

*Werner Frey*

## Peripheral adverbial clauses, their licensing and the prefield in German\*

The focus of this article is on different syntactic and interpretative properties of so-called peripheral adverbial clauses (PACs) in German, typical examples being complementiser-introduced adversatives or concessives. It is argued that although PACs have a quasi-paratactical status and exhibit important signs of non-integration, they are part of the syntactic structure of their hosts, which, for instance, is shown by the fact that they may occupy the prefield of a German verb-second clause. The paper proposes that different peculiarities of these sentences find a natural explanation if it is assumed they are licensed by the Force head of their host. The proposal implies that, contrary to common assumptions, the prefield of a verb-second clause is a position where certain contentful elements are base generated.

### 1. Some relevant common assumptions

As is well known, German belongs to the verb-second (V2) languages. In a V2-clause, the finite verb in second position follows what is traditionally referred to as the ‘prefield’. In a finite clause introduced by a complementiser (subordinating conjunction) or in a non-finite clause, all verbal elements occur at the end of the clause. The part of the clause between the finite verb/complementiser and the verbal elements at the end is traditionally called the ‘middle field’.

---

\* Many thanks go to two anonymous reviewers for very instructive comments. I also would like to thank Hans-Martin Gärtner, Andreas Haida, André Meinunger, Hubert Truckenbrodt and Tonjes Veenstra for helpful discussions. All remaining shortcomings are mine.

- (1) a. Den Hans wird Maria morgen treffen.  
*theACC Hans will Mary tomorrow meet*  
 PREFIELD VFIN MIDDLE FIELD VERBAL ELEM.  
 ‘Tomorrow Mary will meet Hans’
- b. dass Maria morgen den Hans treffen wird  
*that Maria tomorrow theACC Hans meet will*  
 MIDDLE FIELD VERBAL ELEM.  
 ‘that tomorrow Mary will meet Hans’

According to the standard assumption in generative syntax, the prefield is represented as the specifier position of CP (SpecCP). Thus, in a V2-clause, SpecCP has to be filled. Standardly, the prefield is seen as a derived position. No contentful element is base generated there; rather the prefield is the target of  $\bar{A}$ -movement, which leaves a trace (or, according to current assumptions, a copy) in the base position of the moved element, indicated by ‘t’ in the following examples. This movement may not only target the local prefield, as in (2a), but it may also cross a clausal boundary, as in (2b). The finite verb in a V2-clause is moved from its base position at the end of the clause to the C-position – the position in which a complementiser may be base generated.

- (2) a. [<sub>CP</sub> In die Oper<sub>1</sub> [[<sub>C</sub> möchte<sub>2</sub>] [<sub>IP</sub> Karl morgen t<sub>1</sub> gehen t<sub>2</sub>]]]  
*to the opera wants Karl tomorrow to-go*
- b. [<sub>CP</sub> In die Oper<sub>1</sub> [[<sub>C</sub> hat<sub>2</sub>] [<sub>IP</sub> Karl Max empfohlen t<sub>2</sub>]  
*to the opera has Karl to-Max recommended*  
 [<sub>CP</sub> morgen mit Maria t<sub>1</sub> zu gehen]]]]  
*tomorrow with Maria to go*

Thus, for German the statement in (3) is assumed (see for a recent reference Haider 2010: 1). To the best of my knowledge, for any verb-second language, current syntactic theories adopt an assumption in the spirit of (3).

- (3) With the possible exception of the expletive *es* (or dialectal variants thereof), the prefield is filled with an element whose base position is lower in the clause.<sup>1</sup>

<sup>1</sup> The expletive *es*, which in (ia) is in the prefield, cannot appear (at least, overtly) in the middle field, cf. (ib):

- (i) a. Es spricht nun Udo Lattek zu ihnen.  
*expl speaks now Udo Lattek to you*  
 b. \*Nun spricht es Udo Lattek zu ihnen.

Some possible exceptions to (3) come to mind. According to some authors, in the SpecCPs of yes/no-questions and conditionals non-overt operators are generated (an idea going back to Katz & Postal 1964). In addition, as a reviewer generously reminded me, there are some authors who assume that ‘high’ wh-adjuncts like *why*

There exists a variety of reasons for this assumption. For instance, an element gets its grammatical properties licensed by an element to which it stands in a very local relationship. On the surface, a prefield element often does not stand close to its licenser (say, the main verb), but appearances are deceiving if it is assumed that the prefield element originates close to its licenser and its surface position is derived. Other evidence for (3) is given by binding and scope facts. Binding and scope demand that the binder and the scope-bearing element be higher in the structure than the bindee and the scope-taking element, respectively, i.e. the former elements have to c-command the latter. In a linear syntax for German, this would mean that the former elements have to be to the left of the latter, since concerning the prefield and middle field c-command on the surface corresponds to left-right ordering. In (4), the c-command condition does not seem to be fulfilled:

- (4) a. Seinen<sub>1</sub> Wagen wird jeder wackere Mann<sub>1</sub> sorgfältig pflegen.  
       *his car will every brave man thoroughly care-for*  
       b. Einen flotten Sportwagen möchte jeder Mann gerne besitzen.  
       *a speedy sportscar wants every man gladly own*

Nevertheless, in (4a), the quantified subject is able to bind a pronoun which occurs inside the prefield element, i.e. the sentence has an interpretation according to which each man may take care of his own car. And (4b) has a reading which does not require that all men be dreaming of the same dashing roadster, but they might like to own different ones, i.e. the quantified subject may have scope over the indefinite phrase sitting in the prefield. Again, if it is assumed that a prefield element originates lower in the structure, the conditions for binding and scope are fulfilled: the prefield elements in (4) start in positions which are c-commanded by the binder and by the scope-bearing element, respectively. Since, as is well known, there exists independent evidence which corroborates that the base positions of the objects sitting in the prefield in the examples in (4) are c-commanded by the subjects of the clauses, the assumption in (3) leads to a straightforward account of the data in (4).

---

or the Italian correspondent *perché* are base generated in the left periphery. This proposal is adopted by Grewendorf (2002: 281) for German. Finally, it has been proposed in the literature (e.g. Müller 1997) that in a German wh-scope-marking construction like the one in (ii), the scope-marking wh-phrase, i.e. the highest wh-phrase, is base generated in the prefield.

- (ii) Was glaubst du, wen Maria getroffen hat?  
       *what think you who Maria met has*  
       ‘Who do you think Maria has met?’

It is interesting to note that a recent proposal for a linear syntax for German by Pafel (2009) enhances the former linear models by incorporating the notion of trace into the theory. That there is a relationship between the prefield and lower positions in the clause is also postulated by more traditional approaches. Thus, Engel (1972), for example, states that all elements (with the possible exception of the expletive *es*) which may appear in a German clause may appear in the middle field. It follows that every element that appears in the prefield (with the mentioned exception) may appear in the middle field. Although Engel's remark cannot quite be correct – the prefield may also host verbal elements,<sup>2</sup> which cannot be situated in the middle field – it shows that Engel (1972) too does not assess the prefield as a position in which certain contentful elements exclusively occur.

(3) as well as the view expressed by Engel (1972) imply that an element sitting in the prefield is completely integrated into the structure of its clause. This assumption, generally taken for granted and explicitly formulated by, for example, König & van der Auwera (1988), is given in (5):

- (5) The prefield in German is an unequivocal position of integration.

Let us now turn to two assumptions about clause linkage which are known to be problematic but which still can be found in descriptive grammars for German.

- (6) i. Among two clauses of a complex sentence two kinds of relationship may hold: one clause is subordinated to the other or the clauses are coequal (e.g. Duden 2006: 1027), i.e. there are two syntactic linkage relations: hypotaxis and parataxis.  
 ii A subjunction (complementiser) indicates that the clause it introduces is subordinated to a clause, sentence constituent or word (e.g. Duden 2006: 1077).

That (6i) is problematic has been known for quite some time, cf. e.g., with regard to German, König & van der Auwera (1988), Brandt (1990), Fabricius-Hansen (1992), Reis (1997), and Holler (2008). These studies argue that the dichotomic view expressed in (6i) is too simplistic. The main problem is apparent in the fact that the concept of subordination may refer to distinct phenomena, which should be carefully kept apart.

At least two different explications of the notion are common. According to the first one, a subordinated clause can be seen as a constituent of the su-

---

<sup>2</sup> This is the case in (i):

(i) *Arbeiten* wird *Otto* heute zu Hause.  
*work will Otto today at home*

perordinated clause fulfilling the role of an argument or of an adverbial/attribute. The other explication takes subordination as syntactic dependency. It is assumed that in German, a dependent clause is characterised by the clause-final position of the verb. Sentences like the ones in (7) illustrate that these two explications are not equivalent (e.g. Fabricius-Hansen 1992, Reis 1997, Holler 2008):

- (7) a. Emma gewann die Schachpartie, was Oskar ärgerte.  
*Emma won the chess-match which Oskar annoyed*  
 b. Er ist verrückt, dass er ihr jetzt nachreist.  
*he is crazy that he her now follows*  
 'He is crazy to follow her now.'

(7a) is a so-called continuative *wh*-relative clause, and (7b) a so-called free *dass*-clause (cf. Reis 1997).<sup>3</sup> These clauses are verb-final, i.e. supposedly syntactically dependent on the clauses preceding them, but they do not bear a role of these clauses. Furthermore, they can neither be questioned nor pronominalised nor be positioned in the prefield or in the middle field. Especially the fact that their position is fixed can be taken as an indication that they are not constituents of their associated clauses (Reis 1997). 'Standard' subordinated clauses like complementiser-introduced complement clauses or, say, temporal, causal or modal adverbial clauses do not share any of these properties. Subordinated clauses like adversatives or concessives do not share all of them. So, it is obvious that the second explication of subordination covers many more cases than the first one, and adopting the broader one would mean obliterating important differences between dependent clauses.<sup>4</sup> A possible reaction to this situation is to take the constructions in (7) out of the realm of subordination. However, even if this is done, there exist many important differences between the remaining subordinated constructions. The discussion of these differences is the main point of the present article.

Let us briefly consider (6ii), which is in the tradition of the first explication of subordination. The presence of a complementiser necessarily triggers the final position of the verb. Verb-second or verb-first is considered to be a prototypical feature of a main clause. Usually, it is assumed that only main clauses can be uttered independently. Thus, (6ii) seems to be undermined by the fact that in German, there exist clauses introduced by a complementiser

<sup>3</sup> A free *dass*-clause gives reasons for the assessment expressed in the prior clause based on the fact that it denotes (Reis 1997).

<sup>4</sup> Furthermore, the broader explication building on the assumption that a dependent clause is characterised by the clause-final position of the verb is flawed by the well-known fact that in many verb-second languages, certain verbs may take a V2-clause as their object, be it without a complementiser above the V2-clause as in German, or with one as in many other verb-second languages.

that can be used independently, cf. (8) ((8a) is a (self-directed) question, (8b) an optative, and (8c) an exclamative):

- (8) a. Ob er wohl kommt?  
*whether he MP comes?* (MP: modal particle)
- b. Wenn sie nur schon heute kämen!  
*if they only already today (would-)come*
- c. Dass ich das noch erleben darf!  
*that I this still experience may*

However, note firstly that there are no independent complementiser-introduced declarative clauses, and secondly that speakers of German have the intuition that the sentences in (8) are not independent in the same sense as an independently uttered V2-clause. It might be appropriate to say that examples like in (8) seem to be dependent on a non-expressed superordinate structure, which may vary with the contexts (for (8a), this could be, for instance, *I wonder*, for (8b), an appropriate apodosis to the overtly expressed protasis, and for (8c), e.g. *I am delighted*), cf. Schwabe (2007). We do not have to decide whether an analysis in terms of ellipsis is necessary, however. So at this point, the main problem for (6ii) is a sentence like (7b), which is introduced by an element that the Duden (2006) grammar of German also considers a subjunction.

## 2. Peripheral adverbials: Integrated or unintegrated?

In this section, I want to discuss a class of complementiser-introduced clauses which not only raise problems for the simple dichotomy expressed in (6i) but also for the assumption in (3), the latter being, as far as I know, up to now unchallenged in the literature. Consider the following sentences:

- (9) a. Hans wirkt nicht erholt, obwohl er lange im Urlaub war.  
*Hans appears not recovered although he long on holiday was*
- b. Hans ist gestern zu Hause geblieben, während er sonst  
*Hans is yesterday at home stayed while he otherwise*  
 bei schönem Wetter einen Ausflug macht.  
*in beautiful weather an excursion makes*

(9a,b) contain German verb-final clauses, the English equivalents of which belong to the kind of adverbial clauses Haegeman (2002, 2004, 2006) calls peripheral adverbial clauses (PACs). (9a) contains a concessive adverbial

clause introduced by *obwohl*, and (9b) an adversative adverbial clause introduced by *während*.<sup>5</sup> PACs are to be contrasted with central adverbial clauses like temporal adverbial clauses (which may be introduced by the temporal conjunction *während*), causal or modal adverbial clauses. Semantically, the latter adverbial clauses specify the eventuality introduced by the predicate of the main clause, whereas PACs do not. The relation which is denoted by the conjunction (complementiser) of a PAC is not seen as describing a relation holding between eventualities in the world but as describing a relation which the speaker claims to hold between propositions (or, depending on the theory, even between semantic objects of higher types). A PAC is not restrictive with regard to the main clause. Because of this last point, one could say that with regard to interpretation, the relation between a PAC and the associated clause is paratactic.

Central adverbial clauses and PACs show other syntactic and interpretative differences, as, for example, observed by Haegeman (2002, 2004, 2006) mainly with regard to English and by Brandt (1990) for German. Interestingly, these differences can also be found between different causal adverbial clauses. In German, two different complementisers, *weil* and *da*, encode the causal relation. As will be illustrated immediately, a *weil*-clause behaves like a central adverbial clause, and a *da*-clause like a PAC.

German central adverbial clauses allow a correlative element (COR) while PACs do not have a correlative:

- (10) a. Maria ist dann gegangen, als Max kam.  
       *Mary has COR gone when Max came*  
       b. Maria ist deshalb gegangen, weil Max kam.  
       *Mary has COR gone because Max came*  
       c. \*Maria ist deshalb gegangen, da Max kam.  
       *Mary has COR gone because Max came*

---

<sup>5</sup> In the present paper, *obwohl*-clauses serve as the example for the adverbial type concessive and *während*-clauses as the example for the adverbial type adversative. Other expressions of different syntactic categories are to be assigned to these types, which are semantically defined, cf., for example, Breindl (2004), who investigates different expressions of the type concessive. It is to be expected that the different members of a given type differ in certain properties. For example, with regard to the syntactic behaviour, an adversative clause introduced by *wo(hin)gegen* ('whereas') differs from a *während*-clause (Eva Breindl, p.c.). (To put it in the terminology of the present paper, a *wo(hin)gegen*-clause is not a PAC, but seems to belong to the class of unintegrated dependent clause, which is introduced below.) Thus, it has to be studied to what extent the claims made in the present paper about *obwohl*-clauses and *während*-clauses hold for the other expressions belonging to the types concessive and adversative, respectively.

Central adverbial clauses can be in the scope of negation positioned in the main clause. This is not true for PACs.

- (11) a. Peter wird nicht kommen, sobald er kann, sondern sobald  
*Peter will not come as-soon-as he can but as-soon-as*  
 es Clara erlaubt.  
*it Clara allows*
- b. Hans blieb nicht auf dem Fest, weil er tanzen wollte,  
*Hans stayed not at the party because he to-dance wanted*  
 sondern weil er auf Maria wartete.  
*but because he for Maria waited*
- c. \*Peter wird nicht kommen, obwohl er arbeiten muss, sondern  
*Peter will not come although he work must but*  
 obwohl er schlafen sollte.  
*although he sleep should*
- d. \*Hans blieb nicht auf dem Fest, da er tanzen wollte,  
*Hans stayed not at the party because he to-dance wanted,*  
 sondern da er auf Maria wartete.  
*but because he for Maria waited*

Central adverbial clauses following the main clause may carry the nuclear stress of the whole construction, i.e. the whole construction may constitute one focus-background partition. Therefore, sentences like the ones in (12) may be used as all focus sentences:

- (12) a. Peter wird kommen, sobald er etwas ZEIT hat.  
*Peter will come as-soon-as he some time has*
- b. Peter fährt nach Paris, weil er dort eine KonfeRENZ  
*Peter travels to Paris because he there a conference*  
 besucht.  
*attends*

The same is not possible with PACs. The following sentences are not possible as all-focus sentences:

- (13) Was hat Maria gesagt?  
 ‘What did Mary say?’
- a. # Peter wird kommen, obwohl er keine ZEIT hat.  
*Peter will come although he no time has*
- b. # Peter ist heute in Berlin, während er morgen nach PARIS reist.  
*Peter is today in Berlin while he tomorrow to Paris travels*

- c. # Peter fährt nach Paris, da er dort eine KonfeRENZ  
*Peter travels to Paris because he there a conference*  
 besucht.  
*attends*

The next property to observe is that a central adverbial clause may be questioned, whereas there is no possibility to question a PAC. This can be easily demonstrated with the contrast between a *weil*- and a *da*-causal adverbial clause:

- (14) Warum bleibt Hans zu Hause?  
 ‘Why is Hans staying at home?’  
 a. Weil seine Frau krank ist.  
*because his wife ill is*  
 b. \*Da seine Frau krank ist.  
*because his wife ill is*

Finally, we note that if the associated clause is transformed into a question, a central adverbial becomes part of that question. This is not true of a PAC, which does not become part of the question:

- (15) a. Geht Peter nach Hause, weil er müde ist?  
*goes Peter home because he tired is*  
 b. \*Geht Peter nach Hause, da er müde ist?  
*goes Peter home because he tired is*  
 c. \*Geht Peter nach Hause, obwohl er nicht müde ist?  
*goes Peter home although he not tired is*  
 d. \*Ist Maria für Physik begabt, während ihr Bruder nur an  
*is Mary for physics gifted while her brother only in*  
 Sprachen interessiert ist?  
*languages interested is*

The properties of PACs just observed are shared by the verb-final clauses in (7), which we have discarded from the realm of subordination. However, there is an important and crucial difference between PACs and the verb-final clauses in (7): the occurrence of the former in contrast to that of the latter is not restricted to the sentence-final position. PACs may appear in the prefield and in the middle field. The latter fact will be discussed below; (16) shows occurrences in the prefield:

- (16) a. Obwohl Hans lange im Urlaub war, wirkt er nicht erholt.  
*although Hans long on holiday was appears he not recovered*

- b. Während Hans sonst bei schönem Wetter einen Ausflug  
*while Hans otherwise in beautiful weather an excursion*  
 macht, ist er gestern zu Hause geblieben.  
*makes has he yesterday at home stayed*
- c. Da seine Frau krank ist, bleibt Hans zu Hause.  
*because his wife ill is stays Hans at home*

The possibility of a phrase occurring in the prefield is considered evidence that the phrase is a constituent of the sentence. It is assumed – however, not proven – that all sentence constituents are licensed inside the core of the clause, i.e. IP-internally. This assumption underlies the thesis in (3), and it also holds in non-generative accounts. However, under this perspective PACs would need to receive a similar syntactic treatment to central adverbial clauses, and it would seem to be difficult to account for all the differences between the two types of sentences observed above. To put it in other words: According to the ‘prefield test’, PACs are normal constituents of the clause and hence fully integrated into the clause, while according to the data in (10)–(15) PACs fail important tests for integration. Thus, in the next section it will be scrutinised whether (3) is in fact a correct assumption.

Before this is done, we have to make sure that in (16) the PACs are in fact sitting in the prefield. Although this clearly would be the standard assumption, there is reason to be concerned regarding this matter. Relating to another case, Reis (2008) and Wöllstein (2009) express doubt that a preceding clause which is seemingly in the prefield of a V2-clause is in fact positioned there. Reis (2008) and Wöllstein (2009) discuss verb-first conditional clauses like the preceding clause in (17):

- (17) Sind sie zu stark, bist du zu schwach.  
*Are they too strong are you too weak*  
 ‘If they are too strong, then you are too weak.’

According to Reis (2008) and Wöllstein (2009), in (17) there are two verb-first sentences involved, which are paratactically linked. Reis (2008) and Wöllstein (2009) suggest that for principled reasons verb-first sentences cannot be embedded and, as a consequence, cannot be positioned in the prefield of a V2-clause.

This is not the place to discuss whether Reis (2008) and Wöllstein (2009) are correct in rejecting the received view that (17) is a V2-clause with a filled prefield. However, in light of the argumentation of Reis (2008) and Wöllstein (2009) I would like to collect some pieces of evidence that the examples in (16) are V2-clauses with PACs in the prefield.

First, the sentences in (16) do not allow a pause after the PACs.<sup>6</sup> Second, the sentences in (16) can be realised with a progradient intonation, i.e. with a rising contour at the end of the PAC ('continuation rise') and with a falling contour starting on the finite verb following the adverbial clauses. Thus, the sentences in (18) have the same options of prosodic realisation, (18a) containing a central adverbial clause, and (18b) a PAC.

- (18) a. Sobald die Sonne schien, hat er das Verdeck seines  
*as-soon-as the sun shined has he the canopy-top of-his*  
 Porsches aufgemacht.  
*Porsche opened*
- b. Da die Sonne schien, hat er das Verdeck seines  
*since the sun shined has he the canopy-top of-his*  
 Porsches aufgemacht.  
*Porsche opened*

Third, the PACs in (16) do not need to have their own focus-background structuring. That a clause necessarily has its own focus-background structuring is taken as a sign of independence of the clause (Brandt 1990, Reis 1997).<sup>7</sup> (19) shows that the content of a preceding PAC can be given with the consequence that the whole PAC is deaccented and does not contain a focus:

- (19) Was hat Karl gemacht, als die Studenten gegen die schweren  
*what has Karl done when the students against the difficult*  
 Aufgaben protestiert haben?  
*exercises protested have*  
 Da die Studenten protestiert haben, hat Karl die Aufgaben  
*because the students protested have has Karl the exercises*  
 vereinfacht.  
*simplified*

Note that if the content of a PAC is given, the position in front of the finite verb of its host is the only possible position, cf. (20).<sup>8</sup>

<sup>6</sup> An *obwohl*-introduced verb-final clause may precede a V2-clause. Note that in this case a pause is obligatory:

(i) Obwohl Hans lange im Urlaub war, || er wirkt nicht erholt.

<sup>7</sup> The verb-final clauses in (7) need to have their own focus-background structuring. This fact constitutes a first motivation for the assumption that these clauses are not constituents of their associated clauses but are structurally independent; see below for further motivation.

<sup>8</sup> As a reviewer notes, (20c) becomes appropriate if the adversative relation is under focus, i.e. if *obwohl* is stressed. In this case, the content of the PAC is not treated as given in its entirety.

- (20) Was machen wir bei diesem Sauwetter?  
 ‘What will we do in this beastly weather?’
- a. Obwohl so schlechtes Wetter ist, möchte ich gerne spazieren  
*although such foul weather is want I gladly a walk*  
 gehen.  
*take*
- b. # Obwohl so schlechtes Wetter ist, ich möchte gerne spazieren gehen.
- c. # Ich möchte gerne spazieren gehen, obwohl so schlechtes Wetter ist.

In sum, there is clear evidence supporting the assumption that PACs may occupy the prefield of a V2-clause. Thus, as an intermediate summary we note:

- (21) For different types of adverbial clauses introduced by a complementiser (e.g. adversatives, concessives or certain causals), it holds that:
- i. They do not pass different standard tests for integration, i.e. they do not behave as standard constituents of the clause.
- ii. They can occur in the prefield of a V2-clause. The capability to occupy the prefield is standardly regarded as a sign of being integrated.

To strengthen (21i) let us apply another test, namely binding (cf. also Haegeman 2002, Coniglio 2009: 238). It is possible to have binding of a quantified DP into a central adverbial clause:

- (22) a. Kein Linguist<sub>1</sub> sollte Bier trinken, wenn er<sub>1</sub> Durst hat.  
*no linguist should beer drink when he thirsty is*
- b. Keiner<sub>1</sub> hat protestiert, als er<sub>1</sub> unterbrochen wurde.  
*nobody has protested when he interrupted was*
- c. Jedem<sub>1</sub> musste irgendwann das Wort entzogen werden,  
*everybody had-to sometime the word taken-away be*  
 weil er<sub>1</sub> zu lange redete.  
*since he too long talked*  
 ‘Everybody at sometime had to be ordered to stop speaking since he talked too long.’

The binding is just as possible if the central adverbial clauses are positioned in the middle field:

- (23) a. Kein Linguist<sub>1</sub> sollte, wenn er<sub>1</sub> Durst hat, Bier trinken.
- b. Keiner<sub>1</sub> hat, als er<sub>1</sub> unterbrochen wurde, protestiert.
- c. Jedem<sub>1</sub> musste irgendwann, weil er<sub>1</sub> zu lange redete, das Wort entzogen werden.

How do PACs behave? Let us first consider binding into a PAC following the matrix clause. As can be seen in (24), this is not possible:

- (24) a. \*Jede Kollegin<sub>1</sub> ist am Sonntag am Institut gewesen, während  
*every colleague has on Sunday at-(the) institute been while*  
 sie<sub>1</sub> sonst bei schönem Wetter einen Ausflug macht.  
*she otherwise in nice weather an excursion makes*
- b. \*Kein Kollege<sub>1</sub> wirkt richtig erholt, obwohl er<sub>1</sub> lange im  
*no colleague appears really recovered although he long on*  
 Urlaub war.  
*holiday was*
- c. \*Jedem<sub>1</sub> musste irgendwann das Wort entzogen werden, da er<sub>1</sub> zu lange  
 redete.

One might conclude that in (24), the PACs are right-adjoined too high to allow binding of a constituent of the matrix clause into them. However, it is unlikely that this is the reason for the ungrammaticality of (24) since the judgements do not change if the PACs occur in the middle field. To see this, note first that PACs may be serialised as part of the middle field:

- (25) a. Hans wirkt, obwohl er lange im Urlaub war, nicht erholt.  
*Hans appears although he long on holiday was not recovered*
- b. Hans ist gestern, während er sonst bei schönem Wetter  
*Hans is yesterday while he otherwise in beautiful weather*  
 einen Ausflug macht, zu Hause geblieben.  
*an excursion makes at home stayed*

Now (26) shows that binding into a PAC does not become possible if the PAC is part of the middle field:

- (26) a. \*Jede Kollegin<sub>1</sub> ist am Sonntag, während sie<sub>1</sub> sonst bei schönem Wetter  
 einen Ausflug macht, am Institut gewesen.
- b. \*Kein Kollege<sub>1</sub> wirkt, obwohl er<sub>1</sub> lange im Urlaub war, richtig erholt.
- c. \*Jedem<sub>1</sub> musste irgendwann, da er<sub>1</sub> zu lange redete, das Wort entzogen  
 werden.

(26) reveals that PACs are not regular constituents of the matrix clause, for if they were, in (26) they inevitably would be in the c-command domain of the quantified DP and binding would have to be possible. Thus, from (26) it is safe to conclude that PACs occurring in the middle field are not regular parts

of the syntactic structure. They are parentheticals.<sup>9</sup>

It follows that PACs are not base generated in the middle field, i.e. in the IP-domain. However, in the last section it was shown that they can appear in the prefield. Taking these two facts together it follows that (3), according to which all prefield constituents except expletives are base generated in the middle field, cannot be right. So the question arises as to where PACs are base generated. The answer to this question is, of course, dependent on the answer to the question of how PACs are licensed.

Before we approach this question let us consider some more binding data. If, as in (27), a *weil*-clause is forced by the context to have an epistemic reading, we find the same binding data as with the PACs, (27b). This finding confirms the supposition that central adverbial clauses are restricted to readings which concern eventualities:

- (27) a. Hans<sub>1</sub> muss wohl, weil er<sub>1</sub> immer wieder dorthin zurückkehrt,  
*Hans must MP because he always again there returns*  
 diese Stadt sehr lieben.  
*this city really love*
- b. \*Jeder<sub>1</sub> muss wohl, weil er<sub>1</sub> immer wieder dorthin zurückkehrt, diese  
 Stadt sehr lieben

Another fact worth noting is that if the concessive relation is not expressed by a subjunction but by a preposition and therefore the concessive adverbial is expressed by a PP and not by a clause, we find the same binding pattern as with the PAC, cf. (28a):

- (28) a. \*Kein Kollege<sub>1</sub> hat trotz seiner<sub>1</sub> Versetzung weiterhin  
*no colleague has despite his redeployment furthermore*  
 gut gearbeitet.  
*well worked*
- b. Kein Kollege<sub>1</sub> hat an seinem<sub>1</sub> Geburtstag gearbeitet.  
*no colleague has on his birthday worked*

---

<sup>9</sup> Therefore, it is clear that binding also is not possible if a PAC occurs in the prefield:

- (i) a. \*Während sie<sub>1</sub> sonst bei schönem Wetter einen Ausflug macht, ist jede  
 Kollegin<sub>1</sub> am Sonntag am Institut gewesen.  
 b. \*Obwohl er<sub>1</sub> lange im Urlaub war, wirkt kein Kollege<sub>1</sub> richtig erholt.

Binding demands c-command of the binder. Thus, it could only be possible if the PAC had a base position inside the IP-domain, as regular constituents do (as, e.g., the prefield constituents in (4)).

- c. Keine Kandidatin<sub>1</sub> wurde wegen ihres<sub>1</sub> guten Aussehens  
*no candidate was because-of her good looks*  
 bevorzugt.  
*favoured*

(28b,c) show the contrast to a temporal and a causal PP adverbial, respectively. The data in (28) confirm that the concessive relation is conceptualised in a different way than, for example, the temporal or the causal relation. Only the latter ones are taken as relations between eventualities, which is syntactically reflected by the IP-internal licensing of the corresponding adverbial phrases.

### 3. PACs, modal particles and Force

Let us now turn to adverbial clauses containing a modal particle (MP).<sup>10</sup> It is well known that MPs are licensed in various types of independent clauses:

- (29) a. 1931 war Hitler ja noch nicht an der Macht.  
*1931 was Hitler MP not yet in the power*  
 (Thurmair 1989: 104)
- b. Was ist denn hier passiert? [...]  
*what has MP here happened*  
 (Thurmair 1989: 166)
- c. Und nun mach dich mal an die Arbeit! [...]  
*and now get yourself MP on to work*  
 (Thurmair 1989: 185)

<sup>10</sup> MPs express an attitude of the speaker (or of a potential speaker, see below) regarding her/his utterance. For our purposes, the semantics and the highly complex usage conditions of MPs are not important. (i) gives a rough indication of the interpretative effects of some uses of MPs:

- (i) *doch* (unstressed): the speaker indicates that his assertion might run against an assumption of the addressee;  
*ja*: the speaker indicates that his assertion makes salient a fact that follows from the common ground;  
*denn*: in asking a question with *denn*, the speaker indicates that the updating of the common ground of speaker and addressee by the true answer is relevant to the knowledge of the speaker (cf. Bayer to appear);  
*halt*: the speaker indicates that his assertion makes salient a fact that is dis-preferred;  
*mal*: the speaker weakens a command he makes.

Coniglio (2009) systematically studied the behaviour of MPs in adverbial clauses. PACs are good hosts for MPs:

- (30) a. Gestern ist sie den ganzen Tag zu Hause geblieben,  
*yesterday has she the whole day at home stayed*  
 während sie doch sonst bei schönem Wetter meistens  
*while she MP otherwise in nice weather mostly*  
 einen Ausflug macht.  
*an excursion makes*  
 (Thurmair 1989: 78)
- b. Er hat die Prüfung nicht bestanden, trotzdem er ja recht  
*he has the exam not passed nevertheless he MP quite*  
 intelligent ist.  
*intelligent is*  
 (Thurmair 1989: 78)
- c. Max könnte etwas hilfsbereiter sein, da wir ihn doch  
*Max could a-little more-helpful be because we him MP*  
 höflich gefragt haben.  
*politely asked have*

In contrast, central adverbial clauses usually do not tolerate MPs:

- (31) a. \*Als Maria ja in Wien lebte, ging sie oft in die Staatsoper.  
*when Maria MP in Wien lived went she often to the State-Opera-House*
- b. \*Wo ich eben/doch/ja aufgewachsen bin, gibt es einen  
*where I MP MP MP grown-up have there is an*  
 interessanten Brauch: das Kirtarennen.  
*interesting custom the Kirta-racing*  
 (Thurmair 1989: 76)
- c. \*Wenn es schon Frost gibt, erfrieren die Rosen.  
*when it MP frost is freeze-to-death the roses*  
 (Brauß 1994: 112)
- d. \*Während er wohl den Brief schrieb, ist er gestört worden.  
*while he MP the letter wrote has he disturbed been*  
 (Asbach-Schnitker 1977: 49)

However, sometimes central adverbial clauses seem to allow MPs:

- (32) a. Sie sprengten die Brücke, während der Feind wohl näherrückte.  
*they blasted the bridge while the enemy MP approached*  
 (Asbach-Schnitker 1977: 48)

- b. Wenn es schon Frost gibt, könnte es wenigstens auch schneien.  
*when it MP frost has could it at-least also snow*  
 (Brauß 1994: 112)
- c. Er ist nicht durchgekommen, weil er ja schlechte Noten  
*he has not passed because he MP bad marks*  
 bekommen hatte.  
*got had*  
 (Coniglio 2009: 179)

Yet, as Coniglio (2009) argues, there is evidence that the adverbials in (32) are not central adverbial clauses. In (32a), the adverbial does not temporally restrict the event role of the associated clause but expresses an individual predication. Semantically, (32a) behaves like a sequence of two clauses which are connected by a temporal anaphoric phrase: *They blasted the bridge. At the same time, the enemy seemed to be approaching.* (32b) does not contain an event conditional relating two eventualities, but a so-called premise conditional which formulates a premise on the basis of which the associated clause is asserted. That the causal adverbial in (32c) is not a central adverbial can be seen by the facts that it cannot be questioned, that it cannot have a correlate, (33a), and that it cannot be in the scope of negation in the associated clause, (33b).

- (33) a. \*Er ist deshalb durchgekommen, weil er ja gute Noten  
*he has COR passed because he MP good marks*  
 bekommen hatte.  
*got had*
- b. \*Er ist nicht durchgekommen, weil er ja gute Noten  
*he has not passed because he MP good marks*  
 bekommen hatte, sondern weil ...  
*got had but because*

That adverbial clauses containing a MP are not central adverbials but peripheral ones is corroborated by binding data (Coniglio 2009).<sup>11</sup> (34) shows that it

<sup>11</sup> That MPs change the status of central adverbial clauses is also shown by the contrast between (i) and (ii). Speaker-oriented evaluative and epistemic adverbials are not good in central adverbial clauses (Lang 1979):

- (i) a. \*Wenn der VfB leider verliert, ist Maria traurig.  
*if the VfB unfortunately loses is Maria sad*  
 b. \*Als Max glücklicherweise nach Hause kam, waren alle froh.  
*when Max fortunately home got was everybody happy*

However, if a MP occurs in the adverbial clause, evaluative and epistemic adverbials become possible:

is not possible to bind into an adverbial containing a MP:

- (34) a. \*Kein Linguist<sub>1</sub> sollte, wenn er<sub>1</sub> halt doch Durst bekommt,  
*no linguist should when he MP MP thirsty gets*  
 Bier trinken.  
*beer drink*
- b. \*Jedem<sub>1</sub> musste irgendwann, weil er<sub>1</sub> halt zu lange redete, das  
*everybody had-to sometime since he MP too long talked the*  
 Wort entzogen werden.  
*word taken-away be*

Although adverbial clauses containing a MP show signs of non-integration, they may, like the other PACs, occur quite well in the prefield, cf. (32b) and (35):

- (35) a. Weil er halt zu lange redete, hat man Max das Wort  
*because he MP too long talked have they Max the word*  
 entzogen.  
*taken-away*
- b. Wenn sie halt doch Durst bekommt, trinkt Maria Bier.  
*when she MP MP thirsty gets drinks Mary beer*

In sum, there is evidence that PACs may host MPs and that central adverbial clauses may not. These observations can reveal something about the syntactic structure of these clauses since arguably a MP needs some sort of formal licensing.

As, for example, Jacobs (1986), Thurmair (1989) and Coniglio (2009) emphasise, a MP occurring in an independent clause interacts with the illocution of the clause by modifying it (cf. also Fn. 10). For example, there are MPs which strengthen (*JA*) or weaken a command (*mal*), which indicate that the speaker's assertion runs against an assumption of the hearer (*doch*), with which the speaker expresses that he assumes that the hearer does not believe the negation of the proposition in question (*ja*), or which indicate that the speaker's justification for his assertion is reduced (*wohl*). To represent the illocutional force of a clause in its syntax, Rizzi (1997) proposes that as part of the structure of the clause's left periphery (the CP layer), there exists a functional projection Force, which is endowed with additional features to encode

- 
- (ii) a. Wenn der VfB leider doch verliert, ist Maria traurig.  
 b. Als Max glücklicherweise eben doch nach Hause kam, waren alle froh.

the clause's specific force.<sup>12</sup>

As seen above, MPs may occur in dependent clauses. It is known that the occurrences of MPs belong to the so-called root-phenomena (Bayer 2001, Coniglio 2009). Root-phenomena can only occur in root-clauses and in the restricted set of root-like dependent clauses. The classical examples of root-like dependent clauses are the object clauses of verbs of saying, of verbs expressing a doxastic attitude (*believe, hope*), and of verbs of perception (*find out, feel*). Standard examples of non-root-like dependent clauses are the object clauses of so-called factive predicates (like *regret, be surprised*) and of predicates which are inherently negative (*avoid, be impossible*). Classic examples of so-called root-phenomena are English topicalisation and Germanic V2.<sup>13</sup> The root-sensitivity of MPs is shown by the fact that they may occur in a root-like object clause but not in a non-root-like one.<sup>14</sup>

- (36) a. Maria fiel ein, dass Hans (ja) längst hier sein müsste.  
*to-Maria occurred that Hans MP long-ago here be should*  
 b. Er leugnete, dass er die Zeugin (\*ja) unter Druck gesetzt habe.  
*he denied that he the witness MP under pressure put*  
*have-SUBJ* (Thurmair 1989: 109)

As shown above, in German PACs allow MPs. Given the root-sensitivity of MPs, it follows that PACs belong to the root-like subordinated clauses.<sup>15</sup>

Modifying Rizzi's (1997) proposal, Haegeman (2002, 2004, 2006), Coniglio (2009) and Bayer (to appear) among others assume that root-clauses and root-like dependent clauses on the one hand and non-root-like dependent clauses on the other differ as to which of the possible functional projections

<sup>12</sup> It is certainly not without problems that in Rizzi (1997), Force is also supposed to represent the clause type, such that, for example, any relative clause has Force. This consequence is not compatible with the assumptions of the text.

<sup>13</sup> This is illustrated in (i) and (ii), respectively:

- (i) a. John thinks that this book, he should read.  
 b. \*John regrets that this book, he should read.  
 (ii) a. Max glaubt, er muss dieses Buch lesen.  
 b. \*Max bedauert, er muss dieses Buch lesen.

<sup>14</sup> In contrast to a MP occurring in a main clause (cf. Fn. 10), in (36a) the MP *ja* does not express an attitude of the speaker regarding the utterance but an attitude of the referent of the matrix subject regarding a potential utterance that she could have made.

<sup>15</sup> This is confirmed by the fact that in English, PACs allow topicalisation in contrast to central adverbials, cf. (i) (Haegeman 2004):

- (i) a. We don't look to his paintings for common place truths, though truth they contain none the less.  
 b. \*If these final exams you don't pass, you won't get the degree.

in the left periphery they in fact realise. One important difference between the two types is that root-clauses and root-like clauses possess a Force projection, while non-root-like clauses do not. Hence, important ingredients of this proposal are that first, only root-contexts tolerate phrases containing a Force projection, and second, only phrases containing a Force projection allow so-called root-phenomena. Thus, since it is the Force projection which may license topicalisation, V2 or the occurrence of a MP, these phenomena may only occur in root- and root-like phrases.<sup>16</sup>

An immediate and for our purposes central consequence of this proposal is that PACs, being root-like, have a Force projection and that central adverbial clauses, not being root-like, do not have a Force projection.

A further important consequence is that complement *dass*-clauses may or may not possess a Force projection. In general, complement *dass*-clauses are not root-sensitive, cf. (36b). Hence, they do not always have Force. However, they can host MPs, becoming then root-sensitive, (36). A *dass*-clause with a MP necessarily has Force. Another consequence worth mentioning is that although the presence of Force is a necessary condition for V2, it obviously is not a sufficient condition for V2. Root-like object clauses may have verb-end, see (36a) with the MP, and the root-like PACs always have verb-end. These sentences have Force without having V2.

Thurmair (1989) and Coniglio (2009) assume that MPs can only occur in clauses which constitute an independent speech act. Under this view, all root-like dependent clauses are associated with their own speech act. It will be shown in the next section that this strong assumption can hardly be maintained. It seems more appropriate to say that MPs can occur in clauses which have an illocutional potential. Although a lot of research has been carried out on root-phenomena and where they occur (see e.g. Heycock 2006 and the literature cited therein), it has not yet been clarified what exactly the semantic/pragmatic properties of root-like dependent clauses are. However, at least it can be said that a phrase possesses Force if the phrase has an illocutional potential and that Force encodes the necessity of the phrase to be anchored to a speaker or to a potential speaker (Haegeman 2002, 2006).

<sup>16</sup> According to current assumptions in generative linguistics (Chomsky 2001), Bayer (to appear) assumes that the relation between Force, which occurs in the left periphery, and MPs, which occur in the middle field, is established by the (locally operative) AGREE-relation.

Note that a MP may occur in an appositive attribute, (ia), but not in a restrictive one, (ib):

- (i) a. Diese ja bereits bekannten Anschuldigungen wurden wiederholt.  
       *these MP already known allegations were repeated*  
       b. \*Ja bereits bekannten Anschuldigungen wurden wiederholt.

Appositive attributes have their own assertive illocutional potential (Jacobs 1986), so it can be postulated that they contain a Force projection.

## 4. The licensing of PACs

Haegeman (2004) proposes that in English, PACs adjoin to the CP of the associated clause. It is obvious that, at least for German, this cannot be completely right. PACs may occur in the prefield, and the prefield does not correspond to a position adjoined to CP. On the other hand, we have seen evidence that PACs do not behave like regular constituents of the clause, especially in that they cannot occur in the middle field as regular constituents but only as parentheticals.

In the last section, it was claimed that root- and root-like clauses, to which PACs belong, have a Force projection, whereas non-root-like clauses, to which central adverbial clauses belong, do not have such a projection. If Force is present, it is the highest projection of its clause. Thus, root- and root-like clauses are not CPs but ForcePs. Force has to be anchored to a speaker or to a potential speaker (Haegeman 2002, 2006). The Force projection of an independent sentence is directly anchored to the speaker. The Force projection of a root-like object clause is anchored to the referent of the logical subject of the superordinated sentence, a potential speaker (Haegeman 2002).<sup>17</sup> I would like to propose that there exists another way of anchoring a Force projection, namely by its being licensed by a Force projection which itself is anchored. This is what happens with PACs: their Force projection is not directly but indirectly anchored to a (potential) speaker because it is licensed by the Force projection of the superordinated clause, which in turn is anchored to a (potential) speaker. Thus, I would like to propose the following constraints:

- (37) Any Force must be anchored to a (potential) speaker.  
 Hence, a subordinated phrase with an illocutional potential, i.e. a subordinated phrase containing a Force projection, must be anchored to a (potential) speaker.  
 In the syntax, this is reflected by the demand that such a phrase be licensed either

<sup>17</sup> Root-like object clauses are the embedded clause with the MP in (36a) and the embedded clauses in (ia) and (iia) of Fn. 13.

Note that binding into an object clause containing a MP is possible:

(i) Jeder<sub>1</sub> glaubt, dass er<sub>1</sub> eben der Richtige für die Aufgabe ist.  
*everyone thinks that he MP the right-one for the task is*

This is expected. Standardly, an object clause is in the command domain of the subject of the matrix clause, and this remains true for (i), the MP being licensed by its local force, which in turn is licensed by the predicate of the superordinated clause.

- i. by a subcategorising verb whose logical subject denotes a potential speaker, or
- ii. by a Force head.

Since for PACs, condition (37ii) is relevant and licensing is a local relation, we arrive at a new view about the options to fill the German prefield. A V2-clause has Force in its left periphery. Based mainly on evidence from Romance languages, Rizzi (1997) argues that the C-domain of the clause is split into different projections, Force being the highest of them. Each head may license at most one specifier. Several authors have applied Rizzi's approach to German. According to Frey (2010), the C-layer of a German V2-clause is minimally split so that the prefield may correspond to SpecForceP, SpecContrastP or to SpecFinP. Although the present considerations are by and large independent of these proposals, we adopt here the hypothesis that what is commonly called the prefield may correspond to SpecForce. The prefield does correspond to SpecForce when a PAC occupies it, the reason being that the PAC is licensed by Force. Thus, (3) has to be replaced by the condition (38):

- (38) Options to fill the prefield of a clause S in German  
 With the possible exception of an expletive *es* (or dialectal variants thereof), the prefield is filled either
- i. by movement of an element base generated in the middle field (IP-domain), or
  - ii. by base generation of an XP with an illocutional potential (i.e. an XP containing a Force projection). In this case, the prefield corresponds to SpecForce, XP being licensed by Force of S.

An XP which is licensed by Force of the clause functioning as its host will be called a Force-element. PACs are the Force-elements discussed in this paper.<sup>18</sup> According to (38ii), a Force-element may be base generated in SpecForceP. I will assume that as another option, a Force-element may appear as a parenthetical. In syntax, a parenthetical is adjoined to ForceP. Phonetically, it can be realised in a niche which is appropriate for the given par-

---

<sup>18</sup> There are speech-act-related adverbials that may appear in the prefield (Pittner 1999):

(i) Wenn du mich fragst, könnten wir uns um 17:00 treffen.  
*if you me ask could we REFL at 5 pm meet*

Pittner (1999) assumes these adverbials explicitly refer to the speech act. It seems reasonable to assume that speech-act adverbials appearing in the prefield belong to the Force-elements.

enthetical.<sup>19</sup> Thus, if a PAC is serialised in the middle field, it appears as a parenthetical and not as a constituent of the IP-domain.

In featural terms, one could say that a Force head may possess a selectional feature for a phrase which relates to Force. This feature can be satisfied by an appropriate phrase in SpecForceP or by one adjoined to ForceP. With regard to the so-called split-CP approach, I would like to point out one consequence which follows from the claim that PACs are situated in SpecForceP. In former work (Frey 2005), I argued that the dislocated phrase in a German ‘Linksversetzung’ (LV) is positioned in SpecForceP. Putting the claims together and given that there can be only one SpecForceP, it follows that in a LV, no PAC should be possible in the prefield. It is a sign of LV that it shows different connectedness effects, for example binding into the dislocated phrase. In contrast, the so-called Hanging-‘Topic’ construction does not show connectedness.<sup>20</sup> According to Shaer (2009), for example, the dislocated phrase of the Hanging-‘Topic’ construction is not part of the structure of the following clause; in particular it does not belong to the C-domain of that clause. In the light of these considerations consider the following data:

- (39) a. \*Seinen<sub>1</sub> Doktorvater, da Maria kommt, möchte den jeder  
           *his adviser since Maria comes wants RP every*  
           Doktorand<sub>1</sub> mitbringen.  
           *doctoral-student to-bring-along*
- b. Seinen<sub>1</sub> Doktorvater, weil Maria kommt, möchte den jeder Doktorand<sub>1</sub>  
           mitbringen.

My informants judge the binding in (39a) as impossible, but that in (39b) as possible. (39a) cannot be a LV, since the PAC occupies SpecForceP. This explains why binding is not possible. The *weil*-clause in (39b) is not base generated in SpecForceP but is moved to the left periphery. According to Frey (2010), it is moved to a position below Force. Therefore, (39b) can be a LV, since the SpecForceP is free to host the dislocated phrase of the LV. Being a LV, (39b) allows binding into its dislocated phrase.

<sup>19</sup> The phrases containing Force do not all have the same distribution. The appositive attributes mentioned in Fn. 16 have to stand in a certain structural relationship to the NP they relate to. This condition is not fulfilled if they occur in the prefield. It also follows that the parenthetical niches appropriate for appositive attributes are distinct from the niches appropriate for PACs.

<sup>20</sup> (ia) shows binding with a LV; (ib) shows that the same is not possible in a Hanging-‘Topic’ construction:

- (i) a. Seine<sub>1</sub> erste Freundin, die vergisst kein Linguist<sub>1</sub>.  
           *his first girlfriend RP forgets no linguist (RP: resumptive pronoun)*  
       b. \*Seine<sub>1</sub> erste Freundin, sie vergisst kein Linguist<sub>1</sub>.

In the following, I would like to relate different properties of PACs to their being licensed by the Force heads of their hosts. In the course of this, some comparing remarks on the type of verb-final clauses in (7) will be made.

- PACs cannot constitute an independent speech act.

That the Force of a PAC is licensed by means of the Force of its superordinated clause is reflected by the fact that PACs cannot be illocutionarily independent of their host, cf. (40a-d). That a phrase can be illocutionarily independent presupposes that its Force is directly linked to the speaker.

- (40) a. \*Bringst du Vater nach Hause(?), da er müde ist/  
*see you father home because he tired is*  
 obwohl er noch nicht müde ist(?)  
*although he yet not tired is*
- b. ??Du wirst erstaunt sein, da ich hiermit kündige.  
*you will astonished be because I hereby quit*
- c. \*Hans wurde gewählt, [obwohl er es gar nicht wollte,  
*Hans was elected though he it at-all not wanted*  
 nicht wahr?/oder?]  
*did he?*
- d. \*Hast du noch Hunger? Da ich noch viel Essen übrig habe.  
*are you still hungry since I still a-lot-of food left have*
- e. Hast du noch Hunger? Denn/Weil ich habe noch viel Essen übrig.

In (40a), the attempt fails to have the matrix clause as a question and the causal and the concessive PAC, respectively, as an assertion. (40b) shows that the PAC cannot be used as a performative, in (40c) the forming of a tag question with the concessive clause fails, and (40d) shows that the *da*-clause cannot justify the speech act made with the main clause. These observations suggest that Thurmair's (1989) and Coniglio's (2009) view that all root-like dependent clauses constitute an independent speech act is too strong an assumption. Note that the situation is different with V2-clauses introduced by the coordinating conjunctions *denn* or *weil*. (40e) shows that with these sentences, it is possible to justify the speech act made with the preceding clause.

Let us now consider the type of verb-final clauses shown in (7). These clauses show a different behaviour.

- (41) a. Bringst du Vater nach Hause? Wofür ich dir dankbar wäre.  
*see you father home for-which I you thankful be-SUBJ*  
 (cf. Holler 2008)

- b. Max hat sich auch beworben, weshalb ich hiermit zurücktrete.  
*Max has REFL as-well applied why I hereby withdraw*  
 (cf. Reis 1997)
- c. Hans wurde gewählt, [worüber wir uns gewundert haben,  
*Hans was elected about-which we REFL surprised were,*  
 nicht wahr?/oder?]  
*weren't we?*
- d. Ist denn etwas los, dass Max so schreit?  
*is MP something going-on that Max like-that screams*  
 (Reis 1997)
- 'Is something wrong, that Max is screaming like that?'

(41a) demonstrates that it is possible to have the continuative wh-relative clause as an assertion when the associated clause is a question/request. In (41b), a continuative wh-relative clause is used as a performative, in (41c) the continuative wh-relative is the basis for a question tag, and (41d) shows that by means of a free *dass*-clause the illocution of the associated clause can be justified (Reis 1997).<sup>21</sup> Because of these properties, continuative wh-relative clauses and free *dass*-clauses will be called unintegrated dependent clauses.

Let us have a quick look at consecutive *sodass*-clauses. It can easily be proven that a consecutive clause does not belong to the central adverbial clauses. This could be shown with all the tests considered above. (42a) just demonstrates that a consecutive clause cannot be questioned. It is of greater interest that a consecutive clause patterns with the PACs and not with unintegrated dependent clauses. According to (42b), a *sodass*-clause cannot function as an assertion when the associated clause is a question or request. (42c) demonstrates the impossibility of using a *sodass*-clause as a performative.

- (42) a. Welche Folgen hat deine schwere Verletzung?  
*which consequences has your severe injury*  
 \*(Ich bin schwer verletzt,) sodass ich zum Arzt gehen muss.  
*I am badly injured so-that I to-the doctor go must*
- b. \*Bringst du Vater nach Hause(?), sodass ich ruhig schlafen  
*bring you father home so-that I easy rest*  
 kann(?)  
*can*
- c. ??Max hat sich auch beworben, sodass ich hiermit zurücktrete.  
*Max has REFL also applied so-that I hereby withdraw*

<sup>21</sup> Note that to get these results in (41a-d) it is not necessary to have a distinctive pause between the two sentences.

Thus, it seems that consecutive clauses belong to the class of PACs. Hence, I assume that the fact that a consecutive clause cannot be base generated in the prefield of its superordinated clause but can only be base generated right-adjoined is due to its semantics – it specifies a result of the proposition of the superordinated clause – and does not show that a consecutive clause belongs to the unintegrated dependent clauses.<sup>22</sup>

- In contrast to central adverbial clauses, PACs are not just part of the speech act performed with the matrix clause, cf. (15b-d).

PACs have an illocutional potential, which by default is assertive. Their illocutional potential has to be compatible with the illocutional force of the whole construction. This is not fulfilled in (15b-d).<sup>23</sup>

- PACs do not relate eventualities.

Pasch (1989) observes that in (43a) the *da*-clause does not relate to the content of the matrix clause since if this were so, the result would be semantically ill-formed. According to Pasch (1989) and Pasch et al. (2003), a *da*-clause relates to the epistemic mode of the matrix clause. The *da*-clause yields the reason for the speaker's belief that the matrix clause is true. (43b) is bad because, typically, *weil* expresses a causal relation between two eventualities.

- (43) a. Da die Heizungsrohre geplatzt sind, hat es Frost gegeben.  
*because the heating-tubes burst have has EXPL frost been*  
 b. \*Weil die Heizungsrohre geplatzt sind, hat es Frost gegeben.

These phenomena are due to the fact that PACs are licensed by Force and central adverbials are licensed IP-internally. Only an adverbial which is licensed inside the IP of its matrix clause can relate to the eventuality denoted by the matrix clause.

<sup>22</sup> However, it should be mentioned that the fact that a verb-final clause introduced by *sodass* cannot be positioned in the prefield is the main reason for Pasch et al.'s (2003) treatment of *sodass* not as a complementiser (i.e. as a 'Subjunktör' in the terminology of Pasch et al. 2003) but as a member of a class of connectors in their own right called 'Postponierer' (postponing conjuncts).

<sup>23</sup> The judgements for (15b-d) change if the verb-final clauses get their own question intonation. In this case the sequence of the two clauses, each having a question intonation, is interpreted as one question.

- PACs cannot be questioned.

There are no question words for Force-elements, cf. (14). One might speculate that the reason that PACs cannot be questioned is that in this case the matrix clause's Force would exclusively cover given material. This is not compatible with the illocutional function encoded in Force.

- PACs can be part of a root-like subordinated clause and have an 'embedded' meaning.

Interestingly, PACs can belong to an embedded clause. In this case, the embedded clause has to occur in a root-context, i.e. the embedded clause has to be root-like. This is shown by the contrast illustrated in (44a,b) and (44c,d), respectively. Note that this restriction does not hold for central adverbial clauses, cf. (44e,f). They may occur in non-root-environments.

- (44)
- a. Paul glaubt, dass Otto kommt, da er Geld braucht.  
*Paul thinks that Otto comes since he money needs*
  - b. \*Paul bedauert, dass Otto kommt, da er Geld braucht.  
*Paul regrets that Otto comes since he money needs*
  - c. Max meint, dass Maria Fußball liebt, während Paul für Opern schwärmt.  
*Max thinks that Maria soccer loves while Paul about operas is-crazy*
  - d. \*Max bestreitet, dass Maria Fußball liebt, während Paul für Opern schwärmt.
  - e. Paul bedauert, dass Otto kommt, weil er Geld braucht.
  - f. Max bestreitet, dass Maria wegfährt, während Paul krank ist.  
*Max denies that Maria goes-away-on-a-trip while Paul ill is*

That the subordinated clause with the PAC has to be root-like is due to the PAC's Force projection. This Force projection has to be locally licensed by a Force head. As argued in section 3, an embedded clause with Force has to occur in a root-context, since only root-contexts can license Force. Hence, a *dass*-clause with Force has to occur in a root-context. In (44a,c), the Force projection of the PAC can be licensed by the Force of the embedded *dass*-clause. In (44b,d), the subordinated *dass*-clause cannot have a Force projection, and, therefore, the PAC's Force projection cannot be licensed. Since central adverbial clauses do not have Force, they are not restricted to Force-licensing environments.

Note that if a PAC is part of an embedded structure, an element of the superordinated clause may bind into the PAC. This is expected, since the complete embedded structure occurs in the c-command domain of any matrix element.

- (45) Jeder<sub>1</sub> dachte, andere werden bevorzugt, während er<sub>1</sub> doch der Richtige  
*everybody thought others were favoured, while he MP the right-one*  
 sei.  
*is*

If a PAC occurs in an embedded structure it is understood as part of the potential illocution ascribed to the referent of the logical subject of the superordinated clause. This observation contradicts Scheffler (2008), who claims that a *da*-clause (like a V2-clause introduced by *denn*, but in contrast to a *weil*-clause) is associated with a conventional implicature in the sense of Potts (2005). It is a sign of conventional implicatures that they are semantically linked to the actual speaker of the utterance (Potts 2005).

Let us take a look at unintegrated dependent clauses. The examples in (46) show that they can never occur as part of an embedded structure.<sup>24</sup>

- (46) a. \*Hans meint, Maria wird auch kommen, worüber sich  
*Hans thinks Maria will too come about-what REFL*  
 alle freuen werden.  
*everyone happy will-be*  
 b. ?\*Hans glaubt, dass Fritz blöd ist, dass er Erna den  
*Hans believes that Fritz stupid is that he (for)Erna the*  
 Mantel bezahlt.  
*coat pays*

(cf. Reis 1997)

I take the fact that an unintegrated dependent clause, in contrast to a PAC, cannot occur embedded as a strong indication that an unintegrated dependent clause is not part of the syntactic structure of its associated clause (see also Fn. 7). An unintegrated dependent clause is semantically dependent on its associated clause, but it is, unlike a PAC, not syntactically dependent. Below, I will come back to this point.

<sup>24</sup> I was told that there are native speakers who accept (46b); however, according to my own survey the example is not well formed. Reis (1997: 133), too, considers this construction ungrammatical.

- PACs do not appear as attributes.

A PAC needs licensing by Force of its host clause. Hence, it can be base generated in the prefield, or it can be base generated right-adjoined to the ForceP of its host clause. I assume that in the latter case the PAC does not have to be phonetically realised post-clausally but may also be pronounced in parenthetical niches inside the clause which are appropriate for its type. The examples in (47) show that the position of an attribute does not belong to the possible parenthetical niches for PACs.

- (47) a. Eine Beförderung, weil/\*da du der ChefIn gefällst, ist  
*a promotion because you to-the boss appeal is*  
 ausgeschlossen.  
*excluded*
- b. \*Trotzdem, obwohl es mir zu warm ist, schließe ich das  
*nonetheless although it for-me too warm is close I the*  
 Fenster nicht.  
*window not*

(cf. Breindl 2004)

- PACs cannot have a correlate, cf. (10c).
- PACs cannot be in the scope of an element in the superordinated clause, cf. (11c,d); they are not in the binding domain of an element in the superordinated clause, cf. (24), (26).
- PACs cannot carry the nuclear stress of the whole construction, cf. (13).

These three properties are consequences of the fact that a Force-element cannot be part of the c-command domains of IP-internal elements of the superordinated clause.

- PACs cannot be added by means of an *und zwar*-supplement.

By means of an *und zwar*-supplement, the content of the proposition expressed by the preceding clause is further specified. Thus, only material which contributes to that proposition can be added. (48) shows that a PAC does not fulfil this condition.

- (48) Hans lächelt die ganze Zeit, und zwar weil/\*da er so verliebt ist.  
*Hans smiles the whole time and namely because he deep in-love is*

- A PAC can neither be coordinated with a central adverbial clause nor with an unintegrated dependent clause.

A possible syntactic explanation of the ungrammaticality of sentences like (49) is that constituents which are licensed by different elements cannot be coordinated.

- (49) a. \*Karl geht heute in die Oper, weil Strauss gegeben wird  
*Karl goes today to the opera because Strauss performed is*  
 und da Maria mitkommt.  
*and because Mary comes-along*
- b. \*Max hat ein Foul begangen, sodass er vom Platz gestellt  
*Max has a foul committed so-that he off-the field sent*  
 wurde und worüber sich der Trainer ärgerte.  
*was and about-which REFL the coach was-angry*

- Following the matrix clause, PACs occur in-between central adverbial clauses and unintegrated dependent clauses.

If a central adverbial clause, a PAC and an unintegrated clause follow the host clause, the only possible order is ‘central adverbial < PAC < unintegrated dependent clause’.

- (50) a. Ich ging in den Wald, als ich musste, obwohl ich Angst hatte.  
*I went into the wood when I had-to although I scared was*
- b. \*Ich ging in den Wald, obwohl ich Angst hatte, als ich musste.
- c. Er ist gekommen, obwohl er eigentlich keine Zeit hatte,  
*he has come although he actually no time had*  
 worüber sich alle freuten.  
*about-which REFL everyone happy-was*
- d. \*Er ist gekommen, worüber sich alle freuten, obwohl er eigentlich keine Zeit hatte.

A PAC which follows the matrix clause is adjoined to ForceP. The analysis of right-dislocation of elements which are IP-internally licensed is still highly controversial. However, it would be rather implausible to assume that a right-dislocated central adverbial clause is attached as high as to ForceP. Given this observation and since there is no parenthetical niche for a PAC between the main clause and the dislocated central adverbial clause, it is expected that a right-dislocated central adverbial clause will precede a PAC, cf. (50a,b).

To understand (50c,d), we have to recall that with the data in (46) we have seen evidence that an unintegrated dependent clause is not part of the syntactic structure of its associated clause. Obviously, if unintegrated dependent clauses do not belong to the syntactic structure, they have to follow PACs, which do.

That PACs are part of the syntactic structure of their associated clauses and unintegrated dependent clauses are not can also explain other differences. For example, in contrast to the former, unintegrated dependent clauses necessarily are prosodically non-integrated. Furthermore, PACs are possible in answers to all-focus questions, whereas unintegrated dependent clauses are not, the reason being that the answer to a wh-question has to be built by one syntactic structure:

- (51) Was hat Maria erzählt?  
 ‘What did Mary tell?’
- a. Peter ist heute ins Schwimmbad gegangen, obwohl es stark regnete.  
*Peter has today to-the swimming-pool gone although it heavily rained*
  - b. Peter hat einen Preis gewonnen, sodass er jetzt ein Haus bauen kann.  
*Peter has a prize won so-that he now a house build can*
  - c. # Peter ist nach Paris gereist, worüber sich alle gewundert haben.  
*Peter has to Paris travelled about-what REFL everyone surprised was*
  - d. # Peter ist größtenwahnsinnig, dass er sich einen Porsche kauft.  
*Peter is megalomaniac that he REFL a Porsche buys*

## 5. About a PAC’s degree of integration

After having reviewed the licensing of PACs and some of their properties, I would like to come back to the assumption expressed in (5), repeated here:

- (5) The prefield in German is an unequivocal position of integration.

According to our findings, (5) can only be said to be true if it is not expected that any constituent which can appear in the prefield will fulfil all criteria for being integrated into the matrix clause. Although PACs can be base generated in the prefield and, thus, are integrated into the host clause, they show many of the effects which are normally taken as signs of non-integration: they do not allow binding into them, cannot be in the scope of other constituents, do not allow a correlate, cannot be questioned etc. Thus, using a graded concept of integration it can be said that PACs are less integrated than central

adverbial clauses and, obviously, more integrated than continuative *wh*-relative clauses and free *dass*-clauses.

Fabricius-Hansen (1992), among others, mentions two marginal variants of subordination: First, non-restrictive relative clauses and continuative relative clauses, which according to Fabricius-Hansen (1992) are syntactically like prototypical subordinated clauses but show semantic/pragmatic non-integration, and second dependent verb-first and verb-second sentences, which are said to have the form of main clauses but behave semantically/pragmatically like prototypical subordinated clauses. In her seminal paper Reis (1997) also distinguishes two special types of dependent clauses in addition to the dependent clauses which are canonical constituents: relative unintegrated clauses (according to Reis 1997, dependent V2-clauses, free *dass*-clauses) and absolute unintegrated clauses (according to Reis 1997, continuative relative clauses, *sodass*-clauses).<sup>25</sup> How are our findings to be characterised compared to these classifications?

Using the (non-structural) notion of integration one could say that our findings suggest a third special type of dependent clauses, PACs. PACs and dependent V2-clauses share different ‘non-integration properties’, yet dependent V2-clauses fulfil criteria for integration (cf. Reis 1997, Holler 2008) which PACs do not fulfil, cf. (52).<sup>26</sup> First, it is possible to have binding of an element of the superordinate clause into the dependent V2-clause, while there is no binding of an element of the host of a PAC into the PAC. Second, a dependent V2-clause can be information-structurally integrated into its host clause. Thus, it may carry the nuclear accent of the complex consisting of the host and the dependent clause, whereas a PAC cannot. Third, a dependent V2-clause may appear as a complement to a predicate that is questioned, whereas if the predicate of the host of a PAC is questioned, the PAC does not become part of the question.

<sup>25</sup> Note that Reis (1997) assumes that the absolute unintegrated clauses are right-adjoined to CP, such that according to her analysis, all dependent clauses form syntactic constituents with their host clauses.

<sup>26</sup> According to Reis (1997), a V2-clause cannot be positioned in the prefield. From this point of view, dependent V2-clauses would fail to fulfil an ‘integration property’, which a PAC does fulfil. However, this ‘non-integration property’ of V2-clauses is not as clear-cut as is often assumed, cf. (i):

- (i) a. Er<sub>1</sub> habe einen Fehler gemacht, will wohl keiner<sub>1</sub> gerne zugeben.  
*he has a mistake made wants MP no-one willingly to-admit*  
 ‘No one readily wants to admit that he has made a mistake.’  
 b. Das Mineralwasser enthalte giftige Stoffe, hat der  
*the mineral-water contains-SUBJ toxic substances has the*  
 Umweltperte zu Unrecht behauptet.  
*environmental-expert wrongly claimed* (Grewendorf 1988: 253)

- (52) a. Jeder<sub>1</sub> glaubt, er<sub>1</sub> ist der Richtige für die Aufgabe.  
*everyone thinks he is the right-one for the task*  
 b. Otto hofft, sie wird KOMmen.  
*Otto hopes she will come*  
 c. Hoffst Otto, sie wird kommen?  
 'Does Otto hope that she will come?'

Let me conclude by noting two differences in the classification of the sentence types in Reis (1997) and in the present paper. As already mentioned, in Reis (1997), free *dass*-clauses are grouped with dependent V2-clauses, whereas in the present paper it is argued that they belong to the unintegrated dependent clauses. Furthermore, Reis (1997) groups the consecutive *sodass*-clauses with the continuative relative clauses as absolute unintegrated clauses, whereas the present paper treats them as PACs.

The reason for the first difference is that in Reis (1997), some phenomena are evaluated differently than in the present paper. First, Reis (1997) assumes that the reason why the associated clause of a free *dass*-clause cannot be embedded (cf. (46b)) lies in the pragmatics of the free *dass*-clause. Next, in Reis (1997), contrary to our assessment, it is not seen as a decisive fact that a free *dass*-clause may justify the illocution of the associated clause (cf. 41d). In addition, Reis (1997) assumes that a free *dass*-clause participates in the focus-background partition of its associated clause – a judgement I do not share, cf. (53a). Finally, Reis (1997) believes that an element of the associated clause may bind into the free *dass*-clause. With regard to the last point, Reis (1997) gives the example in (53b). Note, however, that Holler (2008: 201) does not accept binding into a free *dass*-clause, and I agree with Holler's judgement, cf. (53c). Moreover, I take the fact that a PAC has to precede a free *dass*-clause as evidence for the view advanced in the present paper, cf. (53d,e).

- (53) a. \*Er ist verrückt, dass er ihr jetzt NACHreist.  
 'He is crazy to follow her now.'  
 b. Jeder<sub>1</sub> war blöd, dass er<sub>1</sub> darauf eingegangen ist.  
*everybody was foolish that he it accepted has*  
 'Everybody was foolish to accept it.'  
 c. \*Jeder<sub>1</sub> ist ein Idiot, dass er<sub>1</sub> jetzt schon das Stadion verlässt.  
*everybody is an idiot that he now already the stadium leaves*

- d. Du bist verrückt, während deine Schwester vernünftig ist, dass du  
*you are crazy while your sister intelligent is that you*  
 das ganze Geld verjübelst.  
*the all money blow*
- e. \*Du bist verrückt, dass du das Geld verjübelst, während deine Schwester  
 vernünftig ist.

As for the second difference, the reasons that Reis (1997) assigns *sodass*-clauses to her class of absolute unintegrated clauses and not to her class of relative unintegrated clauses are obvious. For example, it is not possible to bind into a *sodass*-clause and a *sodass*-clause cannot participate in the focus-background partition of its associated clause. However, the present paper groups *sodass*-clauses in the class of PACs, a class not provided in Reis (1997), and not as an unintegrated clause because a *sodass*-clause cannot constitute an independent speech act (cf. (42b)) and because it can be embedded together with its associated clause, (54). The present paper has to ascribe the fact that a *sodass*-clause cannot occur in the prefield to the resultative semantics of the clause.

- (54) Max sagte, dass er sehr schwer verletzt ist, sodass er zum Arzt  
*Max said, that he very severely hurt is so-that he to-the doctor*  
 gehen muss.  
*go must*  
 'Max said that he is so severely injured that he has to go and see a doctor.'

## Conclusion

This paper argues that a PAC is licensed by the Force projection of its host. Thus, the syntactic licensing of a PAC is very different from the licensing of a central adverbial clause. The proposal explains that first, PACs, in contrast to central adverbial clauses, show many signs of non-integration, and that second, PACs may be base generated in the prefield, which shows that they may appear syntactically embedded (integrated) into their host clauses. The treatment of PACs as constituents which strongly differ from central adverbial clauses distinguishes our account on the one hand from that of Pasch et al. (2003: 398), who make a sharp distinction between the semantics of PACs and central adverbial clauses but treat them syntactically on a par, and on the other hand from Haegeman's (2002, 2004, 2006) approach, which takes PACs as syntactically non-embeddable. The proposal also accounts for the fact that PACs show fewer signs of non-integration than continuative relative

clauses and free *dass*-clauses. In contrast to Reis (1997) and Holler (2008), the paper argues that continuative relative clauses and free *dass*-clauses have no syntactic relationship to their preceding clauses. Since PACs have a structural relation to their hosts, they of course are more strongly integrated than continuative relative clauses and free *dass*-clauses.

## References

- Asbach-Schnitker, Brigitte (1977): „Die Satzpartikel *wohl*. Eine Untersuchung ihrer Verwendungsbedingungen im Deutschen und ihrer Wiedergabemöglichkeiten im Englischen.“ – In: Harald Weydt (Hg.): *Aspekte der Modalpartikeln: Studien zur deutschen Abtönung*, 38–61. Tübingen: Niemeyer.
- Bayer, Josef (2001): „Asymmetry in Emphatic Topicalization.“ – In: Caroline Féry, Wolfgang Sternefeld (Hgg.): *Audiat Vox Sapientiae*, 15–47. Berlin: Akademie Verlag (Studia grammatica 52).
- (to appear): „From Modal Particle to Interrogative Marker: A Study of German *denn*.“ – In: Laura Brugè, Anna Cardinaletti, Giuliana Giusti, Nicola Munaro & Cecilia Poletto (eds.): *Functional Heads*.
- Brandt, Margareta (1990): *Weiterführende Nebensätze. Zu ihrer Syntax, Semantik und Pragmatik*. – Stockholm: Almqvist und Wiksell (Lunder germanistische Forschungen 57).
- Brauß, Ursula (1994): *Lexikalische Funktionen der Synsemantika*. – Tübingen: Narr.
- Breindl, Eva (2004): „Konzessivität und konzessive Konnektoren im Deutschen.“ – In: *Deutsche Sprache* 1/04, 2–31.
- Chomsky, Noam (2001): „Derivation by Phase.“ – In: Michael Kenstowicz (ed.): *Ken Hale: A Life in Language*, 1–52. Cambridge: MIT Press.
- Coniglio, Marco (2009): *Die Syntax der deutschen Modalpartikeln: Ihre Distribution und Lizenzierung in Haupt- und Nebensätzen*. – Diss. University of Venice.
- Duden (2006): *Duden – Die Grammatik*. – Mannheim: Dudenverlag (Duden Bd. 4).
- Engel, Ulrich (1972): „Regeln zur ‘Satzgliedfolge’. Zur Stellung der Elemente im einfachen Verbalsatz.“ – In: *Linguistische Studien* I, 17–75. Düsseldorf: Pädagogischer Verlag Schwann (Sprache der Gegenwart 19).
- Fabricius-Hansen, Cathrine (1992): „Subordination.“ – In: Ludger Hoffmann (Hg.): *Deutsche Syntax. Ansichten und Aussichten, Jahrbuch des IDS 1991*, 458–483. Berlin: de Gruyter.
- Frey, Werner (2005): „Zur Syntax der linken Peripherie im Deutschen.“ – In: Franz Josef d’Avis (Hg.): *Deutsche Syntax: Empirie und Theorie. Symposium Göteborg 13–15 Mai 2004*, 147–171. Göteborg, Acta Universitatis Gothoburgensis (Göteborger Germanistische Forschungen 46).
- (2010): „ $\bar{A}$ -movement and Conventional Implicatures: About the Grammatical Encoding of Emphasis in German.“ – In: *Lingua* 120.6, 1416–1435.
- Grewendorf, Günther (1988): *Aspekte der deutschen Syntax*. – Tübingen: Narr.
- (2002): *Minimalistische Syntax*. – Tübingen: UTB.
- Haegeman, Liliane (2002): „Anchoring to Speaker, Adverbial Clauses and the Structure of CP.“ – In: *Georgetown University Working Papers in Theoretical Linguistics* 2, 117–180.
- (2004): „The Syntax of Adverbial Clauses and Its Consequences for Topicalisation.“ – In: *Antwerp Papers in Linguistics* 107, 61–90.
- (2006): „Conditionals, Factives and the Left Periphery.“ – In: *Lingua* 116, 1651–1669.
- Haider, Hubert (2010): *The Syntax of German*. – Cambridge: Cambridge University Press.

- Heycock, Caroline (2006): „Embedded Root Phenomena.“ – In: Martin Everaert, Henk van Riemsdijk (eds.): *The Blackwell Companion to Syntax*, vol. II, 174–209. Oxford: Blackwell.
- Holler, Anke (2008): „German Dependent Clauses from a Constraint-Based Perspective.“ – In: Cathrine Fabricius-Hansen, Wiebke Ramm (eds.): *‘Subordination’ versus ‘Coordination’ in Sentence and Text*, 187–216. Amsterdam: Benjamins.
- Jacobs, Joachim (1986): „Abtönungsmittel als Illokutionstypmodifikatoren.“ – In: Werner Abraham (Hg.): *Groninger Arbeiten zur Germanistischen Linguistik* 27, 100–111.
- Katz, Jerold J. & Postal, Paul M. (1964): *An Integrated Theory of Linguistic Descriptions*. – Cambridge: MIT Press.
- König, Ekkehard & Johan van der Auwera (1988): „Clause Integration in German and Dutch Conditionals, Concessive Conditionals, and Concessives.“ – In: John Haiman, Sandra A. Thompson (eds.), *Clause Combining in Discourse and Grammar. Typological Studies in Language* 18, 101–133. Amsterdam, Philadelphia: Benjamins.
- Lang, Ewald (1979): „Zum Status der Satzadverbiale.“ – In: *Slovo a Slovesnost* 40, 200–213.
- Müller, Gereon (1997): „Partial Wh-Movement and Optimality Theory.“ – In: *The Linguistic Review* 14, 249–306.
- Pafel, Jürgen (2009): „Zur linearen Syntax des deutschen Satzes.“ – In: *Linguistische Berichte* 217, 37–79.
- Pasch, Renate (1989): „Adverbialsätze – Kommentarsätze – Adjungierte Sätze. Eine Hypothese zu den Typen der Bedeutungen von *weil*, *da* und *denn*.“ – In: W. Motsch (Hg.): *Wortstruktur und Satzstruktur*, 141–158. Berlin: Zentralinstitut für Sprachwissenschaft (Linguistische Studien, Reihe A, Arbeitsbericht 194).
- Pasch, Renate et al. (2003): *Handbuch der deutschen Konnektoren. Linguistische Grundlagen der Beschreibung und syntaktische Merkmale der deutschen Satzverknüpfungen (Konjunktionen, Satzadverbien und Partikeln)*. – Berlin, New York: Gruyter (Schriften des Instituts für Deutsche Sprache 9).
- Pittner, Karin (1999): *Adverbiale im Deutschen. Untersuchungen zu ihrer Stellung und Interpretation*. – Tübingen: Stauffenburg.
- Potts, Christopher (2005): *The Logic of Conventional Implicatures*. – Oxford: Oxford University Press.
- Reis, Marga (1997): „Zum syntaktischen Status unselbstständiger Verbzweit-Sätze.“ – In: Christa Dürscheid, Karl-Heinz Ramers (Hgg.): *Sprache im Fokus. Festschrift für Heinz Vater zum 65. Geburtstag*, 121–144. Tübingen: Niemeyer.
- (2008): „Zur Struktur (vor allem) konditionaler V1-Gefüge im Deutschen.“ – Handout. ZAS Berlin, 27.03.08.
- Rizzi, Luigi (1997): „The Fine Structure of the Left Periphery.“ – In: Liliane Haegeman (ed.): *Elements of Grammar. Handbook in Generative Syntax*, 281–337. Dordrecht: Kluwer.
- Scheffler, Tatjana (2008): *Semantic Operators in Different Dimensions*. – Diss. University of Pennsylvania.
- Schwabe, Kerstin (2007): „Semantic Properties of German Solitaires.“ – In: *Journal for Germanic Linguistics and Semiotic Analysis*, 12/2, 233–254.

- Shaer, Benjamin (2009): „German and English Left-Peripheral Elements and the ‘Orphan’ Analysis of Non-integration.“ – In: Benjamin Shaer, Philippa Cook, Werner Frey & Claudia Maienborn (eds.): *Dislocated Elements in Discourse*, 366–397. New York: Routledge.
- Thurmair, Maria (1989): *Modalpartikeln und ihre Kombinationen*. – Tübingen: Niemeyer.
- Wöllstein, Angelika (2009): „Zur syntaktischen Struktur konditionaler V1-Gefüge.“ – Handout. AG1: Formen und Funktionen von Satzverknüpfungen, DGfS-Jahrestagung 2009, Osnabrück.