in gapping, remnants and correspondents must be in a relation of semantic contrast. The deleted constituents in gapping must be contextually known.

It seems that to account for the data, it is enough to state that in RNR the counterparts and in gapping the remnants are focussed.^{11,12} Without any further information, the sentences in (43) are understood exclusively (for example, (43a) is understood in the way that Eva has given nothing else than a house to her boss, and (43b) that Maria has not spoken to anyone other than Katrin). This follows again from the general conversational maxim that a speaker will present all relevant information that (s)he has. Furthermore, the fact illustrated in (44) is due to a property of the very construction gapping: all contextually known sentence constituents have to be deleted (cf. for example, Hartmann's (2000) Maximal Contrast Principle). Obviously, one could describe this fact by saying that in gapping, remnants and correspondents must express a semantic contrast relation. Note, however, that this move does not address the question why gapping has this property, nor does it involve the claim that contrast, in addition to focus, is formally encoded.

In this section, we have seen that for the description of different phenomena which have stressed elements in the IP-domain and which in the literature are often related to the notion of contrast, the notion of focus seems to be adequate.¹³ So, the findings of this section confirm that stressed elements in the middle field have different properties than stressed elements \bar{A} -moved to the prefield. Whereas the latter are associated with an emphatic/contrastive interpretation, the former just seem to be associated with a focal interpretation.

5. On so-called focus scrambling

As highlighted in section 2, in German there exist elements which cannot be scrambled. Some of them were shown in (3). Above, we observed that if such elements are positioned in the prefield, they necessarily have to be stressed, cf. (1a)–(1c). The next thing to observe is that even these elements putatively have the option of moving inside the IP-domain if they are stressed. Consider (45):

¹¹ This holds although Krifka (2007) states that “the use of focus to express parallel structures is perhaps one of the least understood aspects of focus”. What puzzles Krifka is that in parallel constructions some of the alternatives have to be evoked in the immediately surrounding context, and that focus appears to be less obligatory here than in other contexts. However, these problems are orthogonal to the question whether in order to understand these constructions one needs to appeal to an additional concept of contrast (or emphasis).

Hinterwimmer and Repp (2008) argue that the first pair in a gapping construction can be what they call contrastive aboutness topics. As far as I can see, the term ‘contrastive’ could be replaced by ‘focal’ here, without any loss of explanatory value of their analysis. Note that the concept of an aboutness topic which is focal, i.e. which evokes alternatives, makes perfect sense (cf., e.g. Krifka, 2007; Frey, 2006a).

¹² As in corrective and selective constructions, also in parallel constructions one of the relevant phrases may appear in a prefield position. (i) is a variant to (43a):

(i) Ein HAUS hat Eva heute ihrem CHEF und eine JACHT ihrem KOLLEGen geschenkt

One option to derive (i) is by scrambling *ein HAUS* to the highest position of the middle field, followed by applying FM. Under this derivation, (i) has (nearly) the same reading as (43a) (modulo the effect of scrambling across the subject and the adverbial). Another option to derive (i) is by applying \bar{A} -movement to *ein HAUS*. Although I believe that (i) has a reading corresponding to this derivation, I will not discuss this here.

¹³ Hartmann (2008) argues against any linguistic relevant notion of contrastive focus and replaces it with the concept of emphasis, which she assumes to describe a gradient, paralinguistic phenomenon. As already pointed to above, Hartmann claims that emphatic focus represents an unexpected discourse move. Hartmann presumes that the constructions illustrated in (29), (40)/(41), and (43) involve emphatic focus. Thus, Hartmann has to claim that these constructions exhibit unexpected discourse moves. At first sight, this might make some sense for corrections, although, as discussed with regard to (40) and (42a), it is not the stressed element which induces the correction, but the negation. However, in the cases of selections and parallel constructions, the idea that they represent unexpected discourse moves is rather implausible. In a construction like (29), selection is the expected discourse move, and parallel constructions as in (43) are only possible in the first place if at least some of the items corresponding to each other in the two clauses are focal (or, according to Hartmann, emphatic), so it is very hard to see how any unexpectedness could be involved.

- (45) a. dass GRÜN₁ Maria die Tür t_I streichen will
 b. dass PräsiDENTin Maria bald werden will
 c. weil einen IdIOTen Maria ihren Kollegen genannt hat
 since an idiot Maria her colleague called has
 ‘since Maria called her colleague an idiot’

In addition, one has the feeling that these stressed elements receive a kind of contrastive interpretation. Movement of stressed elements, which seems to happen inside the IP-domain, is often called *focus scrambling (FS)* (e.g. Neeleman, 1994); this label will also be used in the following.¹⁴ However, it will immediately become clear that what is called FS has to be differentiated from stressing a constituent which undergoes standard scrambling.

In German, standard scrambling is clause bound, i.e. we do not find a scrambled phrase inside the middle field of an upper clause:

- (46) *da Eva den MAX₁ meint, dass der Chef t_I mitnehmen sollte
 since Eva the^{ACC} Max thinks that the boss take.along should

(46) is severely ungrammatical. The situation is quite different with FS:

- (47) a. da den MAX₁ Eva meint, dass der Chef t_I mitnehmen sollte
 since the^{ACC} Max Eva thinks that the boss take.along should
 ‘since Eva thinks that the boss should take along Max’
 b. dass GRÜN₁ Paula glaubt, dass Maria die Tür t_I streichen wird
 that green Paula thinks that Maria the door paint will
 c. weil PräsiDENTin₁ keiner glaubt, dass Maria t_I werden will
 since president no.one thinks that Maria (to).become wants

The difference illustrated in (46) and (47) is one of the reasons why many authors categorize (standard) scrambling as an instance of A-movement, and FS as an instance of \bar{A} -movement (e.g. Reis and Rosengren, 1992; Neeleman, 1994; Haider and Rosengren, 2003). What is the target position of FS? According to Grewendorf (2005), FS may target the two different focus projections which he positions in the IP-region above vP. Even more target positions for FS inside the IP of Dutch are assumed by Neeleman and van de Koot (2008). However, at least for German these assumptions do not seem to be right. Consider the following sentences:

- (48) a. weil [sie zu beSUCHen]₁ keiner glaubt, dass er sich t_I leisten kann
 since her to visit no.one thinks that he REFL afford can
 ‘since no one thinks that he can afford to visit her’
 b. *weil keiner [sie zu beSUCHen]₁ glaubt, dass er sich t_I leisten kann
 c. da den MAX₁ Eva meint, dass der Chef t_I mitnehmen sollte
 d. *da Eva den MAX₁ meint, dass der Chef t_I mitnehmen sollte
 e. weil PräsiDENTin₁ keiner glaubt, dass Maria t_I werden will
 f. *weil keiner PräsiDENTin₁ glaubt, dass Maria t_I werden will

The examples in (48) show that long FS may only target a position right-adjacent to the complementizer; any other landing site leads to ungrammaticality. This observation is confirmed by the examples in (49). In (49), phrases which cannot be scrambled undergo short FS. Again, FS can only target the position right-adjacent to the complementizer:

- (49) a. weil einen IdIOTen Maria ihren Kollegen genannt hat
 b. *weil Maria einen IdIOTen ihren Kollegen genannt hat
 c. dass intelliGENT jeder Maria findet
 that intelligent everyone Maria considers
 d. *dass jeder intelliGENT Maria findet

¹⁴ I have to add that one reviewer only accepts FS with a pronounced I-topicalization contour (cf. fn. 1), and the other does not like them at all. For me (as for others) I-contour is not required for FS to be acceptable. At this moment, I have to leave it open how the judgements of the reviewers can be reconciled with the claim which will be made in this section.

Two consequences follow from the observations made in (48) and (49). First, Grewendorf's (2005) and Neeleman and de Koot's (2008) assumption that FS may target different positions inside IP is not correct, at least not for German. Second, FS of a phrase has to be sharply differentiated from the case where a phrase which undergoes standard scrambling is stressed. The latter case can be seen in (43a), where the direct objects are scrambled over the indirect objects.¹⁵ As (43a) shows, a phrase which has undergone standard scrambling and is stressed can be in a position which is not adjacent to the complementizer. I conclude that FS, which is associated with stress on the moved item, and standard scrambling accompanied by stress on the scrambled phrase are quite distinct phenomena.

Now, the question arises whether FS is in fact, as often assumed in the literature, a movement process occurring inside IP. I think the answer is 'no'. It is much more likely that FS targets a position in the C-domain. FS has to target a position adjacent to the complementizer; a complementizer clearly belongs to the C-domain. For different languages, there exists evidence that the C-domain does not just consist of one Spec-position preceding one C-position but is more complex (cf. e.g. the phenomenon of verb-second below a complementizer in Frisian and Danish, or the fact that in Italian, complementizers differ with regard to whether they are preceding or following preposed phrases, cf. Rizzi, 1997). So, the conjecture comes to mind that the target position of FS may belong to the C-domain. Note that there is an interaction between what is going on in the C-domain and the possibility of FS. This is shown by the following examples:

- (50) a. *Heute hat den MAX₁ Eva behauptet, dass der Chef *t_I* mitnehmen wird.
 today has the^{ACC} Max Eva claimed that the boss take.along will
 b. *Anscheinend hat PräsIDENTin₁ keiner geglaubt, dass Maria *t_I* werden will.
 apparently has president no.one thought that Maria (to).become wants
 c. *Zu Ottos Verblüffung findet INTELLIGENT jeder Maria.
 to Otto's surprise considers intelligent everyone Maria

(50) demonstrates that FS cannot move an item to the C-adjacent target position if the prefield is occupied. Such a dependency would be highly unexpected if FS targeted an IP-internal position. However, if FS targeted the C-domain, this dependency could make some sense. Note furthermore that if in fact FS targeted the C-domain, the reasonable assumption could be upheld that the IP-domain is the domain of clause-bounded movement, whereas the C-domain may be targeted by unbounded movement.

However, there is not only evidence that FS targets the C-domain; there is even evidence that FS is nothing else but the \bar{A} -movement discussed in sections 2 and 3. To be sure, \bar{A} -movement inside a dependent clause is much more marked than in a verb-second clause. However, it is likely that this has interpretative reasons and not syntactic ones. If we try to abstract away from the unusualness of the following example, we seem to find the same effect on the meaning as characterized in (24):

- (51) a. Peter hat gesagt, dass GRÜN₁ Maria ihre Tür *t_I* streichen wird.
 Peter has said that green Maria her door paint will
 #Aber diese Auskunft finde ich nicht weiter interessant.
 'However, I do not find this information to be of any interest.'
 b. Peter hat gesagt, dass Maria ihre Tür GRÜN₁ streichen will. Aber diese
 Aussage finde ich nicht weiter interessant.

In (51a), the second sentence is not appropriate. This shows that by employing \bar{A} -movement inside the dependent clause of the first sentence, the speaker expresses that (s)he considers the content of this clause remarkable in at least one respect. As stated in (21c), a CI is a commitment of the speaker. Thus, we observe here the same effect as with \bar{A} -movement to the prefield in a verb-second clause. The unusualness of \bar{A} -movement inside a dependent clause might, at least partly, be due to the fact that the CI evoked by such an \bar{A} -movement is not part of the meaning of the clause in which the movement occurs but is a commitment of the speaker.

¹⁵ By the way, (43a) shows that the claim (formulated, e.g. in Lenerz, 2001; Molnárfi, 2007) that only de-accented phrases can be scrambled cannot be correct.

In summing up this section devoted to FS, it can be said that what seems to be an IP-internal movement which is not clause-bounded and which is associated with a contrastive/emphatic interpretation of the moved item, in fact is an instance of the \bar{A} -movement studied in sections 2 and 3.¹⁶ Thus, FS cannot be taken as evidence that contrast or emphasis would be syntactically encoded IP-internally.

6. Conclusion

The paper's goal was to contribute to the discussion whether a notion of contrast should be part of grammar by considering certain facts of clausal syntax of German. First, it was shown that in German, \bar{A} -movement to the prefield (in contrast to Formal Movement) is obligatorily associated with stress on the moved item. Second, it was demonstrated that the effect of \bar{A} -movement cannot be captured by claiming that \bar{A} -movement involves a focal interpretation of the moved item, and it was shown that it cannot be captured by applying a standard, simple notion of contrast either. Rather, what is involved is a notion of emphasis which reflects a ranking with a highest element imposed by the speaker among the alternatives evoked by the stressed element. It was argued that the emphatic effect of \bar{A} -movement in German is expressed by a conventional implicature (CI) associated with the construction.

Thus, it was argued that in German, there is at least one instance in which emphasis (contrast) is syntactically encoded in grammar. Since our notion of emphasis involves contrastiveness between ranked elements, our findings stand in contradiction to the assumption of, for example, Lambrecht (1994) that contrast is not a relevant linguistic notion because it would never be linguistically encoded. To a certain extent, it is in agreement with Molnár (2002, 2006), who considers contrast an independent notion of information structure.

After having demonstrated that \bar{A} -movement to the C-domain marks an emphatic/contrastive interpretation, the question was asked whether the notion of emphasis/contrast is necessary to account for different data in the IP-domain of German which often are related with the notion of contrast. The answer given is to the negative, focus is the appropriate notion. Finally, with regard to so-called focus scrambling, which involves the emphatic/contrastive interpretation of the moved item, it was argued that this movement does not target an IP-internal position but a position in the C-domain. In fact, it was argued that so-called focus scrambling is nothing else than an instance of the \bar{A} -movement studied in sections 2 and 3 of the paper.

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¹⁶ In Frey (2006a), a minimally split C-domain is assumed for German. It is argued that \bar{A} -movement targets the Spec-position of a ContrastP, which is immediately below the C-projection, whose head position is the place for complementizers. Thus, in an embedded clause, an \bar{A} -moved phrase sits right-adjacent to the complementizer. If the prefield of a verb-second clause is filled by \bar{A} -movement, the finite verb is in the head position of ContrastP.

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