

Association with Focus and Linear Order in German

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ABSTRACT - Whereas languages with relatively fixed constituent order, such as English, mark *association with focus* primarily by means of accent placement, scrambling languages, such as German, obey linear order constraints for association with focus. We discuss how constituent order and intonation interact to license certain scopes for the semantic focus of focus sensitive operators. We also investigate some differences in the patterns of association with focus for three focus-sensitive operators in German, *nur* 'only', *auch* 'also/too', and *immer* 'always'.

KEYWORDS - association with focus, focus sensitive operators, German, linear order constraint

1 Introduction

Languages differ in which formal properties they use to mark *focus*, i.e. the element(s) in a sentence that are in the semantic focus of a focus-sensitive operator. English has a relatively fixed word order and no focus-marking morphology. The effect of intonation (i.e. certain accent placements and sometimes phrasing) on possible focus interpretations has been discussed thoroughly. The interpretation of the examples in (1) differs according to their different accent placements. Throughout the paper we use underlining to mark association with focus. The focus-sensitive operator in italics associates with the semantic elements described by the underlined words.

- (1) a. Peter *only* gave Máry_F a book.
b. Peter *only* gave Mary a bóók_F.

By *association with focus*¹ we mean that e.g. in (1) the underlined constituent refers to the entity that is in the scope of the focus-sensitive operator 'only'. The resulting meanings of (1a) and (1b) are given in (2a) and (2b):

- (2) a. The only person Peter gave a book to was Mary (and nobody else).

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¹In the remainder of the paper we will also say that something is in focus or part of the focus if it is in the semantic scope of the focus-sensitive operator.

- b. The only thing Peter gave to Mary was a book (and nothing else).

While in German, too, intonation plays a crucial role in determining which item is in focus, association with focus is further constrained by constituent order. Consider the German sentences in (3) which - in terms of word order - correlate closely with the English examples in (1).²

- (3) a. Peter gab *nur* Mária_F ein Buch.
 b. *Peter gab *nur* Maria ein Búch_F.
 Peter gave only Maria a book
 ‘Peter only gave Maria a book.’

Unlike English ‘only’, which can associate with any of the syntactic arguments of the verb if it has syntactic scope over the argument and the argument receives the right accent, German *nur* seems to be more limited in this respect. Although the order between the operator (here: *nur*) and the two arguments as well as the order among the two arguments are exactly the same in the English (1) and the German (3), (3b) cannot mean (2b). In this paper, we try to provide a overall picture of the linear order constraints on association with focus in German and how it differs from English. The paper is not so much intended to deliver a theoretical explanation of the observed facts but rather aims at a structured overview. Out of the plethora of focus-related phenomena, we have chosen to focus on the effects of word order and intonation on association with (semantic-)focus, as defined above.

The remainder of this paper is structured as follows. First, we give a general overview of the linear order constraints on possible associations with focus and illustrate two descriptive generalizations, PRECEDENCE and ADJACENCY, going back to observations in Altmann (1978, 22) and Jacobs (1983, 40ff,113). In section 2.2 we compare our observations for German with English. Following that, we discuss some exceptions to those generalizations.

Section 3 discusses violations of ADJACENCY and section 4 goes through two different types of violations of PRECEDENCE. These counterexamples are shown to be due to two factors: (i) the independently motivated phenomena of scrambling and V₂ placement are shown to be responsible for the fact that sometimes PRECEDENCE is not fulfilled (Jacobs, 1983, 55,114); (ii) focus adverbs can attach syntactically to verbal projections³, but cannot attach to DPs or CPs (Jacobs, 1983, 40ff). This often makes it impossible to place a focus adverb adjacent to DPs or CPs, even if the DP or CP is the focus. This fact, we show, explains several violations of ADJACENCY.

In the light of Beaver and Clark (2003) who show that focus-sensitive operators do not fall into one homogenous class, we contrast three different focus-sensitive adverbs of German in section 5. We show that the three focus sensitive adverbs, *nur* ‘only’, *auch* ‘also/too’, and *immer* ‘always’ pattern differently with respect to e.g. the linear order of the adverb and the focused element.

²For sentences where we mark the focus, we use the * to indicate that the example is *not possible with the intended meaning*.

³Jacobs (1983, 64-72) shows that some focus adverbs also attach to DP-internally to nominal phrases and to certain predicates, and some also to a certain class of determiners.

Finally, we summarize our observations and the generalizations in section 6, and discuss possible solutions.

2 Association with Focus and Linear Order

German allows focus sensitive adverbs to appear in various positions. In embedded clauses, for example, the focus adverb can be placed either preceding the subject, the indirect object, the direct object, or the participle:

- (4) Ich glaube,...
- ‘I think...
- a. ...dass nur/auch/immer Peter Maria das Buch gegeben hat.
 - b. ...dass Peter nur/auch/immer Maria das Buch gegeben hat.
 - c. ...dass Peter Maria nur/auch/immer das Buch gegeben hat.
 - d. ...dass Peter Maria das Buch nur/auch/immer gegeben hat.
- ...that Peter Mary the book only/also/always given has
- ...that Peter only/also/always gave Mary a book.’

In the following, we illustrate which constraints certain word orders impose on possible associations of particular focus-sensitive adverbs in German. We then compare the data to the English pattern, and show that German differs from English substantially in how word order affects association with focus.

2.1 Linear Order Constrains Focus Options

In this section, we go through four types of focus-structures, i.e. four type of sentences which differ in regard to which of their elements are part of the focus.

The first case to consider is when the focus comprises all of the arguments.⁴ We will refer to this type of focus as *sentence-wide focus*. Here, we limit ourselves primarily to subordinate clauses to avoid further complications due to V-final to V-2 movement in the case of main clauses. We also hold all other factors⁵ figuring in scrambling as stable as possible in order to make it easier to understand the effects of focus on scrambling.

- (5) Warum ist das Fahrrad umgedreht? Ich glaube, ...
- ‘Why is the bike upside-down? I think...
- a. ...dass nur irgendwer irgendwem einen Streich spielen wollte_F.
 - b. *...dass irgendwer nur irgendwem einen Streich spielen wollte_F.

⁴In order to restrict the domain of this paper in a reasonable way, we do not discuss association with non-arguments. We also have focused on sentences that are relatively bare, i.e. do not contain much material beside the phrases we are interested in.

⁵German scrambling has been argued to be subject to many factors besides focus (e.g. Müller (1999)), among which are +/-definite, +/-specific, +/- agentive, +/- topic, +/- given, etc. At some points of this paper, we address their interaction with focus but we do not attempt a complete analysis of the interaction of focus with all of the other factors.

- c. *...dass irgendwer irgendwem *nur* einen Streich spielen wollte_F.
- d. *...dass irgendwer irgendwem einen Streich *nur* spielen wollte_F.
 ...that someone someone.dat a prank only play wanted
 ...that someone only wanted to play a prank on someone.
 ...ich bezweifle, dass es der Wind war.
 ...i doubt that it is due to the wind.’

The context requires association with the entire clause as the focus, including the subject. Here and in many of the examples to follow, we use preceding and following context to control the association with focus (indicated by subscripting and underlining and subscripting with *f*). Questions in the preceding context illicit the focus, and explicit provision of alternatives in the context afterwards further constrains the semantic type and syntactic category of the associated material in the target sentence.⁶

In the example in (5), the focus particle has to precede the subject. Placing the focus particle after the subject excludes the subject from the association domain. This indicates that a focus operator has to precede the constituent it associates with, including all the subconstituents in the focus. Similar observations are made in Altmann (1978); Jacobs (1983); Büring and Hartmann (2001).

(6) **Generalization 1: Precedence**

A focus-sensitive adverb has to precede its focus.

There are, however, systematic counterexamples to this generalization that we address in section (4).⁷

The next step is to consider a case where the subject is *not* part of the focus. We will refer to sentences like the ones in (7) as *broad-focus* sentences.

- (7) Warum hat Peter eines der Fahrräder umgedreht? Ich glaube, ...
 ‘Why did Peter put one of the bikes upside down? I think...’
- a. *...dass *nur* Peter irgendwem einen Streich spielen wollte_F.
- b. ...dass Peter *nur* irgendwem einen Streich spielen wollte_F.
- c. *...dass Peter irgendwem *nur* einen Streich spielen wollte_F.
- d. *...dass Peter irgendwem einen Streich *nur* spielen wollte_F.
 ...that Peter someone a prank only play wanted
 ...that Peter only wanted to lay a prank on someone.
 ...ich bezweifle, dass er es böse meinte.
 ... I doubt he had any bad intentions.’

The example in (7b) illustrates that the subject *can* precede the focus adverb if it is not part of its focus domain. The example in (7a) illustrates that it in fact *has to* precede the focus adverb. In other words, the judgements in (7a,b) are exactly reversed from those in

⁶We assume the alternative semantics in Rooth (1992) where focus creates sets of alternatives.

⁷These exceptions are the reason why we use indefinites like ‘someone’ in our examples.

(5a,b). It looks as if the focus adverb has to *directly precede* its focus, and a constituent that is not part of the focus cannot separate the two.

(8) **Generalization 2: Adjacency**

A focus-sensitive operator and its focus cannot be separated by a constituent that is not part of the focus.

If the generalization in (6) and (8) are correct, we expect similar patterns with respect to the placement of the indirect object. Indeed, the example in (7b) illustrates that if the indirect object is part of the focus, it can follow the focus adverb. The example in (7c) illustrates that in this case it may not precede the focus adverb, thus obeying both generalizations.

What happens when the indirect object is not part of the focus? Based on (6) and (8), we expect again a shift in judgements, this time with respect to the relative position of the focus adverb and the indirect object. This prediction is borne out, as shown in (9c). We will call sentences like the one in (9c) *V-DO focus* sentences.

(9) Warum hat Peter Marias Fahrrad umgedreht? Ich glaube, ...

‘Why did Peter put Mary’s bike upside-down? I think...

a. *...dass *nur* Peter Maria einen Streich spielen wollte_F.

b. *...dass Peter *nur* Maria einen Streich spielen wollte_F.

c. ...dass Peter Maria *nur* einen Streich spielen wollte_F.

d. *...dass Peter Maria einen Streich *nur* spielen wollte_F.

...that Peter Mary a prank only play wanted

...that Peter only wanted to play a prank on Mary.

...ich bezweifle, dass er sie ärgern wollte.

...I doubt he wanted to annoy her.’

Finally, we also have to consider the case where the direct object is not part of the focus domain. (9d) shows that the direct object cannot precede the focus adverb if it is part of the focus. The following examples illustrate that the judgements shift as expected if the direct object does *not* form part of the focus of the adverb. We will refer to sentences in which only the verb is in focus as *V-focus* sentences.

(10) Warum hat Peter Marias Fahrrad umgedreht? Ich glaube, ...

‘Why has Peter Mary’s bike turned.around? I think...

a. *...dass *nur* Peter Maria das Fahrrad reparieren wollte_F.

b. *...dass Peter *nur* Maria das Fahrrad reparieren wollte_F.

c. *...dass Peter Maria *nur* das Fahrrad reparieren wollte_F.

d. ...dass Peter Maria das Fahrrad *nur* reparieren wollte_F.

...that Peter Mary the bike only repair wanted

...that Peter only wanted to repair the bike for Mary.

...Ich bezweifle, dass er es unbedingt umdrehen wollte.
 ...I doubt that he intended to turn it upside-down.'

An obvious question to ask at this point is whether it is possible that e.g. both the subject and the direct object, but not the indirect object are in the focus, and if it is, where the focus particle is placed.

- (11) Warum ist Marias Fahrrad umgedreht? Ich glaube, ...
 'Why is Mary's bike upside-down? I think...'
 a. ...dass nur irgendwer Maria das Fahrrad reparieren wollte_F.
 b. *...dass irgendwer nur Maria das Fahrrad reparieren wollte_F.
 c. *...dass irgendwer Maria nur das Fahrrad reparieren wollte_F.
 d. *...dass irgendwer Maria das Fahrrad nur reparieren wollte_F.
 ...that someone Mary the bike only repair wanted
 ...that someone only wanted to repair the bike for Mary,...
 ...ich bezweifle, dass jemand Maria ärgern wollte.
 ...I doubt that someone wanted to annoy Mary.'

In this case it looks as if the focus is discontinuous, or that there are two foci which associate with the operator. The operator has to precede the first of the two. Note that, according to PRECEDENCE and ADJACENCY we would expect (12) to be the adequate sentence rather than (10a-d)). Scrambling the indirect object *Maria* over the subject *irgendwer* as in (12), however, is only possible under a contrastive reading of the indirect object (e.g. 'It wasn't Paul, it was Mary who someone only repaired the bike for.')

- (12) ...dass Maria nur irgendwer das Fahrrad reparieren wollte_F.
 ...that Mary only someone the bike repair wanted
 '...that someone only wanted to repair the bike for Mary.'

Before we turn to discuss violations to the above stated generalization, ADJACENCY and PRECEDENCE in section 3 and 4, we briefly discuss some differences and shared features between English and German, which relate to what has already been established above about German.

2.2 Comparison to English

Word order variation exists also in English. However, some focus-sensitive adverbs, e.g. 'always', are much more restricted in their distribution than their German counterparts.

- (13) I think...
 a. ...that only/also/*always Peter lent Mary a book.
 b. ...that Peter only/also/always lent Mary a book.
 c. ...that Peter lent only/also/*always Mary a book.
 d. ...that Peter lent a book only/also/*always to Mary.

Also, the effects of the word order changes in (13) are different from those we observed in German. All of the four contexts discussed in the German examples for sentence-wide focus as in (5), broad focus as in (7), V-DO focus as in (9), and V-focus as in (10) are compatible with one and the same word order in English, where ‘only’ precedes the main verb of the sentence. In the terminology established in the preceding section, (14a) has sentence-wide focus, (14b) has broad focus, (14c) is a V-DO focus sentence, and (14d) is a V-focus sentence.

- (14) a. Sòmeone only plàyed a pránk on someone.
 b. Pèter only repàired the bíke for someone.
 c. Pèter only repàired the bíke for Mary.
 d. Pèter only repàired the bike for Mary.

Nevertheless, in the particular examples given here, the two languages both obey (6) and (8) - with one exception: the subject can be part of the focus of *only* even when it precedes the adverb. This is reminiscent of the cases in German related to V2 sentences in the preceding section.

The examples in (14) also differ from those discussed for German in that the nuclear stress shifts depending on the focus where by nuclear stress we mean the last pitch accent of the sentence. However, similar effects of deaccenting can be observed in German if the focus is followed by constituents that are not part of the focus. Consider a case where *only* the subject is the focus of *nur*.

- (15) Hat jemand die Prüfung bestanden? Ich glaube,...
 ‘Did anyone pass the exam? I think...’
 a. ...dass *nur* Pèter die Prüfung bestanden hat.
 b. *...dass *nur* Pèter die Prúefung bestanden hat.
 c. *...dass *nur* Pèter die Prüfung bestánden hat.
 ...that only Peter the exam passed has
 ’...that only Peter passed the exam.’

The crucial difference between the two languages arises when looking at focus operators taking single arguments as their focus domain. As outlined at the beginning of this paper in (1), below repeated as (16), the following are possible in English:

- (16) a. Peter *only* gave Máry_F a book.
 b. Peter *only* gave Mary a bóok_F.

Note that the focus adverb is linearly separated from its focus by the verb in (16a), and by the verb and the indirect object in (16b), so both times material that is not part of the focus separates the focus-sensitive operator and its focus. This is in contrast to the generalization in (8) which seems to hold for the German counterpart of ‘only’ (*nur*). Further differences between the two languages emerge when comparing the distribution of different focus-sensitive operators within each language - this data is the focus of section

5. In the following two sections, we discuss systematic exceptions to the generalizations about PRECEDENCE, as stated in (6), and ADJACENCY, as stated in (8), in the distribution of focus-sensitive operators in German.

3 Violations of Adjacency

The first type of systematic exceptions to be discussed relates to cases where the focus-sensitive operator is not adjacent to its focus, violating (8). Most of the observations go back to Jacobs (1983); Buring and Hartmann (2001).

Even when the focus of a focus-sensitive operator is a constituent inside of the verbal complex in the right periphery, it has to precede the complex (17a), it cannot be placed inside of it (17b). Similarly, the operator cannot directly precede the verb in second position when it associates with it (17c). The appropriate word order for this latter case is discussed in the next section.

- (17) a. Siglinde hat *nur* kommen wollen_F.
 b. *Siglinde hat kommen *nur* wollen_F.
 Siglinde has come only wanted
 c. *Peter *nur* sah_F den Apfel.
 Peter only saw the apple

This indicates that focus-sensitive operators cannot combine with submaximal projections. Generalization 3 overrides ADJACENCY.

- (18) **Generalization 3:** (to be revised)
 Focus-sensitive Operators attach only to maximal projections.

Another violation of ADJACENCY becomes apparent when looking at complements other than DP-complements. DP-complements can undergo scrambling in German, which turns out to be a crucial factor in the pattern described to motivate (8). A focus-sensitive operator is not adjacent to its focus, but separated by a constituent that is not part of it, if this constituent *cannot undergo scrambling* (Buring and Hartmann, 2001).⁸ Note that this restriction may also reflect back on the facts discussed to motivate (18), since parts of the verbal cluster cannot scramble either.

To further clarify this point, consider the case of Goal-PP arguments (cf. Buring and Hartmann, 2001). Unlike DP-arguments, goal-PPs cannot scramble and can therefore not be placed to the left of sentence level adverbs, as illustrated by the following example.

- (19) a. Peter ist (wahrscheinlich) in die Stadt (*wahrscheinlich) gefahren.
 Peter is probably in the city yesterday driven
 ‘Peter drove into town yesterday.’

⁸We assume that ‘scrambling’ involves adjunction to VP or some higher maximal projection - so when ‘only’ appears to the right of a scrambled constituent, it is actually left-adjoined to the VP and thus does not violate (18). an in-depth discussion of scrambling is beyond the scope of this paper.

- b. Peter hat (wahrscheinlich) Maria (wahrscheinlich) das Buch (wahrscheinlich)
 Peter has probably Maria probably the book probably
 gegeben.
 given
 ‘Peter probably gave the book to Mary.’

Now consider the following data where *nur* cannot be immediately adjacent to the verb it associates with.

- (20) Warum kannst Du das Motorrad nicht in die Garage tragen?
 ‘Why can’t you carry the motor-bike into the garage?’
 a. Weil man das Motorrad *nur* in die Garage fahren_F kann.
 b. *
 Weil man das Motorrad in die Garage *nur* fahren_F kann.
 because one the motorbike in the garage only drive can
 Because one can only drive the car into the garage.
 ...Ich bezweifle, dass jemand es in die Garage tragen könnte.
 ...I doubt that someone could carry it into the garage.’

It seems that placing a focus-sensitive operator adjacent to its focus is contingent on the possibility of scrambling intervening material ‘out of the way’. This is confirmed by the fact that other constituents that cannot undergo scrambling, such as adjectival complements (21)a,b) and resultatives (21c,d), behave accordingly (Büring and Hartmann, 2001):

- (21) a. ...weil man sich *nur* traurig fühlt_F.
 b. *...weil man sich traurig *nur* fühlt_F.
 ...because one oneself sad only feels
 c. ...weil ich sie *nur* in den Schlaf singen_F würde.
 d. *...weil ich sie in den Schlaf *nur* singen_F würde.
 ...because I she in the sleep only sing would

That scrambling is generally not an option in those cases is illustrated in (22).

- (22) a. ...weil man sich wahrscheinlich traurig fühlt.
 b. *...weil man sich traurig wahrscheinlich fühlt.
 ...because one oneself sad probably feels
 c. ...weil ich sie wahrscheinlich in den Schlaf singen würde.
 d. *...weil ich sie in den Schlaf wahrscheinlich singen würde.
 ...because I she in the sleep only sing would

These sit well with the generalization in (18) which requires a maximal projection as the complement of focus-sensitive adverbs. Note that if these constituents cannot scramble out of VP the cases in (20b) and (21b,d) would involve attaching ‘only’ to a subconstituent V’

of VP. This, however, presupposes that the focus-adverb cannot attach to the PP or an AP itself, at least when they are complements of the verb. It turns out that there is independent evidence that focus-sensitive adverbs cannot be attached to arguments, as shown in Büring and Hartmann (2001). These arguments involve another set of cases where the focus-operator is not adjacent to its focus involves complex nominals. Focus-sensitive operators cannot be placed inside a complex nominal.

- (23) a. Siglinde hat *nur* die Freunde von Peter_F besucht.
 b. *Siglinde hat die Freunde (*nur*) von (*nur*) Peter_F besucht.
 Siglinde has the friends only of only Peter visited
 ‘Siglinde only visited the friends of Peter.’

These facts were used by Büring and Hartmann (2001) (following Jacobs (1983, 46)) to argue that focus-sensitive particles can only attach to verbal projections and their extensions, but not to DPs. In addition, focus-sensitive operators cannot attach directly to CPs.

- (24) a. Peter hat *nur* gesagt dass er kommen wird.
 Peter has only said that he come will
 b. *Peter hat gesagt *nur* dass er kommen wird.
 Peter has said only that he come will
 ‘Peter only said that he will come.’

The claim that DPs (and CPs) cannot combine with ‘only’ seem to be refuted by the examples in (25).

- (25) a. *Nur* dass es schneit_F glaube ich nicht.
 only that it snows believe I not
 ‘I only don’t believe that it snows.’
 b. *Nur* Peter_F schnarcht.
 only Peter snores

Both Jacobs (1983); Büring and Hartmann (2001) give evidence that an analysis where the focus-adverb and its focus form a constituent in (25) is not appropriate - contra the common assumption that everything preceding the verb in first position forms a constituent. Environments that unambiguously force attachment with a DP or a CP are ungrammatical (24), and (26) (Jacobs, 1983, 45).

- (26) *Peter und *nur* Maria_F treffen sich.
 Peter and only Mary met each other

To summarize the observations so far: (i) ‘nur’ can only attach with maximal projections; (ii) ‘nur’ cannot combine with CP or DP. The sentence initial *nur* is then analyzed as a syntactically adjoined to a verbal projection.

We can capture both (i) and (ii) by revising generalization 3 in (18) in the following way:⁹

(27) **Generalization 3:** (final version)

Focus-sensitive Operators only attach to maximal verbal projections.

Nur ('only') can attach to any projection of VP, but not to subconstituents verbal heads V^0 (17) or subconstituents of V' (20,21), which is predicted by (27). Also, it captures that *nur* cannot attach to argument DPs (23) or CPs (24).

In all cases discussed in this section, the operator is placed in a position that is not adjacent to its focus domain, but a constituent that is not part of the focus intervenes, in violation of the generalization about adjacency (8). It looks then as if the possible adjunction sites for focus adverbs and other types of sentential adverbs are the same. Note, however, that we do not intend to make claim about the relation between associated material of focus of adverbs and the scope of sentential adverbs.

4 Violations of Precedence

The second type of exceptions are cases where constituents that are the focus of the operator, or at least form part of the focus, precede the focus operator in the middle field or pre- V_2 , violating (6). These observations go back to Jacobs (1983).

4.1 Shift in the Middle Field

GIVEN (cf. Schwarzschild, 1999, and citations therein) DP-pronouns (i.e. non-contrastively used pronouns) and other GIVEN DPs differ in their syntactic distribution from non-GIVEN DP arguments.

In general, DP arguments follow sentence level adverbs. If, however, they are GIVEN, they may precede sentence level adverbs. The placement of pronouns and full-DPs to the right of adverbs that take semantic scope over them is familiar from patterns of *object shift*

⁹There are some apparent counterexamples to that hypothesis, like ones given below in (a) and (b) below, where 'nur' occurs *within* a DP. However, note that only scalar adjectives can be modified by this kind of *nur*, as (c) shows. Though the color 'yellow' provides a clear set of alternatives it cannot associate with *nur* in its non-scalar reading. It thus seems that non-scalar *nur* cannot be adjoined to adjectival or nominal N'-projection.

- (1) a. der (*nur*) gute_F (**nur*) Wein
 Intended: 'the wine which is only good (and not amazing)'
 b. der (*nur*) drei Jahre alte_F (**nur*) Wein
 Intended: 'the wine which is only three years old (and not amazing)'
 c. der (**nur*) gelbe_F (**nur*) Wagen
 Intended: 'the car which is only yellow (and contains not other color)'

Jacobs (1983) argues that 'nur' can combine with numerals and certain quantifiers; Buring and Hartmann (2001) argue that these cases actually involve attaching 'nur' to adjectival phrases. For reasons of time and space we will not discuss the distribution of 'nur' within DPs any further at this point.

as observed in the Scandinavian languages, where discourse antecedent material is placed to the left of certain sentence-level adverbs. The pattern of this type of information structure driven ‘shift’ leaving semantic scope intact is described for German and related to the object shift in Scandinavian in (Wagner, 2003).

Pronominal DP arguments *have to* precede sentence level adverbs. Consider the following examples with pronouns. The alternatives marked with a star in (28b) - (28d) are only possible if the pronoun receives a contrastive accent:

- (28) Ich glaube dass...
 ‘I think that...’
- a. ...wahrscheinlich irgendwer irgendwem irgendwas geklaut hat.
 ...probably someone someone.dat something stolen has
 ‘...probably someone stole something from someone.’
 - b. ...*(er) wahrscheinlich (*er) irgendwem irgendwas geklaut hat.
 - c. ...er *(ihm) wahrscheinlich (*ihm) irgendwas geklaut hat.
 - d. ...er ihm *(es) wahrscheinlich (*es) geklaut hat.
 ...he him it probably it stolen has
 ...that he probably has stolen it from him’

A similar pattern can be observed when looking at *focus-sensitive* adverbs. Pronouns that are part of the focus of an operator often have to precede the focus adverb. The following examples illustrate that reflexive pronouns (29a), reciprocal pronouns (29b), and pronouns (29c) precede the focus operators even when they are part of the focus. As in the other examples, we use continuations to test for the focus assignment.

- (29) a. Peter hat sich nur die Finger gewaschen_f,
 anstatt ein Bad zu nehmen.
 ‘Peter only washed his fingers instead of taking a bath.’
- b. Peter und Luise haben einander nur viel Glück gewünscht_F,
 sie haben sich nicht gegenseitig geholfen.
 ‘Peter and Luise only wished each other good luck, they didn’t help each other.’
- c. Peter_i hat ihn nur nach Hause gefahren_F, er_i ist nicht abgereist.
 ‘Peter only drove him home, he didn’t leave town yet.’

In fact, placing them after the focus adverb in the case they are GIVEN contexts is infelicitous.

- (30) a. *Peter hat nur sich die Finger gewaschen_F,
 anstatt ein Bad zu nehmen.
 ‘Peter only washed his fingers instead of taking a bath.’
- b. *Peter und Luise haben nur einander viel Glück gewünscht_F,
 sie haben sich nicht gegenseitig geholfen.
 ‘Peter and Luise only wished each other good luck, they didn’t help each other.’

- c. *Peter hat *nur* ihn nach Hause gefahren_F,
er ist nicht abgereist.
'Peter only drove him home, he didn't leave town yet.'

The only case in which a pronoun can occur *after* a focus adverb is if the adverb exclusively associates with the pronoun. More precisely, contrastively accented pronouns *have to* follow the focus adverb.

- (31) a. Peter mag *nur* Maria_F, nicht Karl_F.
'Peter only likes Mary, not Karl.'
Nein, ich glaube er mag (*IHN_F) *nur* IHN_F.
'No, I think he only likes HIM.'
- b. Peter und Hans kennen *nur* Maria_F.
'Peter and Hans only like Mary.'
Nein, ich glaube sie kennen (*EINANDER_F) *nur* EINANDER_F.
'No, I think they only know EACH OTHER.'
- c. Peter hat *nur* Maria_F gewaschen.
'Peter only cleaned Mary.'
Nein, ich glaube er hat (*SICH_F) *nur* SICH_F gewaschen.
'No, I think he only cleaned himSELF.'

Similar to pronouns, full-DP arguments may precede focus-adverbs, but only if they are GIVEN. In this case, however, placing the DP after the focus adverb is not infelicitous, as was the case for the pronouns, but if anything at most dispreferred.

- (32) Warum ist Peter Mutter sauer auf Maria? Irgendwas schlimmes?
'Why is Peter's mother upset with Mary? Anything serious?'
- a. Peter hat Maria *nur* ein Buch vorgelesen_F, anstatt für seine Prüfung zu lernen.
b. Peter hat *nur* Maria ein Buch vorgelesen_F, anstatt für seine Prüfung zu lernen.
'Peter has only read a book to Mary instead of studying for his exam.'

The following generalization captures the patterns described in this section.

- (33) **Generalization 4:**
DPs in the focus domain of a focus-sensitive operator can precede the operator if they are GIVEN.

If we analyze the shifting of given material as movement across the focus-sensitive adverb, then the data discussed here may indicate that generalization (6) holds true *prior to certain types of movement*. We will come back to this later.

4.2 V2 Complications

So far we have mainly presented material from embedded clauses, which in German are V_{final} . Several complications arise when taking sentences with V_2 order in consideration.

V_2 refers to the word order in matrix sentences and certain embedded sentences in German, in which in general exactly one syntactic constituent precedes the finite verb (or auxiliary), followed by the rest of the sentence ([XP V ...]). Contrary to English, a wider array of constituents than just the subject is eligible to fill the ‘first position’.¹⁰ In this section, we will consider sentences with [XP V Focus-Sensitive-Operator] word order.

First of all, the finite verb in second position can be part of the focus of a focus-sensitive adverb, even though it precedes it (34a), violating generalization (6). In fact, it is impossible to place the adverb in any position preceding the verb if the verb is in the focus of the adverb (34b,c).

- (34) Warum ist Peter enttäuscht?
 ‘Why is Peter disappointed?’
- a. Der Korken zischte_F nur.
 - b. *...nur zischte_F der Korken.
 - c. *...nur der Korken zischte_F.
 ...only the cork fizzed...
 Er hat nicht geknallt.

Intended: ‘The cork just fizzed... It didn’t pop.’

It is hard to tell if only the verb or the verb and the subject are in focus.¹¹ The continuation is intended to rule out this possibility. However, it is clearly the case that the verb can be part of the focus in a context that facilitates association with *both* the subject *and* the verb:

- (35) Was ist passiert? Brennt das Haus? Nein, ...
 ‘What has happened? Is the house burning? No, ...’
- a. ...Peter kocht_F nur.
 - b. *...nur kocht Peter_F.
 - c. *...nur Peter kocht_F.
 ...only Peter cooks
- Intended: ‘Peter only cooks.’

The verb, more generally, can be part of the focus, even when material follows the focus-operator. Consider the following example.

- (36) Was hat Peter diesen Sommer spannendes gemacht?
 ‘Did Peter do any exiting over the summer?’

¹⁰Jacobs (1983); Büring and Hartmann (2001) discuss some problems with the generalization that only one syntactic constituents can fill the first position. We will not address these objections in detail here, since they do not directly bear on the discussion in this section.

¹¹This uncertainty is in and of itself an interesting fact but we have no hint at how to explain this at the moment.

Pèter schwamm *nur* ein paar Mal im Meer_F.
 Peter swam only a few times in.the ocean

...Er ist aber nicht verreist.
 ...‘But he didn’t travel anywhere.’

All of the above is not surprising if one considers that the verb in the above clauses observes the Wackernagel generalization, that is, it occurs in second position preceded by a maximal projection. It is noteworthy, however, that generalization 3 and 4 would not rule out adjunction of *nur* to the left of the verb (assuming that the verb is the head of an IP). Nevertheless, *nur* can only occur *after* the verb in sentences like the ones above.

In the example in (34), it is clear that the entire focus of *nur* precedes the operator, since nothing follows it. In the example in (36), only part of the focus precedes the operator, and the material following it is also part of its focus. Association with the verb seems also possible when more material follows the operator, as in the following example (37a). The continuation is intended to rule out the possibility that the operator does not just associate with the fronted constituent but has sentence-wide focus (37b).

- (37) Muss Peter alle Aufsätze bis Freitag fertig haben?
 ‘Does Peter have to finish all papers by Friday?’
- a. Pèter will_F *nur* die Aufsätze bis Freitag fertig haben.
 b. ?Pèter will_F *nur* die Aufsätze bis Freitag fertig haben_F.
 Peter wants only the articles until Friday done have.
 ...Er muss aber zumindest je einen Entwurf fertigstellen.
 ‘...But he must finish a least a draft for each.’

In this example, the material following the verb is deaccented, contrastive stress is on the verb. The focus might actually involve the entire material after the adverb as well - it is not easy to show that the focus really only comprises the verb. The continuation in (37) is intended to rule out the possibility of VP-wide focus (37b) - but we are not confident that it really does.

(34), (36), and (37) all constitute counterexamples to the generalization that a focus-sensitive operator always precedes its focus: at least part of the focus precedes the operator in all three examples. Keep it mind, however, what we said at the end of the preceding section. It seems that PRECEDENCE holds prior to certain movements. Let us for now make a mental note that syntactically enforced V_{final} -to- V_2 movement could be such a movement.

A similar pattern to the one observed with the verb in second position can be observed with respect to the constituent in first position. As shown in (35), an argument in this position can be part of the focus of *nur*. Below, we give a further example.

- (38) Was ist den das für ein Lärm?
 ‘What is this noise?’
- Peter schnarcht *nur*. Sonst ist alles in Ordnung.
 Peter snores only. otherwise is everything in order

‘Peter is just snoring. Nothing else.’

The constituent in first position can also be part of the focus if more material follows the focus-sensitive operator.

- (39) Was ist denn passiert?
‘What happened?’

Péter hat nur Marìa ein Búch geliehen_F.
Peter has only Mary a book lent

‘Peter has only lent Mary a book...
...sonst ist nichts passiert.
...nothing else happened.’

Again, it is not obvious whether or not the first position can be the focus of the adverb all by itself. In a context where all other material apart from the first constituent is deaccented (e.g. a contrastive context), it looks as if the adverb only associates with the subject (40a). There is an alternative word order to express association with the subject: the order in (40b) where the subject follows the focus-sensitive adverb. According to the judgements of five subjects, the sentence in (40b) is uncontroversially acceptable. The judgements on (40a) vary from outright rejection (one speaker) to various degrees of acceptability. In direct comparison most speakers preferred (40b) over (40a).

- (40) Hat jeder Maria ein Geschenk mitgebracht?
‘Did everyone give a present to Mary?’
a. ?Péter_F hat *nur* Maria ein Geschenk mitgebracht.
b. Nur Péter_F hat *nur* Maria ein Geschenk mitgebracht
only peter has only mary a present brought
...Er hat auch allen anderen ein Geschenk gegeben. Die anderen haben zumindest Maria gar nichts geschenkt.
‘...He also gave a present to everyone else. The others didn’t give anything to Mary, only to each other.’

The methodological problem we are faced with in this case - apart from the variation in judgements - is to come up with a context that can safely rule out the possibility that the actual association comprises the entire sentence. The additional complication of contrastive accent on the subject might render the sentence in (40a) acceptable in the context we created, even with sentence-wide focus, at least for those speakers who accept it. In other words, the actual association might be the one in (41).¹²

¹² However, it is clearly not the case that association with the constituent in first position is *always* possible in German. When an accent follows the focus-sensitive operator, it is impossible (1). Since we did not consistently test under which circumstances association with a constituent is possible when further accented constituents follow it, we are not sure how to interpret this fact at this point.

- (41) Péter hat nur Maria ein Geschenk mitgebracht._F.
Peter has only Mary a present brought

A similar example from English is the following:

- (42) ... She barely knows him and doesn't want to. Everyone else likes him. We have talked about getting married. My dad only knows. He supports me 100%. ...
www.crm.mb.ca/granny/88.html

The data presented in this section support at least the following generalizations about association with material in the first position and the verb in second position, when the operator follows the verb.

- (43) **Generalization 5: Association with First and Second Position in Matrix Clauses**
- a. The constituents in the first position and the verb in second position can be part of the focus of a following focus-sensitive operator.
 - b. If an accent follows the focus-sensitive adverb, the focus cannot entirely precede the adverb.

The generalization in (a) captures the cases where part of the focus precedes a focus-sensitive adverb. The generalization in (b) captures (1) in footnote (12) below, and might provide further motivation for the hypothesis that in cases where part of the focus precedes the adverb in 1st position focus is sentence-wide, as discussed above, and if the focus includes the verb in V_2 position the focus is at least broad focus. If this latter claim can be further motivated, then the true generalization may be cleaner and could then be stated as follows: A focus-sensitive adverb following the inflected verb in a V_2 sentence (and the pronouns attached to it) can extend its focus to the left and include either the verb (and the pronouns attached to it) or both the first position and the verb.

The data concerning V_2 sentences in German illustrates some surface violations of the generalization that focus-sensitive adverbs precede their focus, i.e. PRECEDENCE as stated in (6). If placing the verb in second position and placing an XP in first position both involve movement, then the generalization (6) may actually hold true for the state of affairs *prior* to these movements - similar to the case of scrambling, discussed in section (4.1). We come back to movement and its effect in the final section.

There is another set of cases where the focus operator does not precede its focus. These observations involve extraction of the focus and will be discussed in section 5.3, since they serve to illustrate that not all focus-sensitive operators are alike regarding their distribution.

(1) ?Péter hat nur Maria ein Geschenk mitgebracht.
Peter has only Mary a present brought
'Peter only brought Mary a present.

5 Differences among Focus-Sensitive Operators

So far we have talked about "focus-sensitive operators" and "focus adverbs" without distinguishing further among them. A closer examination of the distribution of German focus adverbs reveals a much more complex situation. Just looking at the three focus-sensitive adverbs *nur* 'only', *auch* 'also/too', and *immer* 'always' it is striking that sometimes *nur* and *auch* and sometimes *auch* and *immer* pattern together. In the following paragraphs we summarize some interesting differences in the distribution of the three adverbs and clarify which of those differences are directly related to focus and which - arguably - are not. Some comparative data from English serves to further illustrate the complexities of the distributional patterns.

5.1 Sentence Initial Focus-Sensitive Operators

In English, only *only* (of the three above-mentioned operators) can occur sentence initially, as shown in (44).¹³

- (44) a. *Only* in Siberia_F it snows.
b. ??*Also*/**too* in Siberia_F it snows.
c. **Always* in Siberia_F it snows.

German shows a different grouping of the three adverbs. Both *nur* and *auch* can occur sentence initially but *immer* cannot. Compare the examples in (45) with (44).

- (45) a. *Nur* in Sibirien_F schneit es.
b. *Auch* in Sibirien_F schneit es.
c. **Immer* in Sibirien_F schneit es.

Note that German *auch* lacks variant comparable to English *too*, i.e., a focus-sensitive operator that is obligatorily placed after its focus. This difference seems to be a lexical idiosyncrasy rather than a direct consequence of the way how focus is realized in German. In English, the exclusiveness operator *only* and the operator *also* can occur after the NP it associates with, and both can receive stress in this case. *Also*, in contrast to *only*, seems to prefer stress here, at least unless the subject is contrastively focused.

- (46) a. The U.S._F *only*/*óonly* has the right to declare war.
b. The U.S._F *also*/*áalso* has the right to declare war.
c. The U.S._F **too*/*tóo* has the right to declare war.
d. ?The U.S._F *áalways* has the right to declare war.

The possibility of stressed *also* post-nominally is well attested in real-life examples, the unstressed version is at least harder to get. We tested the stressed version with examples collected from Google eliciting people's intuition about the pronunciation.

¹³The sentence in (44b) may be possible with *also* when the subject is contrastively focused.

- (47) a. ... Mainers must continue to realize that other people also have freedoms or individual wishes - others, too, have individual rights. ...
www.state.me.us/sos/kids/fyigames/2003essay.htm
- b. ... law. They also choose not to recognise that other people also have rights. Group peer pressure is very strong among young people. ...
www.sm.org.nz/soapbox.asp?SoapboxID=69 - 15k
- c. ...Many other people also have access to the shared files and folders on the G drive. If you have been granted ...
www.lcc.edu/helpdesk/network/network_employees.htm

German *nur* differs from English *only* in that it cannot receive an accent when it occurs post-nominally ((48a) as opposed to (46a)). Furthermore, German differs from English in not that *auch* may not occur post-nominally.

- (48) a. Die USA_F *nur*/**núr* haben das Recht, Krieg zu erklären.
- b. *Die USA_F *auch*/á*uch* haben das Recht, Krieg zu erklären.
- c. *Die USA_F *immer*/í*mm*er hat das Recht, Krieg zu erklären.

Together with the observations in (45, 44), it seems then that with respect to linear order in the first position, *also* and *auch* have a complementary distribution in the presence of an associated nominal argument: *also* can only follow it, while *auch* can only precede its focus DP. *Only* and *nur*, on the other hand, have similar distributions with respect to linear order in first position, but differ with respect to their stress properties, since postnominal *nur* cannot be stressed (48a), but postnominal *only* can (46a). In both languages, the two respective focus adverbs differ in distribution.

We will not attempt to explain this pattern in this paper. The cases where the focus-sensitive operator *follows* its focus in first position constitute counter-examples to the generalization about PRECEDENCE in (6). In section (4) we considered the possibility that the generalization may hold true prior to certain movements. The next step would then be to look for evidence that the problematic examples involving association in first position are derived, and our generalizations hold and earlier derivational stage. Similar issues are discussed in the section (5.3).

5.2 Discourse Marker *vs.* Focus-Sensitive Adverb

There is a further interesting detail distinguishing the German focus adverbs *auch* and *nur*, discussed in (Altmann, 1978; Jacobs, 1983). Compared to the contrasts in the positional differences discussed in the preceding section, these alleged differences are not entirely clear-cut, however. German focus adverbs have a use where they seem to contribute a discourse related meaning, rather than associate with any particular constituent in the sentence, similar to their English counterparts.¹⁴ In matrix sentences, these discourse particle uses of *auch* and *nur* they can fill the first position without any further material.

¹⁴We are not sure about how to define these sure of focus adverbs exactly. Jacobs (1983) uses the term *Konjunktion* ‘conjunction’.

The example in (49) shows that both *auch* and *nur* can be used encoding a meaning that connects the sentences with preceding sentences in the discourse. Jacobs does not mention *immer*. It might not be a discourse "conjunction" as meant by Jacobs, still the use of *immer* in (49c) does not only mean 'always' but has a discourse related meaning. Independent of the lexical contents of the remaining sentence, *immer* in a construction such as the one in (49c) can only be interpreted as an exclamation (most likely a complaint). We have highlighted the adverbs and their translations by italics.

- (49) a. Schön und gut das du dort hin willst. *Nur* schneit es in Sibirien.
 'Fair enough that you want to go there. *The only thing is*, it snows in Sibiria.'
- b. Ich glaube, dass wird schwieriger als du denkst. Das Visum ist schwer zu bekommen. *Auch* schneit es in Sibirien.
 'I think, this will be more difficult than you believe. The Visa is hard to come by. *The other thing is*: it snows in Sibiria.'
- c. *Immer* wählen die uns aus!
 '(Damn it!) *Always* they choose us.'

Altmann (1978); Jacobs (1983) claim that the adverb *auch* can fill the first position preceding the verb in a V_2 clause without being interpreted as conjunctive discourse marker and associating with material within the following sentence. This, they argue, is impossible in the case of *nur*. Consider the example in (50). *Auch*, the claim goes, can occur without being interpreted as discourse conjunction, and associates with the following constituent. In the following example, this type of reading is at least hard to get, however.

- (50) Ich denke, dies ist irrelevant, denn...
 'I think (that) this is irrelevant since...'
- a. *...*nur* schneit es im Winter_F.
- b. ?...*auch* schneit es im Winter_F.
- c. ?...*immer* schneit es im Winter_F.
 Intended: 'Only/also/always it snows during the winter.'

We think that, in a contrastive interpretation, *immer* sounds slightly better than the two other adverbs, but all of them seem odd. We find the judgment subtle and not clear cut, but they do not yield a clear difference between *auch* and *nur*.¹⁵

The contrast between *auch* and *nur* in (51) seems to be clearer (cited after Jacobs (1983, 5)). This piece of evidence was used in earlier studies to show differences between *auch* and *nur*. The example would constitute a violation of the generalization on ADJACENCY (8), since the verb intervenes between the operator and its focus.

- (51) a. ?*Auch* behielt sie die gemeinsam bewohnte Villa_F.
 Intended: 'She also kept the villa they lived together in (apart from keeping something else).'

¹⁵Note that (50) does neither violate the generalization in (6) nor the one in (8).

- b. **Nur* behielt sie die gemeinsam bewohnte Villa_F.
 Intended: 'She only kept the villa they lived together in.'

The sentence in (51a) can be used to express that, apart from something else, someone ('she') also kept the villa in question, apart from other things. The sentence in (51b), on the other hand, cannot express that the only thing the person kept was the villa. While the contrast between the two sentences seems clear, the interpretation of this contrast is less than obvious. The English paraphrases in (51) may help to illustrate the issue.

- (52) a. Did she keep any of the stuff after the divorce? She kept the piano.
 The other thing is/Additionally, she kept the villa they lived in together.
 b. Did she keep any of the stuff after the divorce?
 ??The only thing is/Only/It's just, that she kept the villa they lived in together.

Our sentence in (51b) is a grammatical way to express something like the English answer in (52b). But this English version is infelicitous in the context in (52), at least it cannot express the relevant meaning expressing association of the DP with *only* - just like our German sentence. It appears that it would be equally odd to use this English paraphrase in this context in order to express that the only thing that someone kept was the villa. The pattern in (52) is due to the difference in meaning between the discourse related uses of the focus adverbs.

Consider now the English example (52a). Using this sentence seems much more felicitous. It clearly is not identical in meaning to 'She also kept the villa they lived in together.', but it is compatible with a context where someone wants to communicate this fact (perhaps via implication: something else happened, and in this context it is plausible that it was another keeping-event) and also indicate that this has some further implications at the discourse level. The parallel between the judgements in English and German illustrates that the German judgements in (51) are not sufficient to support the claim that (51a) has a reading where the DP associates with the adverb.

Our intuition is that similar to the English example in (52a), a discourse related meaning component necessarily forms part of the German sentence in (51a), and that the *auch* in this sentence *is* in fact the discourse-marking version of the adverb and *does not* associate with the DP (and therefore our marking of the association in (51) and the discussion in Altmann (1978); Jacobs (1983) is actually based on a misinterpretation of this sentence).

If this is correct, then a context that *really* assures association with of the focus-sensitive adverb with the DP should be incompatible with the response in (51a) - contra Altmann (1978); Jacobs (1983). A context like the one in (52), as the English example shows, is not sufficient to force such a reading. The context (53) does force association with the DP, - and indeed is *not* compatible with the adverb in first position.

- (53) Hat sie nur das Auto behalten?
 'Did she only keep the car?'
 a. **Auch* behielt sie die gemeinsam bewohnte Villa_F.
 Intended: 'She also kept the villa they lived together in (apart from keeping the car).'

- b. Sie behielt *auch* die gemeinsam bewohnte Villa_F.
 ‘She also kept the villa they lived together in.’

We cannot conclude from this one example that association of the focus-sensitive adverb *auch* with the DP is impossible whenever the adverb fills the first position, but it seems that the claim that it *can* take the DP as its focus cannot be substantiated based on the data discussed. Both *nur* and *auch* might after all only receive a discourse-related meaning here, and thus might *not* differ in this respect after all, contrary to earlier discussions of this data. If this is correct, then example such as (51) do not constitute counterexamples to our generalization on ADJACENCY in (8).

5.3 Association with Preceding Material: *auch* vs. *nur*

Finally, *nur* and *auch* seem to behave differently with respect to pronouns (or other GIVEN NPs) which constitute the exclusive (non-contrastive) focus of the operator. The adverb *auch* can associate with the subject pronoun even if the pronoun precedes the adverb, as in (54b). The adverb has to be stressed, in order to associate with the fronted focus, and the material following the adverb has to be destressed.

- (54) Ich verstehe ja, dass Peter und Maria über den Krieg reden. Sie sind schliesslich direkt davon betroffen. Aber warum redet Christian über nichts anderes?
 ‘I understand why Peter and Mary talk about the war. After all they are directly affected by it. But why did Christian talk about nothing else but the war?’
- a. Weil *auch* er_F mit einem Soldaten verheiratet ist.
 Because too he with a soldier married is
- b. Weil er_F *áuch*/**auch* mit einem Soldaten verheiratet ist.
 Because he too with a soldier married is
 ‘Because he, too, is married to a soldier.’

This is not possible with *nur*, as shown in (55b) - at least when the focus adverb is stressed. According to Jacobs (1983, 101), unstressed *nur* is generally able to associate with a fronted focus. Testing this claim is not trivial, due the confounding influences of the contrast on the subject, which is involved both for (54b) and (55b) - we are not confident at this point about the judgements.

- (55) Warum redet Christian eigentlich so betroffen über den Krieg?
 Die anderen scheinen doch ok zu sein.
 ‘Why is Christian so affected by the war? Everyone else seems to be ok.’
- a. Weil *nur* er_F mit einem Soldaten verheiratet ist.
 Because only he with a soldier married is
- b. Weil er_F **núr*/*?nur* mit einem Soldaten verheiratet ist.
 Because he only with a soldier married is
 ‘Because only he is married to a soldier.’

The fact that *auch* and *nur* differ with respect to their behavior with a fronted focus¹⁶ is further supported by the following data.

- (56) a. Manche Schlägzeu_Fger spielen *áuch*/**auch* Klavier.
 ‘Some drùmmers álso play piano.’ (... apart from organ players)
 b. Manche Schlägzeu_Fger spielen *auch* Klavíer_F.
 ‘Some drùmmers also play piáno.’ (...apart from playing the drums)
- (57) a. Manche Schlägzeu_Fger spielen **núr*?*nur* Klavier.
 b. Manche Schlägzeu_Fger spielen nur Klávíer_F.

We are not confident with respect to the possible association with *nur* in (57), and received conflicting judgments on this point. Both the sentence with stressed *auch* and with ‘nur’ requires deaccenting of following material. This and the complicating influence of a contrastive accent on the subject make it harder to establish association of the adverb. There is, however, converging evidence that our intuition about the different distribution of *nur* and *auch* is correct. In the following examples, taken from Jacobs (1983, 108, his judgments), (b) and (d) show that there are cases where *nur* and *sogar* cannot associate with preceding material but accented *auch* can associate.

- (58) a. Seine Mütter_F kommt morgen *áuch*.
 his mother comes tomorrow also
 b. Ich vermùte, daß seine Mütter_F morgen *áuch* kommt.
 I think that his mother tomorrow also comes
 c. Seine Mütter_F kommt morgen *nur/sogar*.
 his mother comes tomorrow only/even
 d. Ich vermùte, daß seine Mütter morgen *??nur/?sogar* kommt.
 I think that his mother tomorrow only/even comes

To summarize, *only* and *auch* differ in distribution with respect to fronted focus. We leave an account for the observed differences with respect to stress and association for future research.

6 Summary and Conclusions

Although this paper does not provide a complete picture of the underlying laws of focus-association with focus-sensitive operators in German, our examination of the interaction of word order and intonation and its combined effect on association with focus revealed several generalizations. Those generalizations are, at this point, necessarily very surface-oriented since we have not - yet - attempted a theoretical explanation of the observed facts and generalizations.

¹⁶It is important to note that in the cases discussed here *all* of the focus precedes the focus-sensitive adverb. We have already seen in section 4.1 that *nur* can be preceded by parts of its focus.

We have examined mainly one focus-sensitive adverb, namely *nur* ('only'). Below we repeat the generalizations which hold for the association with *nur* in (59) where the lower generalization override the higher ones.

(59) Summary of Generalizations

a. **Generalization 1: Precedence**

A focus-sensitive adverb has to precede its focus.

b. **Generalization 2: Adjacency**

A focus-sensitive operator and its focus cannot be separated by a constituent that is not part of the focus.

c. **Generalization 3:**

Focus-sensitive Operators attach only to maximal verbal projections.

d. **Generalization 4:**

DPs in the focus domain of a focus-sensitive operator can precede the operator if they are GIVEN.

e. **Generalization 5:**

- i. The constituents in the first position and the verb in second position can be part of the focus of a following focus-sensitive operator.
- ii. If an accent follows the focus-sensitive adverb, the focus cannot entirely precede the adverb.

The above-stated generalizations are unsatisfying because they do not *explain* what is going on. At several points throughout this paper we have hinted at a possible interpretation of at least a huge chunk of the exceptions (as discussed in section 3 and 4), namely that ADJACENCY and PRECEDENCE may hold prior to syntactic movement. The generalization can then alternatively stated at a more abstract level by saying that the focus particles in general attach to the constituent they associate with, and subsequent linearization translates this relation in to precedence and adjacency, unless other factors interfere.

A further simplification that this hypothesis would provide is that generalization 5 could be derived. GIVEN material scrambles for reasons independent of association with focus towards the beginning of the sentence (see e.g. Lenerz (1977); Müller (1999); Wagner (2003)) and thereby to the left of the operator. The generalizations of ADJACENCY and PRECEDENCE would then follow from the fact that focus particles in general attach to the constituent they associate with, which results in immediate precedence, unless one of the complicating factors interferes.¹⁷

So far it looks as if one could preserve ADJACENCY and PRECEDENCE by attention to the fact that focus-sensitive operators are of a certain syntactic category (i.e. they are sentential adverbs) and that association with focus happens prior to (certain types of) movement. This account would also capture the problematic data in (34), (36), (39) and (40) from section

¹⁷Whether or not movement should be taken to explain V_2 and scrambling is a question we can not address at this point and is to a certain degree a theory internal question. Jacobs (1983) argues against a transformational analysis of the patterns involved. Our main point here is the systematic link between the generalizations on focus association and and the pattern of V_2 and scrambling phenomena.

4.2. We give the hypothetical positions of subject and verb prior to movement below where we repeat all of the just mentioned examples.

- (60) a. Der Korken_j zischte_{iF} j nur i.
the kork fizzed j only i
- b. Pèter_j schwamm_i j *nur* ein paar Mal im Meer_F i.
Peter swam j only a few times in.the ocean i
- c. Péter_j hat_i j *nur* j Marìa ein Búch geliehen_F i .
Peter has j only j mary a book lent i
- d. ?Péter_{jF} hat j *nur* j Marìa ein Geschenk mitgebracht.
Péter has j only j Mary a present brought

(60a) is an uninteresting case because nothing follows *nur*. That is, we cannot test whether the operator is where we would expect it. (60b), too, is unproblematic since we cannot use it to contradict the hypothesis. Since the focus spans the entire VP it would have been adjacent to the focus-sensitive operator in any case (not even paying attention to the fact that the subject is given in that example). (60c) is accounted for because the finite part of the verb and subject can independently move to the front out of the big scope of *nur* spanning the entire sentence. In (60d) both ADJACENCY and PRECEDENCE are observed since the subject would be generated right in front of *nur* (which only associates with the subject) and then move to the front.

So far our hypothesis seems to make the right predictions. Moreover, the analysis of focus-sensitive adverbs has been simplified. The hypothesis correctly relates the focus possibilities in V_2 sentences to the focus possibilities in embedded sentences. In (61a), the embedded sentence, ‘nur’ is placed in front of the material that cannot be scrambled, the adjective and the auxiliary ‘haben’, as close to its focus as possible. In (61b), the focus raises to second position, but prior to movement, the focus-sensitive operator properly preceded its focus.

- (61) a. ...dass Pèter sie/die Aufsätze *nur* fertig haben will_{iF}.
b. Pèter_j will_{iF} j sie/die Aufsätze *nur* fertig haben i.
peter wants them/the articles only ready have

However, examples like (37) from section 4.2 poses a problem:

- (62) Pèter_j will_{iF} j (*nur*) die Aufsätze bis Freitag (**nur*) fertig haben i.

While our hypothesis would explain why the subject is not part of the focus, it would predict that *nur* should appear right in front of *fertig haben*. The DP *die Aufsätze* and the PP *bis Freitag* are GIVEN and should move to the left of *nur* and no syntactic constraints prevent *nur* from left-adjoining to the then empty VP *fertig haben*. That this word order is possible in the embedded sentence is shown in the following example.

- (63) ..., dass Pèter die Aufsätze bis Freitag *nur* fertig haben will.

The properties of sentences with V_2 word order would need some further study to test whether our hypothesis can explain the full set of facts. To sum up, our hypothesis that association with focus happens prior to movement covers a lot of ground, but needs to be further worked out.

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