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Focus Particles in the German Middlefield

1 Introduction

This paper deals with German focus particles (FPs) like *nur*, *auch*, and *sogar* ('only', 'also', 'even'), located in the so-called middlefield, i.e. between the complementizer and the finite verb in subordinate clauses and between the finite verb and the position of infinite verbal elements in main clauses. As indicated by the term *focus particles*, these elements are generally assumed to interact with the focus-background partition of the sentences in which they occur. Consider the example in (1).¹

- (1) a. Maja hat auch BIER getrunken.
Maja has also beer drunk
'Maja also drank beer.'
- b. Maja hat auch [BIER]_F getrunken. (not only wine)
- c. Maja hat auch [BIER getrunken]_F . (not only smoked cigars)

As can be seen from the possible continuations given in (1-b) and (1-c), the meaning contribution of the FP depends on the size of the focus, which is not unambiguously identified by the nuclear accent in this example. (1-a) is compatible with both readings – in the first, beer is added to a set of other drinks, whereas in the second, the activity of drinking beer is added to a set of other activities. This difference is due to the fact that the additive FP *auch* relates to different elements in (1-b) and (1-c), i.e. *Bier* and *Bier getrunken*, respectively. Throughout this paper, I will refer to the element a FP relates to as the particle's domain.

In the extensive literature on FPs in German and other languages, two important questions have been raised: Firstly, what is an adequate syntactic representation for sentences like (1-a)? Relevant issues include the categorial status of FPs, their integration into the syntactic structure, and the type and properties of

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¹ Here and in the subsequent example sentences, the syllable bearing the nuclear accent is printed in capitals, and the focus is enclosed in square brackets with the index F.

their sister constituents. Secondly, how do syntax, semantics, and information structure interact to identify the domain of a FP?

This paper is organized as follows. Section 2 gives a brief overview of current syntactic theories of FP-constructions in German. One of them, Buring and Hartmann (2001), is discussed in some more detail in Section 3. As the existing accounts are not fully satisfactory, an alternative proposal is presented in Section 4. It is argued that FPs are VP-adjuncts in the German middlefield. Sections 5 and 6 indicate possible extensions to this account, and Section 7 summarizes the results.

2 Focus particles in German: Previous analyses

Previous syntactic analyses of FP-constructions in German can be grouped into two types, which I will call *adverbial analyses* and *adjunction-to-XP analyses* here. The decisive difference between them lies in the set of constituents that are allowed as syntactic sisters of FPs.

2.1 Focus particles as adverbials

Proponents of the first type include Jacobs (1983) and Buring and Hartmann (2001). In both accounts, FPs are syntactically analyzed as adverbials, i.e. adjuncts to verbal (and adjectival) projections. Some crucial assumptions of Buring and Hartmann are informally given in (2), cf. also Buring and Hartmann (2001, pp. 236–37, 266).²

- (2) a. FPs are adjuncts to maximal non-argument projections, i.e. VP, AP, IP, and root CP.
 b. FPs must c-command the focus.
 c. FPs must be as close to the focus as possible.

In this account, the domain of a FP is identified by the sentence focus. As a consequence, immediate c-command between the FP and its domain is not necessary. Although only the direct object *Karotten* ('carrots') is the domain of *nur* in (3-a), the particle is analyzed as an adjunct to the whole VP (cf. condition (2-a) above). In (3-b), correspondingly, *nur* is adjoined to IP rather than to the focused subject *Maja*.

- (3) a. dass Maja [_{VP} nur [_{VP} [KarOTTen]_F gegessen hat]]
 that Maja only carrots eaten has
 'that Maja only ate *carrots*'

² For reasons of brevity, I will leave out the discussion of APs as adjunction sites of FPs and concentrate on what Buring and Hartmann call *Extended Verbal Projections*, i.e. VP, IP, and CP.

- b. dass [IP nur [IP [MAja]_F Karotten gegessen hat]]
 that only Maja carrots eaten has
 ‘that only *Maja* ate carrots’

An argument in favor of the adverbial analysis is that FPs seem not to form syntactic constituents with immediately following DPs, as suggested by the ungrammaticality of phrases like **mit nur Hans* (‘with only Hans’) or **der Bruder nur des Grafen* (‘the brother only of the count’), where FP-DP combinations appear within PPs and DPs (Büring and Hartmann, 2001, p. 233). It can also account for cases like (4) in a straightforward way. Here, the FP *auch* relates to two elements in the middlefield which do not form a constituent.³

- (4) Gestern hat auch [Maja Felix]_F geküsst.
 yesterday has also Maja Felix kissed
 ‘Yesterday it was also the case that *Maja* kissed *Felix*.’

One of the strongest objections to the adverbial analysis was already anticipated by Jacobs (1983): Under the assumption that the FP and its domain do not form a constituent in sentences like (5), such constructions violate the well-established V2-generalization claiming that the finite verb may only be preceded by one constituent in German main clauses. Another drawback is that – by Büring and Hartmann’s version of the adverbial analysis – FPs following their domains in the prefield, as in (6), cannot be accounted for.⁴

- (5) [CP Nur [CP [MAja]_F hat Karotten gegessen]].
 only Maja has carrots eaten
 ‘Only *Maja* ate carrots.’
- (6) [Die TOCHter]_F nur entkam den Flammen.
 the daughter only escaped the flames
 ‘Only *the daughter* escaped the flames.’
 (Jacobs, 1983, p. 95)

2.2 Focus particles as XP-adjuncts

Adjunction-to-XP analyses of German FP-constructions were proposed by Bayer (1996), Reis and Rosengren (1997), and Nederstigt (2003), among others. The central claim of these approaches is that FPs can take maximal projections of any kind as their sister constituents, thus including DP and PP. Consequently, our example from (3-b) above would be assigned the structure given in (7).

³ The sentence final participle is supposed to be defocused, i.e. by means of this sentence, the ordered pair <Maja,Felix> is added to the set of ordered pairs <A,B> such that A kissed B. *Maja* probably carries a prenuclear accent, which is not indicated in the examples.

⁴ As this paper is mainly concerned with occurrences of FPs in the middlefield, these issues will only be briefly touched upon in Section 6. For a detailed discussion of Büring and Hartmann’s account see Reis (2005).

- (7) dass [VP/IP [DP nur [DP MAja]_F] Karotten gegessen hat]

An obvious benefit of this analysis is that it need not postulate exceptions to the V2-generalization of German, as a sentence initial FP is assumed to form one constituent with the immediately following element in V2-clauses like (5). A serious drawback, on the other hand, is of a conceptual nature: The structures proposed by the adverbial analysis, namely adjunction to verbal projections, must always be permitted, too. In other words, adjunction-to-XP analyses predict systematic syntactic ambiguities which, however, do not correspond to semantic differences. The reason is that the strong assumption of always equating the adjunction site of a FP with its domain – as proposed by Nederstigt (2003) – cannot be maintained. There are at least four types of counterexamples. First, consider (4) again. As the domain of the FP consists of two constituents rather than one, the FP must be adjoined to a higher projection that includes the domain, but is not identical with it. The same is true for cases like (8), where the domain is the finite verb. The standard analysis for such examples takes the FP to be adjoined to VP, while the arguments are scrambled to higher positions (cf. Büring and Hartmann, 2001, p. 242, and Reis and Rosengren, 1997, p. 255).

- (8) dass Maja Felix nur [KÜSste]_F
 that Maja Felix only kissed
 ‘that Maja only *kissed* Felix’

Furthermore, there are many examples where the FP and its domain are not even adjacent. In Büring and Hartmann’s example (9), the directional adverbial *in die Garage* (‘into the garage’) intervenes between the particle and its domain, the infinitive *fahren* (‘to drive’). The domain of a stressed additive FP obligatorily precedes the particle, cf. (10). In this sentence, the prefield element *Maja* must be interpreted as the domain of *auch*.

- (9) a. weil man den Wagen nur in die Garage [FAHren]_F darf
 because one the car only into the garage drive may
 ‘because you may only *drive* the car into the garage’
 b. *weil man den Wagen in die Garage nur [FAHren]_F darf
 (Büring and Hartmann, 2001, p. 242)
- (10) Maja hat AUCH Karotten gegessen.
 Maja has also carrots eaten
 ‘*Maja* ate carrots, too.’

It follows that adjunction-to-XP analyses cannot exclude the adjunction of FPs to verbal projections, even in cases where only a subconstituent (e.g. a simple DP or PP) serves as the domain of the particle. Under these circumstances, the more restrictive adverbial analysis seems to be preferable for the syntactic de-

scription of FP-occurrences in the middlefield. As will be shown in the next section, however, the most recent version of the adverbial analysis – Buring and Hartmann (2001) – has some hitherto unnoticed problems which indicate the need for revisions.

3 The account of Buring and Hartmann (2001)

Buring and Hartmann's (2001) formalization of the adverbial analysis is given in (11).

- (11) For any node α marked F in a phrase marker P, let the set of f-nodes of α consist of all nodes β in P such that
- a. β is a non-argument
 - b. β is a maximal projection
 - c. β dominates α or is identical to α
 - d. there is no EP [= extended projection] β' of the same head that β is an EP of such that β dominates β' and β' meets [(11-b)] and [(11-c)].

A FP must be left-adjoined to an f-node of its focus.

(Buring and Hartmann, 2001, p. 266)

As far as I can see, these principles make wrong predictions for two kinds of FP-constructions. The first problem concerns the choice of the adjunction site in the middlefield. Maximal closeness between a FP and its domain is supposed to be guaranteed by two mechanisms: (i) by permitting several adjunction sites – VP, IP, and root CP (cf. (11-a) and (11-b)) – and (ii) by the requirement that the lowest of the potential positions still complying with the c-command condition (11-c) is chosen (cf. (11-d)). In this way, the correct word order is predicted in many cases, e.g. in sentences with focus on the direct object like (12). Here, the defocused subject – assumed to be located in [Spec,IP] – forces the FP to adjoin to VP.

- (12) a. dass Maja nur [KaROtten]_F gegessen hat
 that Maja only carrots eaten has
 'that Maja only ate *carrots*'
 b. *dass nur Maja [KaROtten]_F gegessen hat

The theory runs into problems though with ordering restrictions within the XPs serving as adjunction sites for FPs. A case in point are sentences where a FP relates to the verb in clause-final position, as in Buring and Hartmann's (2001) own example (13).

- (13) a. weil Peter Maria nur [KÜSSte]_F
 because Peter Maria only kissed
 'because Peter only *kissed* Maria'

- b. weil [_{IP} Peter [_{VP} Maria [_{VP} nur [_{VP} _t_{Maria} KÜSSte]]]]
 (Büring and Hartmann, 2001, p. 241-242)

(14) *weil Peter nur Maria [KÜSSte]_F

The authors propose the structure given in (13-b), assuming that the FP adjoins to VP and that the direct object *Maria* is scrambled to a higher position. However, scrambling of the direct object is neither motivated nor enforced by the theory. In fact, the ungrammatical sentence (14) is not ruled out by the principles in (11).

While this first problem might be solved by some minor adjustments to the theory, the second is more serious. It emerges when we consider FPs in fully focused sentences.⁵ In the relevant constructions, the FP relates to a whole proposition, which is – depending on the particle – added to a set of propositions, said to be unique, etc. Büring and Hartmann’s account makes a simple prediction for these cases: As FPs may not adjoin within their domains, the only possible adjunction site should be CP, as in (15-a).

- (15) a. *Sogar [Maja hat KarOTten gegessen]_F .
 even Maja has carrots eaten
 ‘It is even the case that Maja ate carrots.’
 b. Sogar [MAja]_F hat Karotten gegessen.

This sentence neither violates the closeness principle (11-d) nor any of the other principles: the root CP is a non-argument, it is a maximal projection, it corresponds to the focus, and there is no adjunction site further down in the tree that fulfills these conditions. However, with the indicated focus and accentuation, (15-a) is clearly ungrammatical. A sentence initial FP can only take the immediately following constituent as its domain (cf. (15-b)), not the whole remaining clause.⁶ As will be shown in the next section, the correct position of FPs in fully focused sentences is in the middlefield, i.e. within the particle’s domain. This is incompatible with Büring and Hartmann’s account, but follows naturally from the alternative proposal to be put forward here.

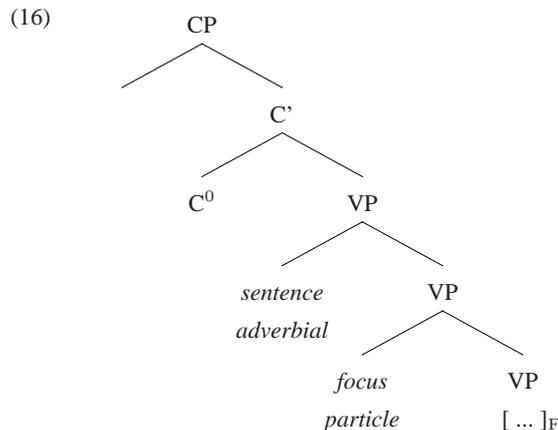
⁵ One might argue that this phenomenon occurs only rarely in German. Nevertheless, it clearly exists (examples were already discussed in Altmann (1976) and Jacobs (1983)) and calls for an explanation.

⁶ The so-called conjunctive use of FPs in sentences like *Nur hat mir das keiner gesagt*. (‘However, nobody has told me that.’), where the particle occupies the prefield alone, is ignored. Following Altmann (1976), I assume that we are dealing with a different (albeit somehow related) grammatical phenomenon here and that a theory of focus particle constructions need not cover such cases.

4 An alternative proposal: Focus particles as VP-adjuncts

To overcome the problems mentioned above, I suggest an alternative syntactic analysis of FPs in the German middlefield, which is based on an independently motivated theory of information structure and allows us to derive the observed patterns without further stipulations. As for the syntactic framework, I follow Haider (1997) and Sternefeld (to appear) in not regarding the postulation of any functional projections between VP and CP as necessary for the description of the German clause. The information structural theory taken as a basis here was developed by Steube (2000) and Steube et al. (2004). Two central assumptions are that German has a syntactically determined focus domain in the middlefield with the sentence adverbials as its left boundary, and that background constituents preferentially leave this focus domain via movement to the left, i.e. scrambling or topicalization.

Given these premises, I propose that the syntactic properties of FPs in the German middlefield can be satisfactorily described by a modified version of the adverbial analysis. In particular, I want to argue for the following hypothesis: FPs are, like adverbs, non-expanding maximal projections. They have a fixed position in the middlefield, adjoined to the maximal VP below the sentence adverbials and c-commanding the focus domain. This account is thus even more restrictive than Buring and Hartmann's version of the adverbial analysis: It allows only VP as adjunction site for FPs in the middlefield. In addition, the adjunction of FPs to the root CP is excluded. The relevant syntactic structure is given in (16).



Another crucial assumption is that the domain of a FP simply corresponds to the focus domain of the clause. In other words, the idea, that an element belongs to the domain of a FP if and only if it is focused, is combined with the hypothesis of a syntactically determined focus domain. There are two (predicted) exceptions

to this generalization: Firstly, defocused elements that cannot move for independent syntactic reasons remain in the focus domain, but do not belong to the domain of the FP. Secondly, focused elements that must move for independent syntactic reasons leave the focus domain, but still do belong to the domain of the FP. In the theory of Steube and colleagues, such mismatches between syntactic position and information structural status are handled by assigning [+F(ocus)]- or [-F(ocus)]-features to the respective elements or their traces. Defocused elements in the focus domain are marked [-F], and the traces left behind by focused elements which are moved out of the focus domain are marked [+F]. These additional features are only necessary if the default mechanism described above is no longer in force.⁷

Before I discuss the exceptional constructions in more detail, let me first illustrate the interaction between FPs and information structure in the standard case. We will see that the association of FPs with domains of different sizes follows directly from what we said about the syntactic realization of focus in German. Consider (17).

- (17) a. Es hat_i [VP auch [VP gestern ein Mann einen HUND geschlagen t_i]_F] .
expl has also yesterday a man a dog beaten
 ‘It is also the case that a man beat a dog yesterday.’
 b. Es hat_i gestern_j [VP auch [VP t_j ein Mann einen HUND geschlagen t_i]_F] .
 c. Gestern_i hat_j [VP auch [VP t_i ein Mann einen HUND geschlagen t_j]_F] .
 d. Gestern_i hat_j [der Mann]_k [VP auch [VP t_i t_k einen HUND geschlagen t_j]_F] .
 e. Gestern_i hat_j [der Mann]_k [den Hund]_l [VP auch [VP t_i t_k t_l geSCHLAGen t_j]_F] .

In (17-a), only the finite auxiliary has been moved out of the focus domain.⁸ Consequently, both arguments as well as the adverbial *gestern* (‘yesterday’) and the main verb belong to the domain of the FP *auch*. In (17-b) and (17-c), the adverbial has left the focus domain; in the former case, it has undergone scrambling in the middlefield, and in the latter, it has moved to the prefield. As a part of the background of the sentence, it is excluded from the domain of *auch*.⁹ Even more elements have left the focus domain in the last two examples: The subject in (17-d) and both arguments in (17-e) are scrambled, their background status being additionally indicated by the use of definite articles. Altogether, the

⁷ For the question of how features such as [-F] and [+F] are transferred into grammar see Steube (2000) and Steube et al. (2004). Crucially, they are of pragmatic origin, expressing distinctions like given/new or communicatively unimportant/important. On the different grammatical levels (semantics, syntax, phonology/prosody), the features are specifically realized.

⁸ The information structural status of the auxiliary is ignored here.

⁹ I assume an extended concept of scrambling applying not only to arguments, but also to adverbials. The prefield differs from the target positions of scrambling in the middlefield in that it can not only be occupied by background constituents, but also by focused elements (cf. Frey, 2004). For the sake of simplicity, let us assume that the topicalized constituents are indeed defocused in the examples discussed here.

more elements that leave the focus domain from (17-a) to (17-e), the smaller the domain of the FP gets, and the interpretation changes accordingly.

Let us now turn to the exceptional cases. Elements that do not participate in information structurally driven movement in the middlefield include finite and infinite verb forms and certain adverbials (see Steube, 2000, 2003). In German main clauses, the finite verb obligatorily moves to the V2-position (C^0 by assumption), whereas all other verbal elements (infinitives and participles) remain in their clause-final base positions. In verb-final subordinate clauses, the finite verb must stay in its base position, too. The distribution of the verb forms is thus determined by purely syntactic principles alone; information structure has no influence on their placement. Different restrictions hold for modal and directional adverbials, among other elements. They can be moved to the prefield, but are unable to scramble in the middlefield (Steube, 2003, p. 170).

Such movement restrictions cause deviations from the default partitioning of the German clause into a background and a focus part, separated by the positions of sentence adverbials and FPs. Elements that, for independent reasons, cannot move must remain inside the focus domain even if they are defocused. An example illustrating this point is given in (18-a). We can now also account for the sentences in (4) and (9) above, which – according to our hypothesis – receive the analyses in (18-b) and (18-c), respectively. The feature $[-F]$ on an element within the focus domain – the participle *geküsst* (‘kissed’) in (18-a) and (18-b) and the directional adverbial *in die Garage* (‘into the garage’) in (18-c) – indicates that this element does not belong to the domain of the FP. Example (18-b) shows that our analysis can account in a straightforward way for cases where a FP relates to two or more elements in the middlefield that do not form a constituent. The main verb is defocused, and the domain of the particle simply consists of the remaining VP-internal elements, i.e. the subject and the direct object.

- (18) a. Gestern_i hat_j Maja_k auch [_{VP} t_i t_k Felix geküsst_[-F] t_j]_F .
 yesterday has Maja also Felix kissed
 ‘Yesterday, Maja also kissed *Felix*.’
 b. Gestern_i hat_j auch [_{VP} t_i Maja Felix geküsst_[-F] t_j]_F .
 c. weil man_i [den Wagen]_j nur [_{VP} t_i t_j [in die Garage]_[-F] FAHren darf]_F

So far we have dealt with defocused elements which cannot be moved out of the focus domain and must be marked $[-F]$. The complementary phenomenon – the forced movement of focused elements – is relevant for the interpretation of FP-constructions, too. First, consider the behavior of the finite verb again. As mentioned above, it must move to the V2-position in German, independent of its information structural status. If it is focused, it leaves a $[+F]$ -trace behind, indicating that the domain of the FP includes the verb, cf. (19).¹⁰

¹⁰ Movement of the finite verb is special insofar as it is assumed to be always reconstructed in German. Instead of marking the trace of a focused finite verb $[+F]$, one could also take the $[+F]$ -

- (19) Sicher läuten_i nur [_{VP} die KIRCHTurmglocken t_{i,[+F]}]]_F .
 certainly ring only the church_bells
 ‘Certainly, it is only the case that the church bells ring.’

In (19), the prefield hosts the sentence adverbial *sicher* (‘certainly’), which does not take part in the focus-background division. If the sentence consists of focused material only, the prefield must be filled by a focus constituent, too. In the unmarked case, this is the subject, but other elements such as temporal adverbials are possible as well. An example illustrating this construction type is given in (20). Here, the finite verb as well as the subject *eine junge Frau* (‘a young woman’) leave [+F]-traces in the focus domain.

- (20) Eine junge Frau_i macht_j sogar [_{VP} t_{i,[+F]} eine WELTreise t_{j,[+F]}]]_F .
 A young woman makes even a world_tour
 ‘A young woman even travels around the world.’

The last example shows that our theory makes correct predictions about the position of FPs in fully focused sentences: The particle simply occupies its standard position in the middlefield. The finite verb and an additional middlefield element cross the FP and fill C⁰ and the prefield, respectively. As their traces are marked [+F], they are interpreted as belonging to the focus domain. Consequently, the FP relates to the whole proposition in these cases.

At this point, let me add a brief comment on the acceptability of FPs in fully focused sentences. A FP establishes a relation between an element (the particle’s domain) and relevant alternatives to this element, which have to be contextually given or at least derivable. Two propositions are relevant alternatives of each other if they have a so-called Common Integrator (cf. Lang, 1977), i.e. if they make a contribution to the same discourse topic. Thus, for the constructions under discussion to be felicitously uttered, the context must meet comparatively specific requirements. An additional complication is that fully focused sentences usually occur discourse-initially, whereas FP-constructions require some preceding discourse in which the alternatives of the particle’s domain are established. These circumstances could lead to the assumption that FPs cannot occur in fully focused sentences at all. However, if the decisive conditions are met by the context, the respective utterances are perfectly acceptable. In the case of (20), a suitable context would be (21), for example.

- (21) Viele Leipziger Studenten geben in letzter Zeit unheimlich viel Geld aus. Einer hat sich ein neues Auto gekauft, und eine junge Frau macht sogar eine Weltreise.
 ‘Many students from Leipzig have been spending a lot of money lately. One bought a new car, and a young woman even goes round the world.’

status as the default case and mark the trace of a moved defocused verb [-F] instead. For reasons of clarity, I keep to the conventions introduced above.

Next, consider constructions with narrow focus on a moved element. In (22-a), the focused phrase *in Berlin* has moved to the prefield, and in (22-b), the focus is on the finite verb in V2-position. The word order of the latter sentence is not surprising given the special status of the finite verb. The possibility of (22-a), on the other hand, is due to a special property of the German prefield, which it does not share with the target positions of scrambling in the middlefield: Apart from background and topic constituents and parts of a broad sentence focus, it can host narrowly focused constituents (cf. Frey, 2004). Both (22-a) and (22-b) are characterized by the fact that there is no overt focused material left in the focus domain. This has two consequences: Firstly, the FP does not c-command (any part of) its domain any longer, and the domain is only identified by the [+F]-trace left behind by the focused element. Secondly, the nuclear accent cannot be realized in the focus domain. Instead, it is taken along by the moved focus.

- (22) a. [In BERLIN]_i war_j Maja_k sogar [VP t_k t_{i,[+F]}} t_j]_F .
 in Berlin was Maja even
 ‘Maja was even *in Berlin*.’
- b. Maja_i KÜSSte_j Felix_k auch [VP t_i t_k t_{j,[+F]}}]_F .
 Maja kissed Felix also
 ‘Maja also *kissed* Felix.’

While many FP-constructions are ambiguous with respect to (the size of) the domain of the FP (cf. example (1) above), the nuclear accents on the prefield constituent and on the finite verb in (22-a) and (22-b), respectively, suffice to unambiguously identify the domain. A nuclear accent outside the focus domain indicates that the accented element is narrowly focused and, consequently, serves as the domain of the FP on its own.

One last type of FPs’ domains being displaced from their base positions will be briefly touched upon here: finite embedded clauses, which are obligatorily extraposed in German. For the sake of simplicity, let us assume that the whole subordinate clause is focused.¹¹ By assumption, extraposition is movement to the right (cf. Büring and Hartmann, 1995, among others). The clause adjoins somewhere higher in the tree – I will not speculate about the exact adjunction site here, as it is insignificant for the present discussion. If extraposition targets a position within the focus domain, i.e. in the c-command domain of the FP, it has no effect on the information structural interpretation. If, on the other hand, the clause leaves the focus domain and adjoins above the particle, its focus status is indicated by a trace marked [+F] in the base position, which is responsible for the association with the FP. This second possibility is illustrated in (23).

¹¹ The discussion of cases where it has a focus-background partition of its own must be left for further research.

- (23) Maja_i sagte_j nur [VP t_i t_{k,[+F]} t_j]_F [dass etwas geSCHEHEN muss]_k .
 Maja said only that something happen must
 ‘Maja only said *that something must happen.*’

We have seen that in certain constructions, FPs do not c-command (all parts of) their domains.¹² However, this does not mean that the c-command requirement often proposed in the literature (cf. (2-b) and (11-c) above) has to be given up completely. As the displaced focus elements leave [+F]-traces in their base positions, they are semantically interpreted in the focus domain. In other words, for the compositional construction of the semantic representation, which contains the relevant information about the elements’ discourse status (cf. Steube et al., 2004, pp. 27-30), it is not their surface positions that are decisive, but the base positions in the focus domain. What counts is thus that a FP c-commands the base positions of all elements belonging to its domain, not necessarily the elements themselves.

To sum up this section, I argued that FPs in the German middlefield are VP-adjuncts and relate to the material they c-command, which in turn corresponds to the syntactically determined focus domain of the clause. Association of FPs with domains of varying sizes is achieved by movement (scrambling or topicalization) of defocused elements across the particle (and the sentence adverbials). In the standard case, a FP thus c-commands its domain and only its domain. Exceptions to this generalization, i.e. defocused elements within and focused elements outside the focus domain were shown to be independently motivated by syntactic movement restrictions and movement requirements, respectively. A theory of German FP constructions along these lines avoids the problems of Buring and Hartmann’s (2001) account mentioned above: It explains the adjacency or non-adjacency of FPs and their domains in the middlefield in a straightforward way, and it predicts the correct position of FPs in fully focused sentences.

In the next two sections, a brief outlook will be given on the analysis of two types of FP-constructions that have not been discussed here yet. The first case in point are sentences with stressed additive particles, the second concerns FPs in sentence initial position.

5 Stressed additive focus particles

The exceptional behavior of stressed additive FPs like *gleichfalls* (‘likewise’), *ebenfalls/ebenso* (‘as well’) and the stressed variant of *auch*, which more or less corresponds to English ‘too’, had already been noticed by Altmann (1976).¹³ Since then, the respective constructions have presented a great challenge for theories of the grammar of FPs. Sentences like (24) differ from the cases discussed

¹² Another pattern where this is the case, namely constructions with stressed additive FPs, will be addressed in Section 5.

¹³ I will concentrate on stressed *auch* here and ignore the other particles. They have similar characteristics but show greater distributional restrictions.

so far in at least two essential properties: Firstly, the FP does not c-command its domain. The domain is located in the prefield or in the middlefield preceding the particle, but not necessarily adjacent to it. In contrast to what has been said about (19) – (20) and (22-a) – (22-b), this deviating word order cannot straightforwardly put down to the independent syntactic movement requirements introduced above.

- (24) Maja hat AUCH geschlafen.
 Maja has also slept
 'Maja slept, too.'

Secondly, the FP itself carries the nuclear accent, whereas its domain may but need not be marked by an additional prenuclear accent. This poses a serious problem for the proposed focus sensitivity of FP, i.e. the claim that they associate with the focused part of a sentence.

Because of their exceptional characteristics, constructions with stressed additive FPs lie beyond the scope of many approaches to the grammar of FPs, among them Bayer (1996) and Büring and Hartmann (2001). The ones that incorporate stressed *auch*, on the other hand, differ considerably in how they account for the relevant observations and in the conclusions they draw for a general theory of FP-constructions. Jacobs (1983) argues that there is no fundamental difference between constructions with the stressed and the unstressed variant of *auch* and that the former can be derived from the latter by a syntactic infixation rule. Although Jacobs' rule system is incompatible with current syntactic theories, the consequences of his claim are still worth discussing. Most importantly, it follows that constructions with stressed *auch* do not form genuine exceptions to the generalization that FPs c-command their domains. The derivation given by Jacobs (1983, p. 103-104) corresponds to an analysis involving movement of the domain across the position of the particle in our theory. This view has been rejected by most authors dealing with the topic after Jacobs. Reis and Rosengren (1997) deny a derivational link between constructions with the stressed and unstressed variants of the particle, but assume that there is nevertheless only one lexical item *auch* underlying both usages. According to this proposal, the complementary distribution of stressed and unstressed *auch* and their domains regarding relative order and accentuation – it is always the last element of the pair consisting of *auch* and its domain that carries the nuclear accent (see Reis and Rosengren, 1997, p. 243) – is a consequence of the modular interaction of syntax, semantics and prosody. Going even one step further, Nederstigt (2003) assumes that the stressed and the unstressed variant of *auch* are different lexical items. While the former is taken to be the head or specifier of a special functional projection AUCHP, the latter is analyzed as an adjunct to XPs of all kinds.

Another interesting approach comes from Krifka (1999). In his semantically orientated paper, Krifka argues that the element associated with stressed *auch* is a contrastive topic which, however, is not necessarily marked as such by in-

tonational means (*Contrastive Topic Hypothesis*). The domain of stressed *auch* and constituents traditionally classified as contrastive topics¹⁴ have some relevant properties in common: They occupy positions in the left periphery of the clause (either in the prefield or at the left edge of the middlefield, outside the focus domain), and they presuppose the existence of relevant alternatives. (24), for instance, cannot be felicitously uttered unless there is some person different from Maja who slept. Consequently, the respective sentences can only be partial answers to (implicit) questions; they have to fulfill Buring's (1997, p. 178) *Condition of Disputability*. The relatively weak *Condition of Distinctiveness* (Krifka, 1999, p. 122), claiming that the predication made of a contrastive topic is different from the predications made of its alternatives, on the other hand, can be circumvented by the use of stressed additive FPs, as they explicitly express that the same predication holds for the associated element and its alternatives.

As emphasized by Krifka, constituents associated with stressed *auch* need not bear the rising contrastive accent typical for contrastive topics. This is especially clear from the fact that the weak pronoun *es* ('it') – which cannot be accented at all in German – and even non-overt elements are possible domains of stressed *auch*. Krifka argues that the prosodic marking can be dispensed with, as the special construction type, and in particular the stress on the FP, in most cases suffices to identify the domain. However, as shown by Sudhoff and Lenertová (2006), there is prosodic evidence for Krifka's *Contrastive Topic Hypothesis*: If constituents associated with stressed *auch* are accented, they bear rising contrastive accents.

With these assumptions in mind, we can now return to the question how constructions containing stressed additive FPs can be integrated in our theory of German FP-constructions. Despite apparent counter-evidence presented by Reis and Rosengren (1997) and Niderstigt (2003), I want to argue that constructions with stressed *auch* can be derived from constructions with the unstressed variant of the particle on the basis of independently motivated principles of information structure. This is possible by combining Krifka's *Contrastive Topic Hypothesis* with a syntactic account of the so-called *I-topicalization* (i.e. the preposing of contrastive topics), such as Steube (2003). The resulting analysis is based on the following assumptions: Firstly, the element associated with stressed *auch* has its base position in the c-command domain of the particle, i.e. in the focus domain. Secondly, its information structural status of being a contrastive topic forces it to move to the left periphery of the clause, where it c-commands the focus domain. The proposed structure of the example in (24) above is given in (25). Third, the FP, as the last focusable element in the clause, receives the regular focus accent and can be seen as the explicit realization of an affirmative element (cf. Krifka, 1999, p. 124).¹⁵

¹⁴ See Steube (2003) and Sudhoff et al. (2004), among others.

¹⁵ For the function of the accent on *auch*, see also Féry (2006).

(25) Maja_i hat_j AUCH [_{VP} t_i[_{+CF}] geschlafen[_{-F}] t_j]_F .

At this point, it is important to note that contrastive topics need not be topics in the narrow semantic sense. A crucial precondition for topicality – at least if the aboutness concept is taken as its basis – is referentiality (cf. Reinhart, 1981): An utterance can only be *about* something that exists in the world. As noted by Steube (2003) and van Hoof (2003), however, non-referential elements such as directional and manner adverbials, resultative and depictive predicates, predicatives, infinite VPs, finite verbs, and even verbal prefixes can function as contrastive topics, too. Both authors conclude that the relevant concept for I-topicalization is not contrastive topic, but contrastive focus. Consequently, the constructions under discussion involve a discontinuous focus: The rising accent marks a contrastively focused element which can get the additional interpretation of a topic, and the falling nuclear accent marks the non-contrastive sentence focus.¹⁶ The mentioned non-referential contrastive topics can also serve as associated constituents of stressed *auch*. Two examples are given in (26).

- (26) a. Auf den Berg ist Maja AUCH gerannt.
 onto the hill has Maja also run
 ‘Maja also ran *onto the hill*.’
 b. Auf hat Maja die Tür AUCH gemacht.
pref has Maja the door also opened
 ‘Maja also *opened* the door.’

A consequence of an argumentation along these lines is that the concept of focus sensitivity, which was abandoned by Reis and Rosengren (1997) at least for cases with stressed *auch*, can be re-established. The FP is associated with a (contrastively) focused constituent that is obligatorily moved to the left periphery of the clause, but semantically interpreted in the focus domain. Again, this is indicated by a [+F]-trace in the base position (cf. (25) above). Although this result is welcome with respect to a uniform account of the grammar of FP-constructions, it must not hide the fact that the information structural properties of sentences containing stressed additive FP differ from those of the other usage patterns (see the discussion of example (29) below).

Another interesting observation to be considered here is that constituents associated with stressed *auch* can undergo long distance movement, cf. the examples in (27). It is well known that contrastive topics – in contrast to, for example, scrambled constituents – systematically cross clause boundaries in German (cf. Haider and Rosengren, 1998). The fact that the same is possible for the domain of stressed *auch* – no matter whether the particle itself belongs to the matrix clause or to the embedded clause – gives further support to the syntactic analysis proposed above.

¹⁶ Strictly speaking, the term *contrastive topic* is thus inadequate. As it has become standard in the literature, I will continue using it for the present purpose.

- (27) a. Beatles-Platten_i weiß ich AUCH, dass Maja zu Hause t_i hat.
 Beatles records know I also that Maja at home has
 ‘I know that Maja has *Beatles records* at home, too.’
 b. Beatles-Platten_i weiß ich, dass Maja AUCH zu Hause t_i hat.

A desirable consequence of an approach along these lines is that constructions with stressed *auch* do not require a separate analysis, but can be derived from the same underlying structure as sentences with unstressed FPs. In this way, the assumption that different mechanisms are at work in constructions with the stressed and unstressed variants of the particle (Reis and Rosengren, 1997) or even that the variants represent different lexical items (Nederstigt, 2003) need not be made. Moreover, the deviating characteristics of constructions with stressed additive FPs (concerning word order, focussing, and accentuation) follow directly from their information structural peculiarities, in particular from the fact that the element associated with the particle is a contrastive topic.¹⁷

As mentioned above, Reis and Rosengren (1997) and Nederstigt (2003) argue against a movement analysis of constructions containing stressed *auch*. Their reasoning is mainly based on the observation that sentences with the stressed variant of the particle cannot always be transformed into sentences with its unstressed counterpart and vice versa. In an account where both variants have the same underlying structure, this is not expected. On closer inspection, however, the examples brought into play by the authors seem not to provide any evidence against a uniform analysis, as in each case the impossibility of using the complementary pattern can be attributed to independent grammatical factors. Let me conclude this section by briefly discussing two of the relevant cases. Consider (28) and (29).

- (28) a. und zwar so dass man die Beschreibung auch [LEsen kann]
 and actually so that one the description also read can
 ‘and actually in a way that one *can read* the description’
 b. *und zwar so dass man die Beschreibung [lesen kann] AUCH
 (Nederstigt, 2003, p. 185)

¹⁷ Of course, one important question has to be answered, namely why the pattern under discussion is restricted to additive particles. Exclusive and scalar FPs like *nur* (‘only’) and *sogar* (‘even’), respectively, cannot be used in the same way. While Krifka (1999) can give a plausible explanation in the case of exclusive FPs – their lexical meaning is incompatible with the requirement that a contrastive topic has relevant alternatives for which it is open whether the predication holds or not – he only has a speculative answer in the case of scalar FPs. Krifka assumes that the latter are excluded because they cannot be stressed or focused. But why is this so? A possible explanation is that scalar FPs – like sentence adverbials such as *leider* (‘unfortunately’) or *überraschenderweise* (‘surprisingly’) – express speaker attitudes, i.e. non-propositional meaning. According to Lang (1979), such elements can never be focused in German. For reasons of space, a more thorough discussion of this topic must be dispensed with here.

- (29) Hab ich AUCH schon erledigt.
 have I also already finished
 'I have already finished *this*, too.'
 (Reis and Rosengren, 1997, p. 249)

In (28), movement of the domain of *auch* – *lesen kann* ('can read') – is blocked for syntactic reasons. The verb cluster of an embedded clause cannot leave its clause final position. But even if the embedded clause is transformed into a main clause, the infinitival main verb *lesen* and the finite modal auxiliary *kann* may not be moved together, as the finite verb alone must move to the V2-position, i.e. C⁰. The ban on using stressed *auch* is thus due to the fact that the domain cannot be moved across the particle.

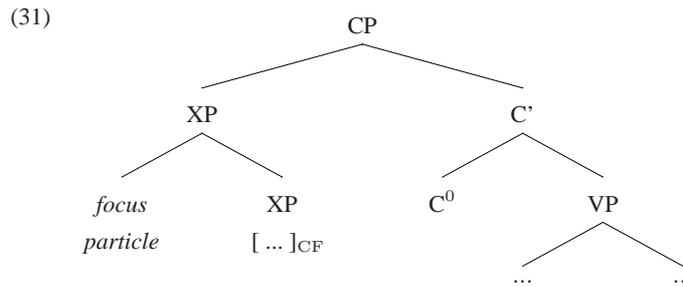
The complementary case is exemplified in (29). Here, the constituent associated with stressed *auch* is not overtly realized. That the same is not possible for constructions with the unstressed variant of the particle follows from the different information structure of the two usage patterns: If the domain of stressed *auch* is a contrastive topic, it can be already established in the preceding context – (29) is most natural as an answer to a question like *What about washing the dishes?* Together with the fact that its prosodic marking is not obligatory, this is an important precondition for the felicitous omission of the associated constituent. In addition, the FP itself is focused (and accented). That its domain has no overt realization does thus not mean that the respective sentence has no overt focus. In constructions with unstressed *auch*, on the other hand, the domain of the particle is obligatorily focused and carries the nuclear accent. It cannot be omitted, as every sentence must have at least one focused element (cf. Steube et al., 2004). Another relevant factor is that the possibility of ellipses in general is fairly restricted in German. (29) is an instance of preverbal ellipsis or topic drop. The domain of the particle can only be omitted because it is in sentence initial position, which, of course, would not be the case if the unstressed variant of *auch* was used.

6 Focus particles in the German prefield

Although this paper is mainly concerned with FPs in the German middlefield, I want to briefly discuss FPs in the prefield, too, as these occurrences are equally relevant for a general theory of FP-constructions in German. As the root CP was excluded as a possible adjunction site (see Section 4 above), our theory so far cannot account for constructions like (30), where *nur* precedes its domain the prefield.

- (30) Nur [MAja]_F hat Karotten gegessen.
 only Maja has carrots eaten
 'Only *Maja* ate carrots.'

As a working hypothesis, I assume that adjunction-to-XP structures must be employed here, as shown in (31), but that the adjunction of FPs to phrases other than VP is restricted to cases with special information structural properties. Constructions with FPs in the prefield differ in their conditions of use from the constructions with FPs in the middlefield discussed in Section 4. The domain of the FP, which immediately follows (or precedes) the particle in the prefield, obligatorily receives a contrastive interpretation. In this respect, FPs in the prefield have much in common with contrastive negation, which can also be analyzed as an adjunct to the prefield constituent (cf. Steube, 2005). The contrastive nature of both construction types becomes particularly obvious when plausible continuations are considered, cf. (32). In both sentences, an (explicitly or implicitly) given assumption is rejected and replaced by a different one. I take this contrastive interpretation to be the precondition for the adjunction of FPs to non-verbal projections, and hence for the occurrence of FPs in the prefield together with their domains.¹⁸



- (32) a. Nur [Felix]_{CF} hat gestern gesungen, und nicht MAja / und sonst
 only Felix has yesterday sung and not Maja / and else
 NIEMand.
 no-one
 ‘Only *Felix* sang yesterday, and not Maja / and nobody else.’
- b. Nicht [Felix]_{CF} hat gestern gesungen, sondern MAja.
 not Felix has yesterday sung but Maja
 ‘*Felix* didn’t sing yesterday, but Maja.’

¹⁸ One might argue that the prosodic realization of the accent on the AC in sentences like (30) differs between the uses indicated in (i-B) and (i-C). In the former case, the set of people that ate carrots is restricted to *Maja*. In the latter, explicitly corrective utterance, the domain of *nur* in B’s utterance is replaced by another element, *Felix*, evoking a ‘stronger’ contrast. However, my impression is that some kind of contrastive interpretation is involved in all usages of sentences with initial FPs. The exact status of contrast in FP constructions must be subject to further research efforts.

- (i) A: Haben Maja und Felix Karotten gegessen? (‘Did Maja and Felix eat carrots?’)
 B: Nur [MAja]_F hat Karotten gegessen. (‘Only *Maja* ate carrots.’)
 C: Nein, nur [FELIX]_F hat Karotten gegessen. (‘No, only *Felix* ate carrots.’)

An analysis along these lines is desirable for at least two reasons. Firstly, the V2-generalization of German (cf. Section 2.1) need not be given up. As the FP forms a complex constituent with its domain, the prefield hosts only one element. Secondly, the fact that sentence-initial FPs can only associate with the immediately following element, but not with the whole remaining clause (cf. Section 3), finds a simple explanation: If a FP is adjoined to the prefield constituent, but associated with the whole clause, the requirement that a FP c-commands its domain (cf. (2-b) above) is not fulfilled. This explanation is inapplicable in Büring and Hartmann's (2001) account where sentence initial FPs are analyzed as adjuncts to the root CP.

Additional evidence may be drawn from constructions where FPs cannot possibly be adjoined to verbal projections, e.g. FP-DP-sequences within DPs or PPs or in coordination structures. In the literature it has often been claimed that these constructions are generally ungrammatical in German (cf. Section 2.1). However, the empirical validity of this generalization must be questioned. Examples like the ones in (33), discussed by König (1993), suggest that FPs can indeed adjoin to DPs in German. König attributes the ungrammaticality of examples given by other authors to semantic mismatches.

- (33) a. Die Auflösung nur der Universitäten wäre nicht sinnvoll.
 the dismantling only the_{gen} universities_{gen} would.be not sensible
 'The dismantling of only *the universities* would not make sense.'
- b. Paul, Peter und sogar Fritz werden kommen.
 Paul Peter and even Fritz will come
 'Paul, Peter, and even Fritz will come.'
- (König, 1993, p. 984)

Of course, this observation must be given a broader empirical basis. If it turns out to be correct, it shows that a pure adverbial analysis is too restrictive and that adjunction to non-verbal projections must be allowed in at least some cases.¹⁹ The

¹⁹ Another argument that was initially brought forward against the adjunction-to-XP analysis, but can in fact be turned into an argument against a pure adverbial analysis, is the 'lack of reconstruction argument' (Büring and Hartmann, 2001, pp. 259–263): A sentence initial FP and an immediately following DP do not form a constituent, as they cannot undergo reconstruction together. As conclusively shown by Reis (2005), however, the impossibility of reconstruction readings in Büring and Hartmann's examples is due to the type of the subject quantifier. While reconstruction is indeed unavailable when the subject is a universal quantifier like *jeder* ('every-one'), it becomes possible with negative quantifiers like *keiner* and *niemand* ('no-one'), cf. Uli Sauerland's (p.c.) example in (i):

- (i) Nur die /Bibel hat NIEMand gelesen. /NUR die Bibel hat NIEMand gelesen.
 only the Bible has no-one read only the Bible has no-one read
 'No-one read only the Bible.'

Intonation seems to play a crucial role here: The reconstruction reading is only possible with a rising accent – indicated by '/' – on the FP or its domain. Although the regularities involved here are only poorly understood, sentences like (i) provide clear evidence for the ability of focus particles to form a constituent with non-verbal XPs.

question, then, is whether the two usages of FPs – with their specific syntactic configurations, intonational patterns, and meaning contributions – correspond to different lexical entries, or whether an independent motivation for the observed distribution can be found. Further research is needed to clarify these issues.

7 Summary

This paper dealt with occurrences of German FPs in the middlefield. It was argued that neither the adjunction-to-XP analysis nor the adverbial analysis as proposed by Büring and Hartmann (2001) is fully adequate. An alternative proposal was made, consisting of the following main assumptions: Firstly, FPs adjoin to the maximal VP below the position of the sentence adverbials in the middlefield. Secondly, their domain corresponds – with certain well-defined exceptions – to the syntactically determined focus domain of the clause. Thirdly, constructions with stressed additive focus particles do not require a separate analysis. Under the assumption that the domain of the particle is a contrastive topic in these cases, their special properties follow directly from their information structural characteristics. Altogether, an important claim of this paper is that the term *focus particle* should be taken seriously, i.e. that many of the observed phenomena and restrictions find a straightforward explanation if the information structure of the constructions under discussion is taken into account.

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