Where syntax and semantics meet: adverbial positions in the German middle field

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1 Introduction

The question how adjunct positions can be explained has recently been very controversially discussed. There is hardly any view imaginable that has not been proposed. On one extreme is the view that adverbs and more general adjuncts can be placed practically anywhere and that they are base generated wherever they appear. The other extreme has recently been proposed by several authors working within a minimalistic framework, e.g. by Cinque (1999), who argues for a universal hierarchy of functional projections which contains a special specifier position for every type of adjunct.

For German, which exhibits a great freedom of word order, it has been controversial whether there are syntactically determined positions for adverbials at all. Some authors have maintained that the placement of adverbials is completely free (e.g. Haider 1996, Hetland 1992 for sentence adverbials).

In Frey & Pittner (1998), Pittner (1999) we have endeavoured to demonstrate that the tests which are used to identify the base positions of verbal arguments can be fruitfully applied to determine the base positions of adverbial adjuncts as well (cf. also Maienborn 1996, 2001 on locatives). Moreover, ambiguous adverbs are especially interesting in this respect. The ambiguity often disappears in certain positions which shows that certain syntactic positions of adverbials lend themselves to certain interpretations. Ambiguous adverbs will also be drawn upon as evidence for the close...
connection between syntactic position and interpretation of adverbials in this paper.
If there are base positions for adverbials, the question arises what determines them. In this paper, the basic assumption is that the semantic entity to which an adverbial constituent applies to determines its positions. That is, the syntactic position of an adverbial is determined by its semantic relations to the rest of the sentence which is reflected in its c-command relations to other adverbials and the verbal arguments.
I will argue that adverbials fall into different classes as far as their base positions are concerned and that these different base positions reflect the semantic objects the adverbials are related to: there is a differentiation between proposition-related adverbials (sentence adverbials), event-related adverbials, event-internal adverbials, process-oriented adverbials. The paper is organized as follows: First, some properties of the German middle field will be presented. In the third section, tests for base positions will be discussed. In section 4, I will discuss the base positions of several types of adverbials. A comparison with other approaches is made in 5. Section 6 deals with the mirror image of adverbial positions in final position in English and in the German extraposition field. A short summary of the results of this paper is given in 7.

2 Some properties of the German middle field
The middle field is the space between the parts of the finite verb and infinite verbs constituting the verbal bracket in main clauses with verb-second or verb-first position, or alternatively between the complementizer and the verbal elements in subordinate clauses with verb-end position. Since German is an OV-type language, the base position of the finite verb is to the right of all verbal arguments in the right part of the bracket. Verb-first and
verb-second position are derived by movement and are possible only if there is no complementizer or other subordinating element.

Major constituents can be permuted quite freely in the middle field of the German sentence.

(1) a. *weil* Hans *seiner* Freundin (IO) *ein* Bild (DO) 
    because John his girlfriend (IO) a picture (DO) 
    *gegeben hat* 
    given has

'because John gave his girlfriend a picture'

b. *weil* seiner Freundin Hans *ein* Bild 
   because his friend (IO) John a picture (DO) 
   *gegeben hat* 
   given has

c. *weil* *ein* Bild seiner Freundin Hans 
   because a picture (DO) his friend (IO) John 
   *gegeben hat* 
   given has

The possible word orders are not all equally normal or neutral, since some require special contexts. Within generative grammar, it has been established by now as the view of the majority that verbal arguments have a normal or base order and orders which are derived by scrambling.

The base order of verbal arguments is not the same for all verbs, however. While many three-place verb take subject > indirect object > direct object as the base order, there are verbs with a base order DO > IO and not with all
verbs the subject is the first argument in the base order. This first argument will be called the highest argument.\textsuperscript{4} It has been convincingly argued that the base order of arguments is determined by the argument structure of the verb, which is present on the level of semantics and projected into the syntax (e.g. Haider 1993:101ff.).

It is controversial whether adverbials which for the most part are free adjuncts have base positions and if there are base positions for them, what determines these base positions. Based on earlier work done with W. Frey, I will argue in this paper that not only verbal arguments, but also adverbials have base positions which can be identified by applying a number of tests.

3 Tests for base positions

3.1 Focus projection

One reason to assume that there are base orders and derived orders is that some orders allow for wide focus or focus projection as it is called in the German literature, whereas others do not. According to Höhle (1982), focus projection is possible if the accent is placed on the constituent adjacent to the verb and if normal word order obtains.

A test for maximal focus projection is whether a sentence can occur as an answer to a question like \textit{what happened}? This is possible only with (2a). Both (2b) and (2c) could only be answers to questions in which some of the material is mentioned.

\begin{equation}
\begin{array}{c}
(2) \\
\text{a. Gestern hat Hans seiner } Freundin (IO) \\
\text{yesterday has John his girlfriend (IO)} \\
\text{\textit{ein Bild} (DO) gegeben} \\
\text{a picture (DO) given} \\
\text{'Yesterday John gave his girlfriend a picture'}
\end{array}
\end{equation}
3.2 Theme-rheme condition

Lenerz (1976) observed that some orders of two constituents allow either constituent to be either theme or rheme, whereas other orders are not possible if the first constituent is rheme and the second theme. Lenerz employs questions as a test for theme and rheme. The theme is already mentioned in the question and the rheme corresponds to the question word:

(3)  *Wen hast du das Geld gegeben?*

Who did you the money give

‘Who did you give the money to?’

a. *Ich habe dem KasIERer das Geld gegeben.*

I have the cashier the money given

‘I gave the money to the cashier.’

b. *Ich habe das Geld dem KasIERer gegeben.*

I have the money the cashier given
This tests demonstrates that the order IO > DO is unmarked, hence the base order. They also show that focussed constituents may not scramble.

3.3 Complex frontings

Some constituents can be topicalized together with the verb. This is not possible for all kinds of elements, only constituents which have a base position adjacent to the final verb can be part of a complex fronting. The reduced grammaticality of sentences like (b) argueably due to a trace in the fronted string that is ungoverned because its antecedent remains in the middle field (cf. Haider 1993).

(5)  

a. Das Buch gegeben habe ich dem Kind.  

the book given have I the child  

‘I gave the book to the child.’

b. ??Dem Kind gegeben habe ich das Buch.  

the child given have I the book
3.4 Quantifier scope

Frey (1993) observes that ambiguities of quantifier scope occur in derived orders, but not in base orders.

(6)  

(a) \textit{WEIL fast jeder Deutsche mindestens einen}  

because nearly every German at least one  

\textit{Goethe-Roman kennt} (\forall \exists)  

Goethe-novel knows  

‘because nearly every German knows at least one novel by Goethe’  

(b) \textit{WEIL mindestens einen Goethe-Roman fast jeder}  

because at least one Goethe-novel nearly every  

\textit{Deutsche kennt} (\exists \forall, \forall \exists)  

German knows  

(6a) has only a reading in which the universal quantifier has scope over the existential quantifier: nearly every German knows at least one novel by Goethe. (6b) is ambiguous. Besides the reading of (6a), it has also a reading in which there is one novel by Goethe which every German knows. Frey’s explanation for this is that scope is determined by c-command-relations, which are ambiguous in (6b) since the surface position of the existential quantifier c-commands the universal quantifier, but in the base order it is the other way round so that there are two readings. Cf. Frey’s (1993) scope principle in a simplified version:

(7) \textbf{Scope principle: A quantified expression }\alpha \textbf{ can have scope over a quantified expression }\beta \textbf{ if the head of the local chain of }\alpha \textbf{ c-commands the base position of }\beta.
The trace which is due to scrambling of the object in (6b) adds a scopus option which leads to the ambiguity described.

3.5 Existentially interpreted w-pronouns

It has been observed that existentially interpreted w-pronouns cannot be scrambled. This makes them useful as a diagnostic for base positions.

(8) a. weil eine Studentin wen beleidigt hat
   because a student someone insulted has
   ‘because a student insulted someone’

b. ??weil wen eine Studentin beleidigt hat
   because someone a student insulted has

(8) provides evidence for a base position of the object to the right of the subject.

Principle-C-effects can also be used as diagnostics for the determination of base positions. For reasons of space, I will not discuss them here and refer the reader to the discussions of this test in Frey and Pittner (1998) and Maienborn (2001).

In the next section, I will show how these tests can be applied in order to determine the base positions of several types of adverbials.

4 Adverbial positions in the middle field

4.1 Directional adverbials

It has been observed by a number of authors that directional adverbials in their base position are adjacent to the verbal elements in such a way that neither sentence negation nor other elements can occur between them. Not only directional adverbials, but also predicative elements belong to this special verbal domain which will be called the “verbal complex”.

- 8 -
(9)  

a. *Sie ist nicht nach München gegangen
she is not to Munich gone

‘She did not go to Munich.’

b. *Sie ist nach München nicht gegangen
she is to Munich not gone

c. *Er ist nicht Präsident geworden
he is not president become

‘He did not become president.’

d. *Er ist Präsident nicht geworden
he is president not become

Frey (1993:37) points out that the verbal complex is the smallest verbal projection that can be topicalized, i.e. be put into the position before the finite verb (the “prefield”). The following goes to show that directional adverbials are part of this projection, since the verb alone cannot be topicalized.

(10)  

a. *Gelegt HAT er die Bücher in das Regal
put has he the books into the shelves

‘He has put the books into the shelves’

b. In das Regal gelegt HAT er die Bücher
into the shelves put has he the books

The directional adverbials are part of the verbal domain. They exhibit some parallels to resultative predicates: Like resultative predicates, directional
adverbials can create additional argument places. Moreover, both resultative predicates and directional adverbials are focus exponents.\textsuperscript{8}

\begin{enumerate}
\item \textit{Er hat leer den Teller gegessen}
\begin{itemize}
\item he has empty the plate eaten
\end{itemize}
\begin{itemize}
\item ‘He ate the plate empty.’
\end{itemize}
\item \textit{Er hat den Teller nicht leer gegessen}
\begin{itemize}
\item he has the plate not empty eaten
\end{itemize}
\begin{itemize}
\item ‘He didn’t eat the plate empty.’
\end{itemize}
\item \textit{Gegessen hat er den Teller leer}
\begin{itemize}
\item eaten has he the plate empty
\end{itemize}
\item \textit{Leer gegessen hat er den Teller}
\begin{itemize}
\item empty eaten has he the plate
\end{itemize}
\end{enumerate}

If not only a goal but a path is specified by giving the starting point and points passed on the way, the normal order is starting point > points on the way > goal. We get focus projection in (a), but not in (b):

\begin{enumerate}
\item \textit{Wir sind von München über Nürnberg nach Berlin}
\begin{itemize}
\item we are from Munich via Nurnberg to Berlin
\end{itemize}
\begin{itemize}
\item driven
\end{itemize}
\begin{itemize}
\item ‘We went from Munich via Nurnberg to Berlin.’
\end{itemize}
\item \textit{Wir sind über Nürnberg von München nach Berlin}
\begin{itemize}
\item We are via Nurnberg from Munich to
\end{itemize}
\begin{itemize}
\item \textit{BerLIN gefahren}.
\end{itemize}
\end{enumerate}
In this case, the order of adverbials is iconically motivated.

4.2 Manner adverbials

Manner adverbials behave like directional adverbials in some respects. Sentence negation may not occur to the right of them. We have argued that manner adverbials are adjoined to the verbal complex (Frey/Pittner 1998: 501ff, cf. Frey 2003). This is not uncontroversial, however: Eckardt (2003), for instance, argues that manner adverbials are adjoined to a higher projection, containing the verb and its object.

The tests support the assumption of a base position of manner adverbials adjacent to the verbal complex. The indefinite w-pronoun as object occurs to the left of the manner adverbial. Since the w-pronoun cannot scramble, this shows that the manner adverbial is base generated to the right of it.

(13) weil Maria heute was (nicht) sorgfältig gelesen
because Mary today something not carefully read

hat

has

‘because today Mary has read something (not) carefully’

Quantifier scope points in the same direction. We have scope ambiguity with respect to the quantifier of the manner adverbial in (b), but not in (a), (cf. Frey 1993, Frey/Pittner 1998:502). While in (a) there is one woman which is courted in nearly every way, (b) has an additional reading where for every way of courting there is (at least) one woman. This shows that the manner adverbial in (b) has been scrambled over the object, whereas in (a) all constituents are in their base position:

(14) a. WEIL er mindestens eine Frau auf fast jede
- 11 -
because he at least one woman in nearly every way

Weise umwarb (∃∀)

way courted

‘because he courted at least one woman in nearly every way’

b. WEIL er auf fast jede Weise mindestens eine

because he in nearly every way at least one

Frau umwarb (∃∃, ∀∀)

woman courted

Complex fronting supports this view as well:

(15)  a. Mit bebender Stimme angesprochen hat Hans die elegante Frau.

with trembling voice addressed has John the elegant woman

‘With trembling voice John addressed the elegant woman.

b. ??/*Die elegante Frau angesprochen hat Hans mit bebender Stimme.

the elegant woman addressed has John with trembling voice

It has to be noted, however, that indefinite objects very often occur after manner adverbials.

(16) weil sie schüchtern einen Prinzen geküsst

because she shyly a prince kissed
Eckardt sees this as evidence for a base position of manner adjuncts higher than the object. In our view, data like (16) are due to the "integration" of the object into the predicate in the sense of Jacobs (1993). Jacobs assumes that a sister constituent may be either informationally autonomous or integrated into its head. If it is integrated, this means that it is not processed separately, but only as part of the head. Among the examples Jacobs gives are the subjects of thetic sentences and certain kind of objects. An integrated object is not conceptualized as a separate entity, but merely as a part of a process. As Jacobs argues, integration of an object is possible if the object exhibits proto-patient characteristics as defined by Dowty (1991). Focus on an integrated object can be wide focus.

(17) a. *Sie hat ein BUCH gelesen.* (wide focus possible)

She has a book read

'She read a book.'

b. *Sie hat einen KolLEGen verachtet.* (only narrow focus)

she has a colleague despised

'She despised a colleague.'

The patient object in (17a) can be integrated whereas this is not possible for the stimulus object in (17b) which is not exhibiting proto-patient
characteristics. It has also been observed that distributive quantification prevents integration (cf. Jacobs 1993:80f.):

(18)  a. *Sie hat jedes HEMD gebügelt. (only narrow focus)

      she has each shirt ironed

'She has ironed each shirt.'

b. Sie hat alle HEMDen gebügelt. (wide focus possible)

      she has all shirts ironed

'She ironed all shirts.'

It is crucial for our explanation that manner adjuncts can occur only in front of integrated objects. The following sentences with non-integrable objects are not acceptable.

(19)  a. *Ich habe abgründtief den Mann verachtet.

      I have deeply the man despised

'I despised the man deeply.'

b. ??Er hat sorgfältig jedes Hemd gebügelt.

      he has carefully each shirt ironed

'He ironed each shirt carefully'

We assume that an integrated object extends the verbal complex. Since any element intervening between an integrated object and the verb would prevent integration, manner adverbials are adjoined to the left of the object in these cases.
Support for the assumption of a base position of manner adverbials adjacent to the verbal complex comes also from the interpretation of adverbials which are ambiguous between a process (manner) reading and an event-related reading like \textit{langsam} (‘slowly’) and \textit{schnell} (‘quickly’).

(20) \textit{Er ging schnell.}

he went quickly

‚He went quickly/he quickly went.’

In its manner reading, the adverb refers to the speed of the movements of the legs that constitute the activity of walking. In its event reading, the adverb refers to the time span between some reference point and his leaving. There is a clear preference among native speakers of German for the manner interpretation of the verb-adjacent adverbial and for the event-related interpretation for ambiguous adverbials to the left of the object. When the context requires a process interpretation, the order object $>$ manner adverb in (a) is preferred.

(21) \textit{Damit niemand etwas hört, hat der Einbrecher}

In order to nobody something hears, has the

\textit{Einbrecher}

burglar

‘For fear that anybody hears something, the burglar has

a. \textit{die Tür langsam geöffnet.}

the door slowly opened

opened the door slowly.’

b. \textit{langsam die Tür geöffnet.}
slowly the door opened

If the context requires an event reading, the order adverbial > object in (a) is preferred.

(22) *Das Zimmer ist schon gut gelüftet –

the room is already well aired

‘The room is already well aired

a. *du könntest langsam das Fenster zumachen.

you could slowly the window close

‘you could close the window now’

b. *du könntest das Fenster langsam zumachen.

you could the window slowly close

‘you could close the window now’

The strong tendency of native speakers of German to interpret ambiguous adverbials to the left of objects as event-related adverbials, cannot be explained if this is the base position for manner adverbials.\textsuperscript{11} It strongly suggests a base position for manner adverbials adjacent to the verbal complex.

If an adverbial which is ambiguous between a manner reading and an event-related reading occurs to the left of the highest argument, only the event reading is available, as in (23).

(23) weil langsam wer das Essen kochen

because slowly somebody the meal cook

können
could

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In this section, it was argued that the base position of manner adverbials is adjacent to the verbal complex. The following condition holds:

(24) Process-oriented adverbials minimally c-command the verbal complex.

4.3 Instrumentals and comitatives

There is some evidence that the base position of instrumentals and comitatives is to the left of the objects. We have focus projection only in (b):


(narrow focus)

he has a can with a knife opened

‘He opened a can with a knife.’

b. *Er hat mit einem Messer eine DOSE geöffnet.*

(wide focus)

he has with a knife a can opened

Complex frontings support this view:

(26) a. *Mit dem MESSER geöffnet hat sie die Dose.*

with the knife opened has she the can

‘With the knife she opened the can.’

b. *Die DOSE geöffnet hat sie mit dem MESSER.*

the can opened has she with the knife

These tests suggest a base position of the instrument to the left of the object. Focus projection shows that the position of instruments is lower than that of subjects:
The tests show the same results for comitatives if they are related to subjects. Comitatives are closely related to one of the verbal arguments, usually the subject. A (rough) paraphrase of a sentence with a comitative is a sentence where the comitative is coordinated with the argument it relates to. There are cases, however, where the comitative relates to the object. Interestingly, the object-related comitatives take their base position to the right of the object, cf. complex frontings:

(28)  a. *Sie hat das Fleisch mit der Suppe in den Topf*  
      she has the meat with the soup into the pot  
      *getan.*  
      done  
      ‘She put the meat with the soup into the pot.’  

      b. *Mit der Suppe in den Topf getan hat sie*  
         with the soup into the pot done has she
It can be concluded that the comitative has to be c-commanded by the argument it is related to (cf. Frey/Pittner 1998:506, Pittner 1999:165).

As for relative order between instrument and comitative, the theme-rheme condition, focus projection and complex frontings hint at a slight preference for comitative > instrument, but no scope ambiguities arise (cf. Frey/Pittner 1998:406ff., Pittner 1999:165ff.) We have argued that the lack of scope ambiguities between subject-oriented comitative and instruments is due to the fact that these adverbials belong to the same class of adverbials and therefore can be base-generated freely with respect to each other. Nevertheless, there is a semantically motivated preference for comitative > instrument, which is not due to syntactically differentiated base positions. In Pittner (1999), I have argued that this corresponds to the greater inherence of instruments to certain actions: While any action can be carried out with nearly any person, the instruments to carry out certain actions are usually restricted to a few (such as essen ‘eat’, einen Nagel einschlagen ‘to drive in a nail’, ein Fahrrad flicken ‘to mend a bicycle etc.). Instruments are more inherent to the actions denoted by the verb (often together with the object) than comitatives and this is reflected in a slight preference to place them after subject-oriented comitatives.
4.4 Mental attitude

Mental attitude adverbials denote the attitude of one of the participants in an event, usually the subject. Interestingly, the ambiguous adverb *gerne* (‘willingly’, ‘frequently’) has no mental attitude reading if it occurs to the left of the subject as in (a):

(29) a. weil hier gerne jemand arbeitet (only frequency reading)
   because here often somebody works
   ‘because often somebody works here

b. weil hier jemand gerne arbeitet (mental attitude reading)
   because here somebody willingly/often works
   ‘because somebody works here often/willingly’

It can be concluded that mental attitude adverbials have to be c-commanded by the argument they are related to, which is usually the subject. With verbs whose highest argument is not the subject, it is the highest argument which c-commands the mental attitude adverb: 13

(30) weil wem versehentlich was rausgerutscht ist
   because him inadvertently something slipped out
   ‘because someone inadvertently said something’

If mental attitude adverbials are related to the subject they have their base position to the left of the object, cf. complex frontings:

(31) a. *den Fehler gemacht hat Peter absichtlich*
    the mistake made has Peter intentionally
‘Peter made the mistake intentionally’

b. *absichtlich* gemacht hat *Peter den Fehler*

intentionally made has Peter the mistake

Mental attitude adverbials share with instruments and comitatives the property of being related to one of the arguments, which led us to classify them as event-internal adverbials (cf. Frey/Pittner 1998: 508ff.) for which the following condition holds:

(32) Event-internal adverbials are minimally c-commanded by the argument they are related to.

As was shown in this and the preceding section this condition determines the base position of subject-oriented comitatives and instruments between subject and object and for object-oriented comitatives below the object. The base position of mental attitude adverbials is below the argument which this attitude is attributed to which is usually the subject.

4.5 Locatives

Local and temporal adverbials are considered by many authors to be similar and therefore are often treated together (e.g. Laenzlinger 1998, Haider 2000). According to the tests, however, they exhibit different base positions and can be assigned to different adverbial classes on the basis of their distribution. I will argue that canonical locatives are another instance of event-internal adverbials whereas temporal adverbials are event-related adverbials.

Locatives can relate to different kinds of semantic entities which is reflected in different base positions. First I deal with canonical locatives which are commonly assumed to localize events.

These locatives take their base position higher than the object. This is borne out by focus projection which is possible in (33a), but not in (33b):
(33)  *Was hat Hans gemacht?

what has John done

‘What did John do?’


John has in the cinema Mary kissed

‘John has kissed Mary in the garden.’

b. *Hans hat Maria im KINO geküsst.

John has Mary in the cinema kissed

This view is supported by scope data (cf. Frey 1993:194):

(34)  a. WEIL Paul zumindest einen fast überall

because Paul at least one nearly everywhere

traf

met

‘because Paul met at least one nearly everywhere’

b. WEIL Paul fast überall zumindest einen

because Paul nearly everywhere at least one

traf

met

Only (a) is ambiguous with respect to the scope of the quantified locative
due to scrambling of the object over the locative.

The theme-rheme-test points in the same direction:

(35)  Wen hat Anne in der Kantine beleidigt?

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Who did Ann insult in the canteen?

‘Who did Ann insult in the canteen?’

a. *Anne hat in der Kantine den KOCH beleidigt*

   Ann has in the canteen the cook insulted

   ‘Ann insulted the cook in the canteen.’

b. *??Anne hat den KOCH in der Kantine beleidigt*

   Ann has the cook in the canteen insulted

According to the theme-rheme-test, the locative has a base position below the subject of transitive verbs, which is corroborated by w-pronouns:

(36) *Wo hat gestern jemand den Koch beleidigt?*

   where has yesterday somebody the cook insulted

   ‘Where did someone insult the cook yesterday?’

a. *??Gestern hat in der Kantine jemand den KOCH*

   yesterday has in the canteen somebody the cook

   beleidigt

   insulted

b. *Gestern hat jemand in der Kantine den Koch beleidigt*

   yesterday has somebody in the canteen the

   Koch    beleidigt

   cook    insulted

(37) a. *Dies wird hoffentlich jemand wo*

   this will hopefully somebody somewhere
bemerken

notice

‘This will be hopefully noticed somewhere by someone’

b. ??Dies wird hoffentlich wo jemand
this will hopefully somewhere somebody

bemerken

notice

Thus we have the following order of base positions with a transitive verb:

\[ NP_{\text{Nom}} > \text{Adv}_{\text{Loc}} > NP_{\text{Akk}} \]

Taking into account verbs whose highest argument is not the subject, it becomes clear that the base position of locatives is below the highest argument, cf. focus projection and w-pronouns:

(38) weil dem Mann auf der Brücke der HUND
    because the man (DAT) on the bridge the dog
    entlief
    ran away
    ‘because the man lost his dog on the bridge’

(39) a. weil ihm in einem Park wer
    because him (DAT) in a park somebody
    entlaufen ist
    run away is

b. ??weil ihm wer in einem Park entlaufen ist
    because him somebody in a park run away is
c. *dieses Tier ist einem Wärter wo entlaufen*

this animal is a guard somewhere run away

‘This animal ran away from the guard somewhere’

d. ??*dieses Tier ist wo einem Wärter*

this animal is somewhere a guard

*entlaufen*

run away

With these two-place *sein*-verbs (‘ergative verbs’) we have this order of base positions: NP\textsubscript{Dat} $>$ Adv\textsubscript{Loc} $>$ NP\textsubscript{Nom}.

We have seen that canonical locatives are related to the highest argument. This means that these locatives do not relate to events directly, but rather to the most prominent element in them which is represented by the highest argument.

There are locatives, however, which take their base position below an object of a transitive verb which is not the highest argument. These either locate the object or are a process specification.

Object-locating locatives occur as adjuncts with verbs like *see* or as complements to verbs with the basic meaning ‘to put something somewhere’ like *verstauen, abstellen, unterbringen, verstecken* where the place is specified by a locative rather than by a directional adverbial.

(40) a. *Er hat das Auto in der GaRAge abgestellt.*

he has the car in the garage parked

‘He parked the car in the garage.’

b. *Er hat das Geschenk im SCHRANK versteckt.*

he has the present in the cupboard hid
‘He hid the present in the cupboard.’

We get focus projection in (40) which indicates that this is the base order. A canonical locative may be combined with an object-related one, with the base position of the first higher than the object, of the latter lower than the subject. In the following sentences we get focus projection:

(41) a. *Ich habe auf dem Balkon eine Palme im HOF gesehen.*

‘On the balcony, I saw a palm in the backyard.’

b. *Sie hat in dem Terminal ein Flugzeug über den WOLken gesehen.*

‘In the terminal, she saw an airplane over the clouds.’

Maienborn (2001) points out that there are locatives which do not refer to a situation as a whole but only to part of it. They can receive different interpretations, all of which are closely related to the action denoted by the verb and are very similar in this respect to manner adjuncts which apply to processes. They occur in the same base position as manner adjuncts, minimally c-commanding the verbal complex.

(42) a. *Sie haben das Hühnchen in der PFANne gebraten.*

‘They fried the chicken in the pan.’
b. *Sie haben die Gangster auf dem Motorrad*

they have the gangsters on a motorbike

*verfolgt.*

pursued

‘They pursued the gangsters on a motorbike’

We have focus projection in (42) which shows that the base position of these locatives is adjacent to the verbal complex. Moreover, like manner adverbials, this kind of locative can occur only after sentence negation. A third class of locatives are so-called frame setting locatives, which are dealt with in section 4.8.

4.6 Temporals

Focus projection shows that temporal adverbials take their base position higher than that of objects and higher than canonical locatives:

(43) a. *Hans hat am Montag in seiner Wohnung den Fussboden geschrubbt.* (wide focus)

John has on Monday in his apartment the floor cleaned

‘On Monday, Hans cleaned the floor in his apartment.’

b. *Hans hat den Fussboden am Montag geschrubbt.*

(narrow focus)

John has the floor on Monday cleaned
Scope data support this view. (44b) is ambiguous with regard to quantifier scope indicating that the local adverbial has scrambled over the temporal adverbial:

(44)  

a. weil Hans an jedem Tag in mindestens einem 

because John on every day in at least one

_Lokal_ einkehrte (\(\forall \exists\))

bar stopped off

‘because on every day John stopped off at in least one bar’

b. weil Hans in mindestens einem Lokal an jedem 

because John in at least one bar at every

_Tag_ einkehrte (\(\exists \forall, \forall \exists\))

day stopped off

There is some evidence that the base position of temporals is higher than that of the subject, cf. the position of the indefinite w-pronoun.

(45)  

a. weil morgen wer den Boden putzen 

because tomorrow somebody the floor clean

_sollte_

should

‘because tomorrow somebody should clean the floor’

b. ??weil wer morgen den Boden putzen 

because somebody tomorrow the floor clean

_sollte_

should\(^{14}\)
The scope test points in the same direction:

\[ (46) \]

\[ \begin{array}{l}
\text{a. WEIL } an \text{ fast jedem Tag mindestens einer} \\
\text{because on almost every day at least one} \\
\text{nichts tat } (\forall \exists) \\
\text{nothing did} \\
\text{‘because on almost every day at least one person did nothing at all’} \\
\text{b. WEIL mindestens einer an fast jedem Tag} \\
\text{because at least one on almost every day} \\
\text{nichts tat } (\forall \exists, \exists \forall) \\
\text{nothing did}
\end{array} \]

I conclude that temporal adverbials c-command the base position of the highest argument. This reflects the fact that they are event-related, i.e. situate events in time.\(^{15}\)

Now the question arises why locatives which are often considered to be very similar to temporals should behave differently. At this place I can only offer some speculations about this. Locatives are not necessarily related to events, but may localize only certain parts of it (cf. Wunderlich/Herweg 1991). Locatives which appear to localize whole events are related to the most prominent figure in it, the highest argument. Thus it is plausible that they are event-internal. Temporals, on the other hand, characterize whole events.\(^{16}\)

The following condition holds for event-related adverbials:

\[ (47) \]

Event related adverbials c-command the base position of all verbal arguments as well as the base positions of event-internal adverbials.
4.7  *Causals*

Causals are meant here in a broad sense and comprise all adverbials which express causal or conditional relations. Intuitively, it makes sense to say that these are event-related.

With respect to temporals, scope data suggest that they are not ordered in syntax. Since no scope ambiguity occurs in (48) both orders of the adverbials can be considered to be base generated.

(48)  

a. *WEIL wegen mindestens einem Artikel*  

because on account of at least one article  

*an fast jedem Abend Streit herrschte (∀∃)*  

on almost every evening quarrel was  

‘because there was a quarrel on account of at least one article on almost every evening’  

b. *WEIL an mindestens einem Abend wegen*  

because on at least one evening on account of  

*fast jedem Artikel Streit herrschte (∃∀)*  

almost every article quarrel was

Other tests can be applied with the same result. I take this as evidence that causals belong to the same category as temporals, namely event-related adverbials which are c-commanding the base positions of all verbal arguments.
4.8 Sentence adverbials

The position of the indefinite pronoun shows that sentence adverbials have their base positions higher than all verbal arguments.

(49)  a. weil wahrscheinlich wer schläft
      because probably somebody sleeps
      ‘because somebody sleeps probably’

      b. *weil wer wahrscheinlich schläft
      because somebody probably sleeps

Sentence adverbials are sensitive to the topic-comment-structure. Only topics may occur to the left of sentence adverbials (cf. Frey/Pittner 1998:517, Pittner 1999:175). This becomes evident with elements that cannot be a topic, since they have no referent. According to Lambrecht (1994:154ff.), topichood presupposes referentiality.

(50)  a. ??weil keiner wahrscheinlich Zeit hat
      because nobody probably time has
      ‘because probably nobody has time’

      b. weil wahrscheinlich keiner Zeit hat
      because probably nobody time has

The semantic entity that sentence adverbials relate to are propositions. These propositions contain completely specified events including their temporal specification. This is reflected in a c-command relation over the finite verb. This condition is always fulfilled in the middle field, since German is of the OV-type and all constituents in the middle field c-command the finite verb or its trace. Therefore, this condition can be violated only in complex frontings as in (a) and (b).
(51) a. *Glücklicherweise viel getanzt wird in diesem

fortunately much laughed is in this

Club

club

‘In this country there is fortunately much laughter.’

b. *Vermutlich getanzt wird heute Abend

probably danced is today evening

This evening, there will probably be dancing.’

c. Es wurde juristisch betrachtet vermutlich falsch

it was legally seen probably wrongly

entschieden

decided

‘From a legal point of view, it was probably a wrong
decision.’

d. *[Vermutlich falsch entschieden] wurde juristisch

probably wrongly decided was legally

betrachtet

seen

There are ordering restrictions between different kinds of sentence
adverbials. I take these to reflect the scope relations among these classes of
sentence adverbials, where, as a first approximation, a > b > c > d holds:

(52) a. evaluative adverbs (glücklicherweise, erfreulicherweise, ...)
b. evidentials (*offensichtlich, klarerweise, ...*)

c. epistemic adverbs (*wahrscheinlich, sicherlich, vermutlich, ...*)

d. subject-oriented adverbs (*klugerweise, arroganterweise, ...*)

Consider the following sentences:

(53) a. *dass Petra wahrscheinlich leider verreist ist*

   that Petra probably unfortunately away is

   ‘that Petra probably unfortunately is away’

b. *dass Petra leider wahrscheinlich verreist ist*

   that Petra unfortunately probably away is

   that unfortunately Petra is probably away

c. *Paul ist vermutlich laut CNN gestern*

   Paul is supposedly according to CNN yesterday

   abgereist

   left

   ‘Paul has supposedly according to CNN left yesterday.’

d. *Paul ist laut CNN vermutlich gestern*

   Paul is according to CNN supposedly yesterday

   abgereist

   left

(53a) shows that an evaluative adverbial cannot occur within c-command of an epistemic adverbial. While it makes sense to give an evaluation of a proposition which has a certain degree of probability, it seems to make no
sense to judge the probability of an evaluated proposition. Likewise, (53c) is semantically deviant, since it makes no sense to give a source for the proposition according to which the proposition is true and then to make an epistemic judgement about the proposition. The only possible interpretation is that the epistemic adverbial is used in (53c) focussing on the source alone. We think that semantic scope relations are sufficient to account for the ordering restrictions among different kinds of sentence adverbials. There is no evidence for different syntactic base positions for these classes of sentence adverbials. The ungrammaticality of (53a,c) even can be considered as counterevidence. If only surface positions matter, ungrammaticality follows. On the other hand, if (53a) could be derived from (53b) by scrambling, then the trace in the base order should give the scope option that makes sense, namely the one with scope of the epistemic over the evaluative sentence adverbial. But, as we maintain, if there are no different base positions for different kind of sentence adverbials, scope can only be calculated with recourse to the surface order, namely from left to right.

All the sentence adverbials considered so far occur before the so-called subject-oriented sentence adverbials.

(54) a. Peter hat leider arroganterweise/*arroganterweise

Peter has unfortunately arrogantly/*arrogantly

leider nicht gegrüßt.

unfortunately not greeted

‘Peter unfortunately did arrogantly not say hello.’

b. Peter hat wahrscheinlich arroganterweise/*arroganterweise

- 34 -
Peter has probably arrogantly/*arrogantly

wahrscheinlich nicht gegrüßt.

probably not greeted

‘Peter probably did arrogantly not say hello.’

The class of subject-oriented sentence adverbials stands out among the others because it has a special relation to the subject. These subject-oriented sentence adverbials give a judgement of the speaker about the subject referent with regard to its participation in the event denoted in the sentence. This special relation to the subject is reflected in the c-command relations. Subject-oriented adverbials have to occur within c-command of the subject in the surface structure.

(55) a. weil Hans arroganterweise nicht grüßte

because Hans arrogantly not greeted

‘because Hans arrogantly did not say hello’

b. ??weil arroganterweise Hans nicht grüßte

because arrogantly Hans not said hello

Ambiguous adverbs can serve as diagnostic. An adverb like dummerweise can either be evaluative (‘unfortunately’) or subject-oriented (‘stupidly’). According to my intuition, the second reading is only possible if there is an agent which c-commands the surface position of the adverb:

(56) a. weil dummerweise alle antworteten

because unfortunately all replied

‘because unfortunately all replied’

b. weil alle dummerweise antworteten
because all stupidly answered

Subject-oriented adverbials like other sentence adverbials have to c-command the finite verb, which becomes visible in complex frontings. This differentiates them from mental attitude adverbials.

(57)  

a. klugerweise/dummerweise den Brief beantwortet hat Peter

intelligently/stupidly the letter answered has Peter

‘Intelligently/stupidly, Peter answered the letter.’

b. freiwillig/gerne beim Putzen geholfen hat Peter

voluntarily/willingly with cleaning helped has Peter

gestern

yesterday

‘Peter has voluntarily/willingly helped with cleaning yesterday.’

To sum up: The strict ordering restrictions among different classes of sentence adverbials corresponds to the fact that they are not ordered by the syntax and ordering restrictions are only semantically determined.

The following conditions hold for the base position of sentence adverbials:

(58) Sentence adverbials (proposition-related adverbials):

(i) The base position of sentence adverbials c-commands the base position of all other kinds adverbials (and hence the base positions of all verbal arguments)

(ii) The base position of sentence adverbials c-commands the base position of the finite verb
A note is necessary here on the proposition-related use of local and temporal adverbials, the so-called frame adverbials. In this function, local and temporal adverbials apply to whole propositions and restrict their validity to certain times or places. In this case, they serve as topics (Chinese-style topics in the sense of Chafe) and appear to the left of all verbal arguments as well as to the left of all types of adverbials.

Often, the reference of other elements in the sentence is restricted by this type of adverbial, such as the reference of *viele Leute* (‘many people’) to America. This type of adverbial can be combined with canonical locatives and temporals:

(59)  
\begin{align*}
\text{a. } & \text{In Amerika essen viele Leute in} \\
& \text{In America eat many people in} \\
& \text{*Fastfood-Restaurants.*} \\
& \text{fast food restaurants} \\
& \text{‘In America, many people eat in fast food restaurants.’}
\end{align*}

\begin{align*}
\text{b. } & \text{Im Mittelalter tranken die Mönche während der} \\
& \text{in the Middle Ages drank the monks during the} \\
& \text{*Fastenzeit Bier.*} \\
& \text{Lent beer} \\
& \text{‘In the Middle Ages, the monks were drinking beer during} \\
& \text{Lent.’}
\end{align*}

Different frame adverbials may be combined. It appears that there is an unmarked order epistemic frame $^{20}$ > temporal frame > local frame.

(60)  
\begin{align*}
\text{weil in seinem Traum im Mittelalter}
\end{align*}
because in his dream in the Middle Ages

in Europa alle Frauen schön waren

in Europe all women beautiful were

‘because in his dream in the Middle Ages in Europe all women were beautiful’

Maienborn (1996:115f.) shows by scope data, that the position of local frames is above the base position of canonical temporal adverbials. In Frey/Pittner (1998), we came to the conclusion that frame adverbials have their base position higher than sentence adverbials. The position to the left of sentence adverbials, however, may be an effect which is due to the fact that frame adverbials usually are topics. As Frey (2003) points out, there are non-referring frame adverbials which can be no topics. These have to occur to the right of sentence adverbials:

(61) a. weil wahrscheinlich in keinem Land alle
    because probably in no country all
    Beamten korr upt sind
    officers corrupt are

    ‘because probably in no country all officers are corrupt’

b. weil in keinem Land wahrscheinlich alle
    because in no country probably all
    Beamten korr upt sind
    officers corrupt are

This suggests that frame adverbials take base positions below those of sentence adverbials and usually have to occur to the left of them only
because they are topics. This makes sense because sentence adverbials are sensitive to sentence mood (i.e. they cannot occur freely with any sentence type), whereas frame adverbials are not. Sentence mood, whether introduced by an illocutionary operator or represented in a syntactic phrase (as suggested by Rizzi 1997), is usually considered to be left-peripheral.

5 A look at other approaches

Classes of adverbials, which are primarily semantically defined, have repercussions on the syntax. As has been indicated in the beginning, there are very different conceptions as to how syntax and semantics are related in this respect.

We hope to have provided sufficient evidence now that the assumption of a completely free positioning of adverbial adjuncts can be refuted. A somewhat less extreme view close to completely free positioning is advocated by Haider (2000). He maintains that the syntax only provides potential slots for adverbial adjuncts which can be filled in by adjuncts without restrictions as long as their relative hierarchy is observed. This hierarchy is seen to be a reflex of a hierarchy of semantic types:

(62) proposition > event > process/state

A very similar view is held by Ernst (1998), whose hierarchy is a bit more elaborated and includes speech act > fact > proposition > event > specified event. Both Haider and Ernst assume that the positioning of adjuncts is grammatical as long as the hierarchy is observed. They maintain that there are no restrictions of adjunct positions relative to the arguments in the sentence.

Our findings have shown, however, that there are regularities of adverbial positioning which hold in relation to arguments. This was demonstrated with instruments, comitatives, mental attitude adverbials and locatives (cf. 4.3-
4.5. The position of adjuncts reflects their semantic relations to the sentence in intricate ways.

Another difference between the approach presented here and the approach by Ernst and Haider is that our approach allows for scrambling of adverbials, whereas Haider and Ernst have to assume that adverbials are base-generated wherever they appear. If adverbials belonging to different classes are permuted, scope ambiguities can be observed which are evidence for scrambling. The ambiguity of (b) indicates that the manner adverbial has scrambled over the temporal adverbial:

(63)  

a. \textit{WEIL} Hans \textit{an fast} jedem Tag \textit{auf mindestens}

because John on nearly every day in at least

\textit{eine Art} seinen Chef verärgert (\forall \exists)

one way his boss worries

‘because John worries his boss nearly in at least one way nearly every day’

b. \textit{WEIL} Hans \textit{auf mindestens eine Art an fast}

because John in at least one way on nearly

\textit{jedem Tag} seinen Chef verärgert (\exists \forall, \exists \exists)

every day his boss worries

No such effect occurs if adverbials belonging to the same class are permuted, as for instance instruments and comitatives. These facts support our assumption that instruments and comitatives have the same base position whereas temporal and manner adverbials belong to different classes as far as their base position is concerned. It is unclear how differences like this could be captured by the semantic hierarchy approach.
Recently, it has been maintained within a minimalistic framework, that adjuncts occur in the specifier positions of functional projections (Cinque 1999, cf. Alexiadou 1997 and Laenzlinger 1998 for similar proposals). It is assumed that there is a suitable functional projection for every semantic type of adjunct imaginable, which results in an enormous amount of functional projections. As far as the syntax-semantics mapping is concerned, the semantics is completely represented in the syntax which determines the order of adjuncts.

This is not the place to go into a detailed critique of this approach, since this has been done elsewhere (e.g. Frey & Pittner 1998, Haider 2000). I would like to point out only briefly, that the ordering restrictions among adverbials exist independently of syntactic projections. The same ordering restrictions can be observed for the modifiers within a nominal phrase.

(64)  a. the probable quick end of the war
      b. *the quick probable end of the war

This is naturally explained if there is a semantically determined hierarchy between operators, but under the assumption of syntactically fixed positioning, it leads to an enormous amount of functional projections. More importantly, however, the same ordering restrictions can be observed among arguments (cf. Shaer 2000):

(65)  a. it is lucky for us that it is probable that it is easy for John
      b. *it is probable that it is lucky that it is easy for John.
      c. the probability of the quickness of the end of the war
      d. *the quickness of the probability of the end of the war
In (a)-(d) the ordering restrictions cannot be due to functional projections which once more shows that the observed ordering restrictions exist independently of functional projections. Taken together, these facts provide strong evidence that the ordering restrictions between nominal modifiers and arguments which correspond to the scope relations between adverbials are semantically motivated.

If these ordering restrictions exist independently from syntactic configurations it is not clear why they have to be duplicated by means of functional projections in syntax leading to an enormous inflation of functional projections and moreover to a semantification of syntactic configurations. It has been claimed that functional projections provide a more restrictive way of capturing adverbial positions. But if it is taken into account that certain adverbials can appear in several places without any movement of other elements involved then there are two possibilities: either a respective functional projection to host these adverbials has to be assumed in all these places or these facts are captured by means of traditional adjunction. But if traditional adjunction cannot be done away with then an approach which explains all adverbial positions by adjunction is more economical.

If this is correct, then it is not necessary to explain the ordering restrictions by hierarchically ordered functional projections. We claim that functional projections are not needed in order to capture the regularities of adverbial positioning.

6 Mirror images: adverbials in final position in English and in the German extraposition field
For the German middle field, it holds that elements have scope over elements to their right.
However, scope is not in all languages calculated from left to right, there are environments where the order is reversed and scope is calculated from right to left. This is also the case in English in postverbal position and in the extraposition field in German.
Let us first look at English. Quirk/Greenbaum (1973:241) note that the normal order of adverbials in postverbal position is instrument/manner > locative > temporal adverbial:

(66) He was working with his shears in the garden the whole morning.

Also, it can be observed that in the English postverbal position the normal order is locative > frame adverbial:

(67) Many people are eating in fast food restaurants in America.

These examples must suffice here to show that the normal order of adverbials in English postverbal position is reversed in comparison with the German middle field.21 Also for the German extraposition field, there is considerable evidence that in this field the base order of adverbials is reversed. This becomes evident with adverbial clauses. In Pittner (1999), I have shown that the base positions in the middle field apply to adverbial clauses as well. In the extraposition field, however, the order of base positions is reversed. Let us take as an example an adverbial clause which is ambiguous between a process-related and an event-related reading: in (a) the event of telling that he is a spy will come about quickly whereas in (b) the process of telling is going on quickly:

(68) a. Hans wird Maria erzählen, dass Peter ein Spion ist, 
Hans will Mary tell that Peter a spy is

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so schnell er kann. (event)
as fast he can.
‘Hans will tell Mary that Peter is a spy as fast as he can.’

b. Hans wird Maria erzählen, so schnell er kann, dass Peter ein Spion ist. (process)
Hans will Mary tell as fast he can that Peter a spy is.

In this respect the question arises, how the reversed order can be accounted for. It has to be noted that an assumption of right adjunction would explain these orders. Also the scopal relations between adverbials are as expected under an assumption of right adjunction: adverbials to the right have scope over adverbials to their left.

(69)  a. He helped his friend frequently willingly (frequently has scope over willingly)

b. He attended classes at at least one university nearly every week (nearly every week has scope over at least one university)

Although under the assumption of right adjunction the order of adverbials and the scopal relations between them are as expected, objections have been raised against right adjunction both for empirical and conceptual reasons. On conceptual grounds, it has been argued that syntactic structures in general can only be right-branching which rules out right adjunction as a possibility (e.g. Kayne 1994, Haider 1993).
Larson (1988) used binding data and other indicators for c-command-relations like negative polarity in order to establish that postverbal adverbials are c-commanded by the object and therefore cannot be right-adjointed:

(70)  
   a. John visited every colleague\textsubscript{1} on his\textsubscript{1} birthday.  
   b. Eve insulted no one for any reason.

Larson’s approach, however, cannot capture the scope data exemplified in (69). Thus, we are faced with a dilemma: scope and the order of adverbials suggest c-command from right to left which would be expected under a right-adjunction analysis, whereas binding data and negative polarity suggest c-command from left to right, hence right-branching structures. So if one does not want to give up the well-founded idea that binding presupposes a c-command relation, the solution to this puzzle has to be looked for elsewhere.

In order to capture the order of adverbials Cinque has made an innovative suggestion. According to him, adverbials are base-generated in the order which corresponds to the scopal relations exemplified in (69). He assumes a new movement called intraposition which moves constituents around an adverbial. By this movement, first (b) and subsequently (c) is derived from (a):

(71)  
   a. He has [frequently [willingly [helped his friend]]]  
   b. He has [frequently [[helped his friend], willingly t\textsubscript{1}]]  
   c. He has [[[helped his friend], [frequently t\textsubscript{1}], willingly t\textsubscript{2}]

Since this is an innovation, it is not clear at all which restrictions an operation as intraposition is subject to. But at any rate, this kind of movement cannot capture binding data correctly and therefore is no solution for the puzzle outlined above.

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There are two different ways out of the dilemma: either the connection between binding and c-command is given up. This is the way Ernst (2002) is going. Another way has been pointed out in Frey /Pittner (1999), where it is suggested that the adverbials in final position cannot be interpreted semantically. Their interpretation becomes possible by way of “modification markers” which link the adverbials to their respective preverbal place, i.e. the constituent modified by them. The order of adverbials is explained by a condition of non-crossing lines of the modification markers. Thus, the order and scopal relations of adverbials as well as the binding facts could be captured, the first by the modification markers, the latter by the c-command relations.

Whatever the best solution to the problems outlined in this section will turn out to be, the parallels between the English postverbal position and the German extraposition field give rise to the expectation that the explanation for the order of adverbials in both these environments will be the same.

7 Summary

By applying the tests for identifying base positions to adjuncts we tried to establish there are five classes of adverbial adjuncts as far as their base positions are concerned: (I) sentence adverbials, (II) frame adverbials, (III) event-related adverbials, (IV) event-internal adverbials and (V) process-related adverbials. Within these classes, there may be semantic preferences for a certain order but this order is not syntactically determined. The base position of these classes and their c-command-relations reflect their semantic relations to the rest of the sentence.

(72) Base positions of adverbials:

(i) sentence adverbials: c-command the finite verb and the base positions of all adverbials adjuncts and verbal arguments

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(ii) **frame adverbials**: c-command the base positions of event-related adverbials

(iii) **event-related adverbials**: c-command the base position of the highest argument and the base positions of event-internal adverbials (e.g. time, cause)

(iv) **event-internal adverbials**: they are minimally c-commanded by the argument they are related to, i.e. no other argument can intervene (e.g. instrument, comitative, mental attitude adverbials)

(v) **process adverbials**: c-command minimally the verb or "verbal complex" (manner)

Our findings are evidence for a close connection between syntactic base position and semantic interpretation of adverbials. They also suggest that adverbial modifiers do not uniformly relate to an event variable, but that they relate to very different kinds of semantic entities, e.g. processes (as parts of events), partial events, events, propositions and speech acts.

As far as the syntax-semantics interface is concerned, following overall picture emerges. Syntax itself imposes no restrictions on adverbial adjunction, adverbials can be adjoined freely. The semantic entities that adverbials apply to, however, are accessible only in certain structural configurations, resulting in base positions for the various types of adverbials. Thus, the base positions which were advocated in this paper are due to the interplay of syntax and semantics and reflect the mapping mechanism between syntactic and semantic structures.

Because the ordering restrictions for adverbials are semantically based we expect that the conditions for the base positions hold not only for German, but in other languages as well. Obvious differences in adverbial placement are due to different sentence structures (cf. Frey/Pittner 1999, Frey 2003 for
a comparative study). This promises to be a worthwhile topic for further study.

Literature


Ernst, T. 1998. „Scope Based Adjunct Licensing.“ In Proceedings of NELS 28, Amherst: GLSA.


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1 This paper is based on earlier work done with Werner Frey. I would like to thank the editors as well as two anonymous reviewers for their helpful comments.
2 This has been very intensively studied for wieder (e.g. von Stechow 1997, Fabricius-Hansen 2001, Pittner 2003 and the references given there).
3 Because of their parenthetical nature, there is arguably no base position for speech act-oriented adverbials (cf. Pittner 1999 for a discussion of speech act adverbials.)
4 Often it is called the external argument, but for German it can be argued that this argument is part of the verbal projection and therefore not “external” to it. (Haider 1993:142ff.)
5 Capitals indicate accents.
6 In these and similar following examples the accent is placed on the complementizer or on the verb, since accented arguments may lead to additional scopus options. The elements fast (‘nearly’) and mindestens (‘at least’) make sure that there is a quantificational reading of the quantifiers.
7 It is important that the judgements apply to sentences with an accent on the finite verb which is indicating Verum-focus, i.e. focus on the truth of the proposition (usually occurring in contexts where the truth is at debate).
8 It can be argued that resultatives and directional adverbials are part of the verbal complex due to a process of integration as described by Jacobs.
(1993). According to him, constituents may be either informationally autonomous with regard their head or integrated into it. Jacobs notes that integrated elements may contribute to the valency of their head and are focus exponents. The role integration plays for the formation of the verbal complex has yet to be explored, cf. also section 4.2.


10 Any element intervening the adverbial and the verb prevents a manner interpretation of the adverb, cf. the following example with a modal particle:

(i) Du könntest das Fenster langsam mal zumachen.
This supports the view that manner adverbials minimally c-command the verbal complex.

11 Besides the position, intonation has also a disambiguating effect because event-related adverbials usually remain unaccented. Their accentuation would require very special contexts, for instance phonetic correction.

12 Note that the PPs in applicative constructions, which look very similar to instruments are not adjuncts but arguments of their verbs and have their base position to the right of the object:

(i) Er hat die Wand mit FARbe beschmiert. (wide focus)
he has the wall with colour covered
‘He covered the wall with colour.’

(ii) Er hat mit Farbe die WAND beschmiert. (narrow focus)
he has with colour the wall covered

13 If mental attitude adverbials occur above all arguments the attitude might be attributed to then it is attributed to some other person which is present in the context.

(i) weil alle Schüler absichtlich fehlten
because all students intentionally were absent

(ii) weil absichtlich alle Schüler fehlten

In (i) it is intentional of all students that they are not present, whereas in (ii) the intention has to be attributed to somebody else.

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Not for all speakers (b) is clearly worse than (a). But it is certainly worse than a corresponding example with an instrument instead of a temporal adverbial. This shows that temporal adverbials have base positions higher than instruments at any case.

(i). weil wer mit dem Besen den Boden kehren sollte
because somebody with the broom the floor sweep should
‘because somebody should sweep the floor with the broom’

Temporal adverbials relating to the reference time behave like frame-setting adverbials, cf. 4.8.

A note is necessary here on frequency adverbials. For frequency adverbials it can be argued that they can take their base positions at different places (cf. Frey/Pittner 1998:515f., Frey 2003) which corresponds with their property of taking different parts of events into their scope.

Frey (in press) provides ample evidence for a structural position reserved for topics which is located to the left of sentence adverbs. As a consequence of this, adverbials can appear in front of sentence adverbs if they are topics.

(i) Peter wird auf diese Weise wahrscheinlich seine Reisen finanzieren.
Peter will in this way probably his trips pay for.
‘In this way, Peter will probably pay for his trips.’


Cf. the definition of topic by Chafe (1976:50): "What the topic appears to do is to limit the applicability of the main predications to a certain restricted domain [...] the topic sets a spatial, temporal, individual framework within which the main predications holds"


In this respect it is interesting to note, that in postverbal position in English not all the observed orderings are reversed. One exception is the
relative order of different directional adverbials, which I explained as
iconically motivated:
(i) They carried the man from the third floor over the staircase to the ground
floor.
?They carried the man to the ground floor over the staircase from the third
floor.

This supports the view that there is iconic motivation for this order and
therefore it cannot be reversed.

22 The idea goes back to Chomsky (1995) who remarks that phrases on the
right end of the clause “might be supported by empty heads below the main
verb”. Haider (2000) assumes that these empty heads are mere structural
licencers which cannot be interpreted semantically.
23 The idea resembles the concept of scope markers developed by Williams
(1986).