

## Prosody and information structure of the German particles *selbst*, *wieder* and *auch*<sup>1</sup>

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Ein Hanúta kostet jetzt sogar ein Euro  
(heard in the Hamburg train station)

### 1. The phenomenon to be explained

Some German particles appear to change their meaning according to their accented or unaccented status. This is the case with *selbst* ‘self/even’, *wieder* ‘again’ and *auch* ‘too’. Other particles, like *sogar* ‘even’ and *nur* ‘only’, do not show the same behavior. However, in pure intonation languages such as English and German, a sentence-level pitch accent cannot have a contrastive function at the lexical level. Pitch accents are correlates of syntax and information structure, but are not able to distinguish two words, or even two interpretations of a word. This role is taken over by lexical stress, which is potentially distinctive. In a pair like *éxport* vs. *expórt* in English or *úmfahren* ‘to run over’ vs. *umfáhren* ‘to drive around’ in German, the distinction is made by the place of the lexical stress in the word rather than the actual realization of stress with pitch. In these languages, all words have a stressed syllable, a property called ‘culminativity,’ and a monosyllabic word – like the particles studied here – obligatorily carries its lexical stress on the unique syllable.<sup>2</sup> Whether the lexical stress is realized by a pitch accent is not a property of the word itself, but of the sentence as a whole, especially of its information structure. As has been shown by Selkirk (1984, 1995), a pitch accent on a word signals that the word itself is the focus or that it is the focus exponent of a larger constituent. Because of this property, when a difference in meaning due to pitch accent is observable, it can only be the reflex of a difference anchored in another part of the grammar.

In this paper, I propose that the difference in meaning and accent behavior of *selbst*, *wieder* and *auch* is a function of their information structural roles. When they are focus particles, they do not carry focus, but just associate with the focus constituent. In this case, they are not accented. But they can also carry a free focus themselves, and in this case, like all foci, they have a focus domain and they elicit a set of alternatives (see Rooth 1985, 1992). In this function, they generally are accented at the level of the intonation phrase (Selkirk 2008). The change of information structural role comes with a change

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<sup>2</sup> *Wieder* is not monosyllabic, but it has only one stressable syllable.

of meaning, as illustrated in the examples (1) to (6). This change of meaning is only indirectly related to the change of accent status, and cannot be considered as definitional of two lexemes. German does not contrast words by the presence vs. absence of stress, and the particles under consideration are no exception.

When unaccented as in (1), *selbst* behaves like a focus particle with the same meaning as *sogar* 'even'. It associates with the accented constituent *Auto* 'car' and elicits the presupposition that Maria washed other things, which are 'less likely, less plausible, or more surprising' (Eckardt 2001) than the car on the scale of the things Maria usually washes (see also Primus 1991 for a scalar interpretation of *selbst*). The forwardslash (/) stands for a prototypical topic intonation, a rising contour, and the backslash (\) for a prototypical focus intonation, a falling contour. *Selbst* in (2) is used in its interpretation as an 'intensifier' (see Eckardt 2001, Hole 2008 Jacobs 1983, König 1991 and Siemund 2000, among others). In this case it elicits the reading that it was Maria herself who washed the car, possibly in contrast to other persons who could have more plausibly washed the car.

(1) [MARIA]<sub>TOP</sub> hat selbst<sub>1</sub> [das AUTO]<sub>FOC1</sub> gewaschen.  
 Maria has even the car washed  
 'Maria has even washed the car.'

(2) [MARIA]<sub>TOP</sub> hat das Auto [SELBST]<sub>FOC</sub> gewaschen.  
 Maria has the car herself washed  
 'Maria washed the car herself.'

Unstressed *wieder* in (3) is used in its restitutive interpretation. *Wieder* associates with the word *geschlossen* 'closed' in its domain of interpretation. The door is usually closed, or at least it had been closed before, but it has been opened, and Eva restored its original closed state. In its restitutive use, the focus operator is sensitive for the element in its scope, which is often a predicate with a resultative component, expressing accomplishment or achievement. In (4), *wieder* is accented and has a repetitive meaning. Eva (or somebody else) has closed the door at least once in the past, and she repeats this act (see, among others, Beck 2006, Klein 2001 and von Stechow 1996).

(3) [EVA]<sub>TOP</sub> hat die Tür wieder<sub>1</sub> [GESCHLOSSEN]<sub>FOC1</sub>  
 Eva has the door again closed  
 'Eva closed the door again.'

(4) [EVA]<sub>TOP</sub> hat die Tür [WIEDER]<sub>FOC</sub> geschlossen.  
 Eva has the door again closed  
 'Eva closed the door once more.'

The difference in meaning between the unaccented and the accented versions of *auch* 'also' is more subtle. A straightforward apprehension of the contrast between (5) and (6) is that unstressed and preposed *auch* in (5) associates with a following constituent, *Kuchen*, while accented *auch* in (6) seems to associate with the preceding element, *Maria* (see, among others, Krifka 1999 and Reis and Rosengren 1997 for this explanation). However, there is also a

difference in the interpretation of *auch* itself. In (5), it is just an association-with-focus particle with an additive meaning. Maria has eaten different things, and the sentence (5) adds cake to the list of the things she has eaten. In (6), *auch* is a focus and, as Krifka proposes, it emphasizes the affirmative part of the sentence. It contains a presupposition that at least one other person besides Maria has eaten cake, and affirms that Maria also performed this action. According to Krifka, *Maria* is a contrastive topic, and the remainder of the sentence says something about her. Reis & Rosengren (1997) propose that *auch* can sometimes mean 'likewise'.

(5) [MARIA]<sub>TOP</sub> hat auch<sub>1</sub> [KUCHEN]<sub>FOC1</sub> gegessen.  
 Maria has also cake eaten  
 'Maria also ate cake.'

(6) [MARIA]<sub>TOP</sub> hat [AUCH]<sub>FOC</sub> Kuchen gegessen.  
 Maria has also cake eaten  
 'Maria ate cake, too.'

In this paper, it is proposed that, besides the well-studied semantic and syntactic features of these words, their prosodic and information structural properties are important for a proper analysis of the change of meaning. It is proposed that they form a class of words with similar properties.

## 2. Two information structural roles: Association-with-focus and free focus

The main thesis defended in the present paper is that the three particles just introduced can have two main information structural roles, and that all other distinctions, in particular accent status and word order, are consequences of this primary distinction. The first role is association-with-focus and the second role is free focus.

### 2.1 Association-with-focus

In their first role, the particles associate with a focus, as illustrated in (1), (3) and (5) (see Jackendoff 1972 for the expression association-with-focus). They are part of a larger class of focus-sensitive particles which typically evoke a set of alternatives on their associated constituent (Rooth 1985). Additionally, they also express scalar (*sogar*, *selbst* 'even'), additive (*auch* 'also'), exclusive (*nur* 'only'), negative (*nicht* 'not') or restitutive (*wieder* 'again') functions. They usually associate with only part of the sentence, and are specialized for the kind of syntactic element with which they associate.

As already mentioned, the meaning of *selbst* as a focus particle is equivalent to that of *sogar* 'even'. The definition given by Eckardt (2001: 371) for *selbst* as a focus particle is: "(a) the proposition expressed is the least likely, least plausible, or most surprising proposition among the set of focus alternatives (scalar presupposition) and (b) all focus alternatives hold true as well (additivity)."

Klein (2001) gives a unified meaning for both uses of *wieder/again*: 'and this is not for the first time.' As a focus particle, *wieder* associates with

teleological constructions, resultatives and the like, denoting a state which can be restored. This is often expressed by a predicate or an adjective, but see below for more uses.

As for *auch*, additivity is the meaning that most authors propose. *Auch* associates with different kinds of elements. Jacobs (1983) and Buring and Hartmann (2001) demonstrate a tendency for *auch* to adjoin to non-arguments, in other words to VPs, IPs, APs and root CPs. An adjunction to argument DPs or CPs is dispreferred, but not impossible (see Reis 2005 and Müller 2002 for examples). I will not contribute anything to this syntactic debate here.

When they associate with another element, the focus particles are functional elements with a scope. In this role, they keep their primary meaning. In the expression *selbst das Auto* in (1), the identity function identifies *Auto* as the element at stake, and presupposes that there are more plausible alternatives, yielding a true proposition when the background is applied to them. In (3), the complex *wieder geschlossen* has a resultative reading, due to the meaning of *geschlossen*, which is a state that can be restored, and the function of *wieder*, which says that it was already in this state before and that the initial or normal state has been restored. And finally, in the expression *auch Kuchen* in (5), *auch* is a functional element adding cake to whatever the action denotes.

## 2.2 Free foci

On the other hand, *selbst*, *wieder* and *auch* can also be foci themselves, without an associated element. In this case, they are not functional elements and do not associate with another constituent in the sentence. When they are free foci, they carry the focus role themselves. This is what distinguishes *selbst*, *wieder* and *auch* from other particles like *nur* 'only', *fast* 'almost' and *sogar* 'even', which cannot be free foci but only associate with another element in the sentence, and which, as a consequence, do not show the same twofold behavior.<sup>3</sup>

I assume a tripartite division of the sentence into focused, given and topical parts (see Krifka 2008, Féry 2008). Every sentence has a focal part, but given and topical elements are optional. If *selbst*, *wieder* and *auch* are foci, the remainder of the sentence contains further information structural elements. The other constituents of the sentence may be given, or there may be another focus, or a topic. A topic may itself contain a focus and a given part. See below for examples of different constellations.

In (2), (4) and (6), the intended reading is one in which the subject is a topic, and the particle is the only focus of the sentence. The remainder of the sentence is undefined, it may be given or new information. The sentences can be paraphrased as in (9) to (11), respectively. These paraphrases express the fact that the particle has a meaning, tentatively rendered by the expression in brackets labeled FOC.

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<sup>3</sup> I do not try to provide a list of focus particles here, and it may be the case that other particles may carry a free focus as well, like for instance the negative particle *nicht* 'not'. By contrast, the sentence *Ich bin nur MÜDE* 'I am only tired' in the sense of the only thing that I feel is tiredness, is not a counterexample to my claim. In this case, *nur* is a focus particle with an adjective as its associated constituent.

(9) *Selbst*

‘[As for Maria]<sub>TOP</sub>, [somebody washed her car], [and it was Maria who did it]<sub>FOC</sub>’

(10) *Wieder*

‘[As for Eva]<sub>TOP</sub>, [she has closed the door], [and this is not for the first time]<sub>FOC</sub>’

(11) *Auch*

‘[As for Maria]<sub>TOP</sub>, [she has eaten cake], [as did other persons]<sub>FOC</sub>’

The narrowly focused part, indicated with square brackets and a subscripted FOC, is rendered in the examples above with pitch-accented particles. There is some loss in the interpretation of these words as compared to their function as association-with-focus particles. This loss may explain the drift in meaning observed when they do not associate.

As free foci always do, the particles elicit a set of alternatives, as shown in example (12). Since alternatives are of the same semantic type, modulo type-lifting, as the constituent of which they are alternatives (see Rooth 1985, 1992), the words *selbst*, *wieder* and *auch*, which following Kleemann-Krämer (2008) I assume to be adverbs, should elicit propositional alternatives. As free foci, *selbst*, *wieder* and *auch* have a domain which, in the examples, includes the verb. We will see below that at least for *selbst*, the domain of the free focus does not necessarily include the verb. And of course, the particles also have a semantic meaning, which will be addressed in the following sections.

- (12) a. Alternatives for *selbst*: {and it was Anna herself who did it, and it was Anna’s father who did it ...}  
b. Alternatives for *wieder*: {and this is not for the first time, and this still happens, and this happens}<sup>4</sup>  
c. Alternatives for *auch*: {and as did John, and as only Maria did, and as did other persons...}

A primary focus may contain a secondary focus in its scope (Rooth 2009 Buring 2008, Féry and Ishihara 2009). The adverbial particles addressed here may be primary foci, in which case they have wide scope over a secondary focus, or they are secondary foci, and are themselves subordinate to a focus with wider scope. Both cases are illustrated below. This happens in both the association-with-focus and free focus roles.

In the remainder of the paper, *selbst*, *wieder* and *auch* are discussed in turn, the proposal is elaborated with examples, and alternative accounts are discussed.

### 3. *Selbst*

Further examples of *selbst* as a focus particle are given in (13). *Selbst* preferably associates with a nominal constituent, argument or adjunct. In (13a),

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<sup>4</sup> Beck (2006: 306) only admits *still* and the semantically empty adverb as alternatives for *again*. In doubt, I follow her proposal.

the constituent with which it associates, the subject, is the only focus of the sentence. There is no other focus, and also no topic. In (13b), *selbst* associates again with the unique focus of the sentence, but there is also a topic, as in (1), where the constituent associated with *selbst* was an object. (14) illustrates that a constituent introduced by *selbst* cannot play the role of a topic. This is due to the fact that *selbst* introduces a focus, and that the two roles are incompatible.

- (13) a. Selbst<sub>1</sub> die [REISE\]<sub>FOC1</sub> war ein Abenteuer.  
 even the journey was an adventure  
 'Even the journey was an adventure.'  
 b. [Den NACHTISCH/]<sub>TOP</sub> hat selbst<sub>1</sub> [ANNA\]<sub>FOC1</sub> nicht mehr geschafft.  
 The.acc dessert has even Anna no longer managed  
 'As for the dessert, even Anna did not manage it.'
- (14) \*Selbst<sub>1</sub> [ANNA /]<sub>TOP1</sub> hat [den NACHTISCH \]<sub>FOC</sub> nicht mehr geschafft.  
 even Anna has the.acc dessert no longer managed  
 'Even Anna did not manage the dessert.'

In (15), *selbst* has a focal role. In discussing the role of *selbst* as a free focus, it is important to separate the strictly information structural issues from those related to pragmatic or contextual effects. It is for instance important to neutralize the effects that other particles of modality may bring into the same sentence. In (15a), *schon* 'already' contributes to the meaning of the sentence and conveys a scalar nuance. (15a), where *selbst* is focused, and (13a), where it associates with *Reise* 'journey', convey equivalent meanings, but through different means. When *schon* is absent, as in (15b), the nuance is no longer there, because the scalar effect associated with *schon* in (15a) or with the focus particle in (13a) is absent.

- (15) a. Die Reise [SELBST\]<sub>FOC</sub> war schon ein Abenteuer.  
 the journey self was already an adventure  
 'The journey itself was already an adventure.'  
 b. Die Reise [SELBST\]<sub>FOC</sub> war ein Abenteuer.  
 'The journey itself was an adventure.'

At this point, the function of *selbst* as an intensifier has to be clarified. In (15a) *selbst* intensifies *die Reise*, and resembles a focus particle. It seems to associate with this noun. And indeed, different authors have also analyzed *selbst* as a focus particle in its role as intensifier (see König and Siemund 1999, Siemund 2000; but see Eckardt 2001, who argues against this analysis). I agree with Eckardt and propose that even if *selbst* is the identity function for *die Reise* in (15a), its role in discourse is not that of a focus particle, but of a free focus. *Die Reise* is the topic of the sentence (or it may be given) and *selbst* is the focus. Neither has the other one in its association domain.

*Selbst* as 'intensifier' has been studied for its different interpretational uses (see especially König and Siemund 1999 and Siemund 2000), and has been shown to have several nuances, like scalar effects (or 'surprise effects')

(16a), centrality effects<sup>5</sup> (16a-c) (see also Baker 1995), exclusivity (16a), and additivity (16d) (see Moravcsik 1972, Edmondson and Plank 1978 and Siemund 2000). However, these effects are not part of the meaning of the word *selbst* and, as a result, all nuances can be absent from the interpretation (see Eckardt 2001 for a similar view). They arise because of world knowledge and/or context, if the construction in which *selbst* occurs suggests them. In fact, even though they are not part of the meaning of *selbst*, they often co-occur with this word, because of the strong identity function it denotes, shown in (17). We know that only one person is necessary to open a door, that parliamentary debates are supposed to be attended by all deputies, that the dessert is just a small part of a meal, and that many people are vegetarians. These pieces of information are not included in the literal meaning of the sentences in (16), but influence their meaning all the same.

- (16) a. Die CHEFIN hat die Tür [SELBST]<sub>FOC</sub> aufgemacht.  
 the boss has the door self opened  
 'The boss opened the door herself.'
- b. Die KANZLERIN war bei der Parlamentsdebatte [SELBST]<sub>FOC</sub> anwesend.  
 the chancellor was by the parliament-debates self present  
 'The chancellor was present at the parliamentary debates.'
- c. Der Nachtisch war [SELBST]<sub>FOC</sub> eine ganze Mahlzeit.  
 the dessert was self an entire meal  
 'The dessert was a meal in itself.'
- d. BARBARA isst [SELBST]<sub>FOC</sub> kein Fleisch.  
 Barbara eats self no meat  
 'Barbara herself doesn't eat any meat.'

For Moravcsik (1972), the core meaning contribution of *selbst* is the identity function ID on the domain of objects  $D_e$ , shown in (17) in Eckardt's (2001) formalization.<sup>6</sup> What is focused when *selbst* is a free focus is this identity function, causing the centrality effect evoked above and illustrated in (16a-c).

- (17) ID:  $D_e \rightarrow D_e$   
 ID( $a$ ) =  $a$  for all  $a \in D_e$

An important distinction made in the work of König (1991), Siemund (2000), Eckardt (2001) and Hole (2006) is the adnominal vs. adverbial use of *selbst*. In the adnominal use, *selbst* is used as an intensifier of a noun and nothing else, whereas in its adverbial use, *selbst* is syntactically attached to a VP, even though it also intensifies a noun. (18) illustrates the adnominal use of *selbst*. In (18), the subject *Anna selbst* is divided into *Anna*, the topic, and *selbst*, the focus (of the topic). Together, they form the topic of the sentence. The primary focus of the whole sentence is the object *ein Kleid von Lagerfeld*.

- (18) Adnominal  
 [Anna [SELBST/]<sub>FOC</sub>]<sub>TOP</sub> trug [ein Kleid von LAGERFELD]<sub>FOC</sub>

<sup>5</sup> And the correlates of 'periphery' or 'entourage'.

<sup>6</sup> *Selbst* establishes a relation between the referent and itself ( $x$  and  $x$ ), in the same way as father of  $x$ , or sister of  $x$  is establishing a relationship between  $y$  and  $x$ .

Anna self wore a dress by Lagerfeld  
 'Anna herself wore a dress by Lagerfeld.'

Turning now to the adverbial use of *selbst*, a further distinction is made between its agentive (or exclusive) and its inclusive use, at least in the work of König, Siemund and also Hole, but not in the work of Eckardt (2001). König and Siemund (1999) propose the rough paraphrases 'alone,' 'without help' for the exclusive use (19a) and 'too' for the inclusive one (19b), see also (16d).

- (19) a. Agentive/exclusive use of adverbial *selbst*  
 Anna hat ihr Kleid [SELBST]<sub>FOC</sub> geschneidert.  
 Anna has her dress herself sewn  
 Anna sewed her dress herself.'  
 b. Inclusive use of adverbial *selbst*  
 Anna ist [SELBST]<sub>FOC</sub> geflogen.  
 Anna is herself flown (together with other people)  
 'Anna is flown herself.'

Again I follow Eckardt, who claims that the differences in interpretation between the different uses of adverbial *selbst* are a consequence of the context. Taking an example from Hole in (20) to illustrate this, glaciers cannot be deliberate agents, so that a sentence in which glaciers are portrayed as agents is not well formed; but this has purely pragmatic reasons. The agentivity effect is absent when *selbst* is adnominal (20b), because, in this case its domain is the DP. As illustrated in (18), *der Gletscher selbst* is a topic, and *selbst* is a focus inside the topic. There is no agentivity effect because *selbst* is not adverbial and does not modify the VP.

- (20) a. \*[Der GLETSCHER]<sub>TOP</sub> versperrt den Taleingang [SELBST]<sub>FOC</sub>  
 The glacier blocks up the entrance of the valley itself  
 \*['...and it is the glacier that does it]  
 b. [Der Gletscher SELBST]<sub>FOC</sub> versperrt den Taleingang

We are left with the distinction between the adnominal and adverbial uses of *selbst*. I propose that this distinction is a consequence of the information structure of the sentence as a whole. In the adnominal version of (18), the noun + *selbst* form a topic together. *Selbst* is a free focus, but its domain is reduced to the topic part of the sentence (see Truckenbrodt 1995 for a definition of 'focus domain' as used here). In such a case, there is an independent and primary focus further in the sentence. The sentence (18) can be paraphrased as in (21). The paraphrase shows that the focus domain is now restricted to the DP. The difference is due to the different domains of the focus, and not to any intrinsic difference that the word itself can have.<sup>7</sup>

(21) [As for Anna [and it was Anna]<sub>FOC2</sub>]<sub>TOP</sub> [she wore a dress by Lagerfeld]<sub>FOC1</sub>

<sup>7</sup> *Selbst* can even be a topic alone if the context gives enough information about who we are talking about:

- (i) Edes Frau lebt in Berlin, sein Sohn in Wien, und [SELBST]<sub>TOP</sub> [arbeitet er in FRANKFURT]<sub>FOC</sub>  
 Ede's wife lives in Berlin, his son in Vienna, and he himself works in Frankfurt.



A for (19a), *selbst* is the primary focus, and the paraphrase shows that its focus domain is the whole sentence.

(22) [As for Anna]<sub>TOP</sub> she sewed her dress [and it was Anna who did it]<sub>FOC</sub>

Beside the fact that *selbst* can have different focus domains, it may also be a primary or a secondary focus. If it is a secondary focus, it is subordinate or relative (Rooth 2009) to a primary focus in the same sentence. In (15a) and (19a), *selbst* is the primary focus. In (18), it is a secondary focus, relative to the primary focus (the dress she wore).

Due to this property that focus may be a primary or a relative/secondary focus, *selbst* can combine with other particles in the same sentence. This is illustrated in (23), a sentence in which *Apfelstrudel* may be brand-new, as is the fact that Marie bakes this notoriously difficult cake by herself. *Sogar* is a focus particle taking *Apfelstrudel* in its scope. In one reading of this sentence, the baking of *Apfelstrudel* is primary focus, and that Marie is doing it herself is secondary focus (23a). In another reading, shown in (23b), *selbst* is a primary focus with larger scope than the one on *Apfelstrudel*. What is primarily focus is Marie's cooking talents. But even in the latter case, *selbst* does not carry the strongest accent of the sentence. It may even be completely unstressed. The reason is that it is too close to the accent on *Apfelstrudel*, and that this word is associated with a focus operator, a potent device for introducing pitch accents.<sup>8</sup> The information structural property of being a focus is marked by an accent when this is possible, but this is not obligatory. In this respect, this word behaves like other examples of the same sort (see Féry and Samek-Lodovici 2006 for similar cases). In order for a word to carry a pitch accent, focus is not sufficient – the prosodic conditions for accent have to be fulfilled as well.

- (23) a. {Some cakes are very difficult to bake even for good cooks like her.}  
 Sie backt sogar<sub>1</sub> [APFELSTRUDEL]<sub>FOC1</sub> [selbst]<sub>FOC2</sub>  
 she bakes even apple-strudel herself  
 'She even bakes apple-strudel herself.'
- b. {Marie is a fantastic cook.}  
 Sie backt sogar<sub>2</sub> [APFELSTRUDEL]<sub>FOC2</sub> [selbst]<sub>FOC1</sub>

If *selbst* is a free focus, it should be able to elicit a set of alternatives which differs from the set of alternatives elicited by the element it intensifies. And indeed this is the case. A nice example of this sort, from Saebø (2007), appears in (25). The antecedent of *selbst* and *selbst* itself both carry a focus feature<sup>9</sup>, but the alternative sets that their information structural roles elicit are different: *My brother* is in an alternative set to which *I* belongs {my brother, me}, as members of the family about which the parents mind, and *himself* is in an alternative set to which *my fiancé* belongs {my brother, my fiancé}, the piano players.

<sup>8</sup> When enough material appears between the pitch accent on *Apfelstrudel* and *selbst*, the latter word may be accented. Thanks to Shin Ishihara for observing this.

<sup>9</sup> *My brother* can be a topic, but as Büring (2003) proposes, a topic also elicits a set of alternatives.

- (25) A: Will your parents mind if you marry a piano player? (Saebø 2007)  
 B: Hardly. You see, [my BROTHER]<sub>FOC</sub> plays the piano [HIMSELF]<sub>FOC</sub>

To conclude this section, *selbst* can be a focus-sensitive particle, or it can be a free focus. In the latter case, there is a distinction between the adnominal use, where its focus domain is limited to a DP, and the adverbial use, where its focus domain comprises a VP. As all foci it needs alternatives. An important factor is whether the focus is primary or secondary (or relative).

#### 4. Wieder

In its restitutive use, when it is a focus particle, *wieder* takes an associated focused element. As illustrated in (3), the associated element is typically a state which is restored, often expressed by a predicate or an adjective. This has led researchers to concentrate on teleological constructions, resultatives and the like, which best illustrate the contrast between the two uses of *wieder*.

Some more examples of the restitutive use of *wieder* are given in (26) and (27). (26) presupposes that the normal situation is quietness<sup>10</sup>, and (27) presupposes that the fridge has been closed before.

- (26) Als ich herein kam, gab es ein Riesenkrach, dann war es wieder<sub>1</sub>  
 [RUHIG]<sub>FOC1</sub>.  
 when I in came, was it a huge-noise then was it again quiet  
 ‘When I came in, there was a loud noise, but then it was quiet again.’

- (27) Maria hat den Kühlschrank wieder<sub>1</sub> [ZUGEMACHT]<sub>FOC1</sub>.  
 Maria has the fridge again closed  
 ‘Maria closed the fridge.’

In its repetitive use, *wieder* is a free focus, and does not associate with another element. As observed for *selbst*, the difference in interpretation is a direct consequence of the information structural role of this word. In the example from von Stechow (1996) (his footnote 2) reproduced in (28), repetitive *wieder* is unstressed because it competes with an adjacent stronger contrastive accent. This shows that accent is not necessary for a repetitive interpretation of *wieder*, though focus is. In the last part of (28), the focus is not on the fact that the bus is moving, but rather on the fact that it is doing it again. Actually, it is difficult to decide whether *wieder* is repetitive or restitutive in this sentence. Both seem to be possible. The speaker may assume that the normal situation for this bus is to be moving.

- (28) Jetzt FÄHRT der Bus. Jetzt bleibt er STEHEN. Jetzt [FÄHRT]<sub>FOC1</sub> er  
 [wieder]<sub>FOC2</sub>.  
 now moves the bus now stays it stand now moves it again  
 ‘Now the bus is moving. Now it is standing still. Now it is moving again.’

<sup>10</sup> I order for this sentence to be well-formed, the speaker does not need to have perceived the quietness at an anterior moment.

In von Stechow's (1996) structural account, the difference in interpretation of this word is due to an ambiguity in syntactic position and semantic scope. If *wieder* precedes an accusative object, as in (29a), only the repetitive reading is available. If *wieder* follows the accusative object, as in (29b), two readings are available, due to two possible positions of *wieder* (see (30)). This analysis goes together with lexical decomposition of the resultative predicate. *Geschlossen* 'closed' is decomposed into an adjective and an agentive verb.<sup>11,12</sup>

- (29) a. (weil) Anna WIEDER das Tor geschlossen hat (repetitive)  
 (because) Anna again the gate closed has  
 '(because) Anna has closed the gate again.'
- b. (weil) Anna das Tor wieder GESCHLOSSEN hat (restitutive/repetitive)  
 'Anna closed the gate again.'

In von Stechow's proposal, (30a) corresponds to (29a) and *wieder* can only have a repetitive reading, whereas in (30b), which corresponds to (29b), it can have both readings.

- (30) a. [<sub>S</sub> Again [<sub>S</sub> [<sub>NP</sub> Anna] [<sub>VP</sub> CAUSE [<sub>S</sub> BECOME [<sub>S</sub> [<sub>NP</sub> the gate] be closed ]]]]]  
 b. Again [<sub>S</sub> [<sub>NP</sub> Anna] [<sub>VP</sub> CAUSE [<sub>S</sub> BECOME [<sub>S</sub> again [<sub>S</sub> [<sub>NP</sub> the gate] be closed ]]]]]

When *wieder* is a focus particle, it may associate with a word or expression which can have a restitutive meaning, such as a state (or a property, or an element in a pattern), and, in this role, it has to be adjacent to its associated element. There is, however, an alternative explanation for the word order facts, correlating with the newness of the object. The nuclear stress of the sentence is preferably preverbal in German. In (29a), it is unlikely that the object is unstressed, at least when the sentence is all-new, but the verb is preferably unstressed. The repetitive meaning is preferred in this sentence, and the object is new. In (29b) by contrast, *wieder* is preverbal. In this case, the object comes before *wieder*, making it old information. But it is important to notice that word order and stress are only preferences. In a grammaticality judgment experiment, Meßmer (2007) could demonstrate that the relationship between word order, accent and interpretation is far from being as clear as presented in the literature. Contextual information can override both word order and accent.

Stative verbs can also be related to a restitutive vs. resultative reading of *wieder*, as illustrated by the following examples from Klein (2001).

- (31) a. Im Herbst 1980 waren sie in Riva Faraldi. Im folgenden Herbst  
 in-the fall 1980 were they in Riva Faraldi. In-the next fall  
 waren sie wieder [auf der AXALP]<sub>FOC</sub>. (restitutive/state)  
 were they again on the Axalp  
 'In the fall of 1980 they were in Riva Faraldi. In the next fall, they were  
 again on the Axalp.'
- b. Im Herbst 1980 waren sie auf der Axalp. Im folgenden Herbst  
 in-the fall 1980 were they on the Axalp. In-the next fall

<sup>11</sup> Fabricius-Hansen (2001) proposes two different lexical entries for *wieder*.

<sup>12</sup> Von Stechow proposes the stress pattern shown in (29), but observes at the same time that the correlation between stress and interpretation is not watertight. In my view, the same holds even more so for word order.

waren sie [WIEDER]<sub>Foc</sub> auf der Axalp. (repetitive/activity)  
 were they again on the Axalp  
 'In the fall of 1980 they were on the Axalp. In the next fall, they were again on the Axalp.'

According to Klein, the crucial aspect for the correct interpretation of *wieder* is the "order of the situations that are stated in ongoing discourse," rather than the real temporal order, as shown in (32).

- (32) a. (Going back in time)  
 Es gab eine Eiszeit vor 20.000 Jahren, dann gab es wieder eine  
 it gave a ice-age before 20,000 years, then gave it again one  
 vor 60.000 Jahren.  
 before 60,000 years  
 'There was an ice age 12,000 years ago, and another one 60,000 years ago.'
- b. (Describing a pattern on the wall)  
 Es gibt ein rotes Quadrat, dann ein blaues Dreieck, dann  
 it gives a red square then a blue triangle  
 wieder ein rotes Quadrat.  
 then again a red square  
 'There is a red square, then a blue triangle, then again a red square.'

Klein (2001) and Beck (2006) show that the restitutive/repetitive variants of *wieder* are a by-product not only of scope but also of information structure and discourse appropriateness. This is the analysis adopted here. However, there is a difference at least between Beck's analysis and the one I propose in the sense that Beck also claims that the predicate is given information in the repetitive reading, and new information in the restitutive one. In her view, there is a default complementarity between newness of the predicate and givenness of the adverb.<sup>13</sup>

In my view, the status of the predicate as focused is irrelevant for the repetitive interpretation. Focused *wieder* can be the only focus of the sentence (see (4)), or another focus may be present in the same sentence, on the predicate or somewhere else. Examples of sentences in which *wieder* is not the only focus of the sentence are given in (33), with main stress on *vordere* 'front' or on the verb *zugemacht* 'closed', and secondary stress on *wieder*. As was illustrated for *selbst*, *wieder* can also be a primary (33c) or a secondary focus (33a,b). In short, the accent behavior is only a facultative but conspicuous reflex of this difference, and it cannot be considered as a necessary property of focus.

- (33) a. Eva hat [WIEDER/]<sub>Foc2</sub> nur [die VORDERE\]<sub>Foc1</sub> Tür zugemacht.  
 Eva has again only the front door closed  
 'Eva has again closed only the front door.'
- b. Eva hat [WIEDER/]<sub>Foc2</sub> die Tür [ZUGEMACHT\]<sub>Foc1</sub>.  
 Eva has again the door closed  
 'Eva has again closed the door.'

<sup>13</sup> Although she concedes that "all tendencies can be overridden in suitable contexts."

- c. [EVA\]<sub>FOC1</sub> hat [wieder]<sub>FOC2</sub> die Tür zugemacht.  
 Eva has again the door closed  
 'Eva has again closed the door.'

A case in which *wieder* is unambiguously repetitive comes from Fabricius-Hansen (2001). She shows that a repetitive reading is obligatory when *wieder* precedes the finite verb in V2 position, as in example (34a) (slightly changed from Fabricius-Hansen). In the analysis proposed here, *wieder* is a topic, and there is a focus later in the sentence. There is no reading in which *wieder* could be interpreted as restitutive. In my view, this impossibility illustrates the need for *wieder* as a focus particle to be adjacent to its associated element.<sup>14</sup>

- (34) a. [WIEDER/]<sub>FOC</sub> musste Barbara [ihr altes AUTO\ reparieren]<sub>FOC</sub>.  
 again had-to Barbara her old car repair  
 'Barbara had to repair her old car again.'  
 b. [Wieder REPARIERT/]<sub>TOP</sub> wurde Barbaras Auto [am nächsten TAG\]<sub>FOC</sub>.  
 again repaired was Barbara's car on next day  
 'Barbara's old car was repaired the next day.'

When the verb is also topicalized, as in (34b), the resulting word order may trigger a restitutive reading, because *wieder* is adjacent to the predicate and can assign focus to it. If *wieder* is accented, the same sentence expresses that the action was repeated. In this case, *wieder* carries a free focus.

As for the difference in meaning between restitutive and repetitive interpretation, I refer the reader to Klein (2001) and especially Beck (2006), who elaborate accounts of the semantic contribution of the word in both readings.<sup>15</sup> In my view, the main difference lies in the fact that *wieder* as a focus particle needs an associated element which expresses that a state is re-established, whereas in its free focus reading, the main import of this word is that a certain state or action is true, 'and this not for the first time.'

In short, this section has shown that *wieder* resembles *selbst* in the sense that both particles can be focus-sensitive or free focus. The accent and word order behavior are correlates of the crucial information structural distinction, and cannot be considered as the distinguishing property of the two uses.

## 5. Auch

As already mentioned, the data for *auch* are subtler than those for *selbst* and *wieder* because the difference in meaning between the focus particle and free focus uses of *auch* is not so obvious. The discussion in the literature is usually

<sup>14</sup> An alternative explanation (suggested to me by Ede Zimmermann) is that *wieder* is topicalized and is in a position where it is necessarily accented, and this is the crucial point for its repetitive interpretation. The logic behind the explanation would be something like the following: While focus does not necessarily imply pitch accent, pitch accent necessarily implies focus.

<sup>15</sup> From Beck (2006: 309): "When *again* is not focused, the time interval *t'* that the presupposition of *again* makes reference to must be some salient time interval from the context. But when *again* is focused, it seems to have to be identified as the immediately preceding topic time – typically, the topic time of the immediately preceding sentence."

concerned with word order (preposed vs. postponed) and difference of accent (accented vs. unaccented), thus on correlates of information structure, rather than on a true difference in information structural role, Krifka (1999) being an exception. However, he only identifies a difference in information structure, and none in meaning. Reis and Rosengren (1997) find that *auch* (including preposed unstressed and postponed stressed *auch*) gives rise to two utterance meanings, ‘in addition/furthermore’ and ‘likewise,’ which depend on whether or not the syntactic scope of *auch* contains stressed material, but they do not find a difference in information structure between postponed and preposed *auch*.

In the following, it is shown that *auch* has all the properties listed for *selbst* and *wieder*. In particular, word order and accent behavior are only consequences of the two roles of this word, and cannot be considered as primary properties. *Auch* can associate or not; if it associates, it assigns focus and does not carry it. This relates to a strong tendency to be unaccented. If it does not associate, it is a free focus, without scope, but it then has a domain and triggers alternatives. In this role, it is often accented. I also propose to take the difference in meaning identified by Reis and Rosengren seriously, and to correlate ‘in addition/furthermore’ to the focus-sensitive particle and ‘likewise’ to the free focus use. However, as mentioned, the distinction between the two can be tenuous.

The two roles of *auch* can be illustrated with ‘short replies,’ as in the contrast illustrated in (35) vs. (36) (see Vicente 2006 and Konietzko 2008 for different analyses). (35B) illustrates *auch* as a focus particle. In (35A), the list of the things that Maria ate is focused, and (B) just adds a new element which is also a focus. In this use as a focus particle, *auch* is truly additive. It is unmotivated to change the information structural content of the things she ate by making a topic out of it, as in (35B’). However, (35C) is better as compared to (35B’). If *auch* is interpreted as ‘likewise’ in its free focus use, (35B’) can be paraphrased as: ‘Likewise, Mary ate different things’, which is awkward in the context whereas in (35C) it is ‘Likewise, she ate cake.’ This could be the reason why (35C) fits the context better than (35B’).

- (35) A: Maria hat verschiedene Speisen gegessen: [LACHS, SUPPE, EIS,...]<sub>FOC</sub>.  
 ‘Maria ate different dishes: salmon, soup, ice-cream,....’  
 B: [Auch KUCHEN\<sub>FOC</sub>.  
 ‘Cake, too.’  
 B’: ?[ KUCHEN/]<sub>TOP</sub> [AUCH\<sub>FOC</sub>.  
 C: [KUCHEN/]<sub>TOP</sub> hat sie [AUCH\<sub>FOC</sub> gegessen.  
 ‘She also ate cake.’

In (36) *Alain* is a topic, and the fact that this person has a cold is the focused part of the sentence. Speaker B changes the topic and focuses the fact that the same situation as expressed by A holds true for the new topic *ich* ‘I’. In contrast, B’ is not a good continuation because in this case, *ich* is a focus (and no longer a topic), and *auch* associates with this word. Notice that if the sentence is continued as *Auch ich bin erkältet*, it becomes better, probably because the VP is present and plays the role of *auch* in B, even if it is not stressed. In other words, it is a Second Occurrence Focus, and thus a focus.

- (36) A: [ALAIN/]<sub>TOP</sub> [ist ERKÄLTET\]<sub>FOC</sub>.  
 'Alain has a cold.'  
 B: [ICH/]<sub>TOP</sub> [AUCH\]<sub>FOC</sub>.  
 'Me too.'  
 B': \*[Auch ICH\]<sub>FOC</sub>.

Krifka (1999) claims that postponed *auch* is a focus, and that it needs a contrastive topic associated with it. One of his examples appears in (37). *Auch* (too) gets its accent because it realizes an overt affirmative element, as illustrated in (37), an answer to the polarity question in curly brackets. The set of alternatives of the second part of (37) is {Pia ate polenta, Pia did not eat polenta}. In the first part of (37), AFF is non-overt. In Krifka's account, *too* is an accented additive particle which receives its stress because it realizes an affirmative element explicitly, just like *did* and *certainly* in some other cases. Additive particles contrast with the non-overt affirmative element AFF and hence express a particular emphasis.

- (37) {Did Peter and Pia eat pasta?}  
 [PETER]<sub>TOP</sub> ate pasta AFF<sub>F</sub>, and [PIA]<sub>TOP</sub> ate pasta *tò*<sub>FOC/AFF..</sub>

But in fact, when *auch* is a focus, it does not need a contrastive topic over which it can take scope. A first example is shown in sentence (38). *Bohnen* is the contrastive topic, but it is *Peter* (*er* 'he') who is added to the list of persons who ate beans, and *er* is just given in the sentence. Contrastive topic and focus are totally independent of each other.

- (38) {Mary ate rice and beans. Did Peter eat the same?}  
 [BOHNEN]<sub>TOP</sub> hat er [AUCH\]<sub>FOC</sub> gegessen.  
 beans has he also eaten  
 'He also ate beans.'

The following examples from Reis and Rosengren illustrate further that there is no need for a contrastive topic for *auch* to be a focus. A *wh*-word, as in (39), cannot be topical (it is not referential), and in (40), there is no topic at all.

- (39) Ich stand vor dem Eingang, und wer stand da plötzlich [AUCH/]<sub>FOC?</sub>  
 I stood in-front-of the entrance and who stood there suddenly also  
 'I stood in front of the entrance, and who suddenly appeared?'
- (40) Er bat sie, ø [AUCH\]<sub>FOC</sub> zu kommen.  
 he asked her also to come  
 'He asked her to come, too.'

*Auch* does not always have an additive meaning, but, as shown by Krifka, it sometimes has a meaning which is related to truth or affirmation. In these cases, it is affiliated to verum focus (Höhle 1988). One of the crucial properties of verum focus in German, which is realized on the finite part of the sentence, is that all other constituents in the sentence must be deaccented in order for verum focus to emerge. Otherwise, the accent on the finite verb is overwritten, and the verum component is not perceived any more. Compare (41) with (42).

In (41), *verum focus* is expressed by an accent on the finite verb *ist* 'is'. This is possible because all other constituents in the sentence are given, and as a result, can be deaccented.

- (41) A. Maria ist nicht in Rom, Tom hat sie gestern gesehen.  
Maria is not in Rome, Tom has her yesterday seen  
'Maria is not in Rome. Tom saw her yesterday.'  
B. Doch, Maria IST in Rom.  
Sure, Maria is in Rome  
'But Maria is in Rome.'

In (42), by contrast, only the fact that Maria went away is already given by the context, but not that she is Rome. If the speaker wants to highlight both the affirmative part of the sentence and Rome as the location, only the accent on Rome will be perceived, and the one on the finite verb will be lost. Because of the necessity of uniqueness of a *verum* accent, this focus is special.

- (42) a. Maria ist nicht weggefahren, Tom hat sie gestern gesehen.  
Maria is not away.driven, Tom has her yesterday seen  
'Maria did not drive away. Tom saw her yesterday.'  
B. Doch, Maria IST in ROM.  
Sure, Maria is in Rome  
'But Maria is in Rome.'

Accented *auch* sometimes plays the role of *verum focus*, in the sense that it provides a word which can be accented in order to affirm a sentence. When the whole sentence is given in the sense of Schwarzschild (1999), *auch* can be added to the sentence in the sense of likewise, and it then happens to be a good place for the necessary accent. An accent has to be there because of the focus (in this case the answer to the *wh*-question), but no other constituent can be accented. This is demonstrated in (43).

- (43) a. Marie thinks that Hannah is coming today, but what did Peter say?  
b. He [ALSO]<sub>FOC</sub> said that Hannah is coming today.  
c. \*He SAID that Hannah is coming today.  
d. \*He said that HANNAH is coming today.  
e. \*He said that Hannah is coming TODAY.

Similarly, in the following sentence, it is not clear what should be added concretely. Hans does not need to believe anything about Peter, and clearly Maria cannot be added to the set of persons who like this Christmas cake, since B mentions that Maria does not like it. But in the interpretation of 'likewise' *auch* is a good word to carry the necessary pitch accent of the sentence.

- (44) A: Peter mag Christstollen.  
'Peter likes stollen.'  
B: Hans glaubt, dass Maria Christstollen [AUCH]<sub>FOC</sub> mag (aber Maria hasst Kuchen).



'Hans believes that Maria likes stollen, too (but in fact Maria hates cakes).'

Another example in which additivity is not straightforward comes from Heim (1992). Imagine a situation in which John and Mary are competing for a job. John is chosen and informs Mary. She then answers (45). Again, Mary did not get the job, so that she cannot be added as a successful candidate, and the parents do not need to know anything about John in order for the sentence to be well formed. There is thus no addition in the main clause either. If the meaning is changed to 'likewise,' things improve a lot. Mary says to John that her parents think that she is, like John, the lucky candidate.

(45) Mary: My parents think that I also got the job.

To sum up this section, *auch* behaves in the same way as has been illustrated for *selbst* and *wieder*. It can be a focus particle or a free focus. It has been shown that the meaning difference between the two uses of this word is not as conspicuous as with *selbst* and *wieder*.

## 6. Summary

This short paper has discussed three German particles, *selbst*, *wieder* and *auch*, which have the property of changing their meaning according to their accent status. It has been proposed that the difference cannot be lexical, because German simply does not distinguish words by virtue of their pitch accent status. Only abstract lexical stress can do that, but since two of the words under study are monosyllabic, and the third one has an unstressable schwa syllable, this possibility is not available. Rather they vary their information structural properties. On the one hand, they can be focus particles, in which case they always associate with another element in the sentence. They then have a special scalar (*selbst* 'even'), additive (*auch* 'also'), or restitutive (*wieder* 'again') nuance. They are not accented because they assign focus, but do not carry it. On the other hand, they can be free foci, and in this role they have all the properties of focus: a domain and a set of alternatives. Moreover, they usually carry a pitch accent. Their meaning is different from the one they have when functioning as focus particles because they do not associate anymore, but have to elicit alternatives all by themselves.

The other parts of the sentence in which they appear are crucial to fully understand the information structural properties of the particles. The remainder of the sentence also has an information structure, which interacts with the words under consideration, but which is largely independent of them. It is thus not possible to attribute a fixed information structural structure to the entire sentence. In other words, there is no complementarity between information structure of the particle and information structure of the remainder of the sentence.

The novelty of the proposal is, first, to account for these particles as a class. The analysis improves when they are treated as such. Second, to recognize that information structural behavior is crucial, because it triggers conspicuous properties like word order and pitch accents in the whole sentence. Attempts to relate the particles' meanings to obligatory syntactic or

phonological aspects are doomed to fail since these properties are just consequences of the information structure of the particles and of the whole sentence in which they appear. Word order and accents are contingent effects, which can be present or not.

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