

Syntactic conditions on adjunct classes*

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Abstract

The paper claims that in German and English five major classes of adjuncts have to be distinguished syntactically: (i) sentence adjuncts, (ii) frame adjuncts, (iii) event-external adjuncts, (iv) event-internal adjuncts, (v) process-related adjuncts. Each of these is assigned a base position defined by distinct structural requirements that the elements of the given class have to meet with respect to the positions of certain other elements of the sentence.

Approaches which try to describe the distribution of adjuncts just by principles of scope are rejected as incomplete. However, the proposed syntactic requirements are not as rigid as other approaches require, where there is just one possible base position for a given adjunct. Rather, in the approach advocated here, the syntactic constraints for a base position may be fulfilled in different places.

In addition to the base positions, adjuncts may occur in a number of derived positions. In particular, it is argued that adjuncts can undergo scrambling in the middle field of a German clause.

1. On base positions in German

It is well-known that in the middle field of a German clause, constituents may appear in various orders. Nevertheless, most syntacticians working on German agree that verbal arguments have base positions. Other serializations are derived from the base serialization by scrambling. Some of the tests which have been argued to reveal the base positions of arguments are the following:

(I) Existentially interpreted *w*-phrases

W-indefinites which have a non-specific existential reading resist scrambling in German. Therefore, they constitute a good means to determine base positions:

- (1) a. *weil jemand was lesen will*
because someone something (or other) read wants
'because someone wants to read something'
b. **weil was jemand lesen will*

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(II) Scope

There are serializations of quantified arguments of a German clause which give rise to scope ambiguities, and there are serializations which yield only one reading. In Frey (1993) these phenomena are accounted for by the following principle:

(2) Scope Principle:

A quantified expression α can have scope over a quantified expression β if the head of the local chain of α c-commands the base position of β .

For our purposes, it is sufficient to consider the chains induced by scrambling in the middle field as instances of local chains. Consider the following examples:¹

- (3) a. *Gestern HAT er mindestens einer Dame fast jedes*
 yesterday has he at least one woman-DAT almost every
Gemälde gezeigt. (only $\exists\forall$)
 painting-ACC shown
- b. *Gestern HAT er mindestens ein Gemälde₁ fast jeder*
 yesterday has he at least one painting-ACC almost every
Dame t₁ gezeigt. ($\exists\forall$ or $\forall\exists$)
 woman-DAT shown

It is the scrambling trace in (3b) that gives rise to the reading which does not correspond to the surface serialization of the quantified phrases.

(III) Principle C effects

An R-expression inside a preposed complex constituent in the prefield of a German clause may give rise to a Principle C violation with a coindexed pronoun in the middle field. This arises if the pronoun c-commands the base position of the phrase in the prefield because after reconstruction of the preposed phrase, the R-expression is in the c-command domain of the pronoun:

- (4) a. *[Peters₁ Mutter]₂ hat t₂ ihm₁ sehr geholfen.*
 Peter's mother-NOM has him a lot helped
- b. **[Peters₁ Mutter]₂ hat er₁ t₂ sehr geholfen.*
 Peter's mother-DAT has he a lot helped

Phenomena like the ones in (I)–(III), which may be used to determine the base positions of constituents in the German middle field, have until re-

cently only been studied with respect to arguments. Frey and Pittner (1998) however use such constructions to determine whether adjuncts have base positions in German.

The issue of base positions is – language-independently – controversial with respect to adjuncts. Basically, there are two major approaches. On the first approach, it is argued that adjuncts are freely generated in positions adjoined to verbal and functional projections (e.g. Hetland 1992; Zwart 1993; Neeleman 1994; Haider 2000; Ernst 2002). Restrictions on adjunct placement are considered to be of a semantic nature. On the other approach, syntax imposes strict ordering conditions on adjuncts. Adjuncts are located in the specifier position of designated functional projections (e.g. Cinque 1999). For every type of adjunct, there is a functional projection which hosts exactly this adjunct type.

In the following, I will argue for a theory which is in between these two approaches. According to the view defended here, syntax does indeed regulate the distribution of adjuncts, thus defining five **classes** of adjuncts. However, syntax is not sensitive to what we refer to as adjunct **types** that are more or less defined on the basis of semantic properties, cf. the list immediately below. Moreover, there is some freedom in where the base position of an adjunct has to be.

I will proceed in the following way. I will first look at the behaviour of an adjunct class in German by using the above-mentioned tests. I will then formulate a syntactic condition for this adjunct class. In a next step, I try to show that the condition can be fruitfully applied to English. The following types of adjuncts, which will be grouped into the different classes, are considered:

- sentence adjuncts like *fortunately, apparently, presumably*
- subject-oriented sentence adjuncts like *stupidly*
- frame adjuncts like *in the Middle Ages, by then*
- domain adjuncts like *professionally*
- causal adjuncts, conditionals, concessives
- locative, temporal and instrumental adjuncts
- mental-attitude adjuncts like *willingly*
- frequency adjuncts like *always*
- manner adjuncts like *carefully*.

2. Sentence adjuncts and frame adjuncts

Let us start with sentence adjuncts (SADJs). The term ‘sentence adjunct’ is used here as referring to those adjuncts by which the speaker evaluates the proposition expressed by the clause (cf. Grundzüge 1981 for example). This means that, for example, temporal or causal adjuncts do not belong to the class of sentential adjuncts. Examples of SADJs are rather: evaluatives (e.g. *erstaunlicherweise* ‘surprisingly’), evidentials (e.g. *offensichtlich* ‘obviously’), epistemic adjuncts (e.g. *wahrscheinlich* ‘probably’).

At first glance, it seems that a SADJ can appear everywhere in the German middle field:

- (5) *weil (anscheinend) Hans (anscheinend) Maria (anscheinend)*
 because (apparently) H. (apparently) M. (apparently)
einladen wird
 invite will

Data such as these have led different authors to claim that SADJs can be base-generated in any position in the middle field (e.g. Hetland 1992; Laenzlinger 1998).

A closer look, however, reveals that there are severe restrictions on the relative position between SADJs and other constituents:

- (6) a. **weil fast jeder vermutlich das Buch entleihen möchte*
 because nearly everyone probably the book to borrow wants
 b. *weil vermutlich fast jeder das Buch entleihen möchte*
 c. **Hans ist wegen was leider böse.*
 Hans is for some reason or other unfortunately angry
 d. *Hans ist leider wegen was böse.*

In Frey (2000), it is argued that in German there is a designated position for aboutness topics immediately above the base position of SADJs. This position belongs to the middle field, i.e. it follows the complementizer in verb-final clauses with verb-end and the finite verb in V2-clauses. Two of the different phenomena which show that topics occurring in the middle field have to occur in this position are the following:

- (7) *Da wir gerade von Hans sprechen.*
Since we right now of H. speak ‘Speaking about Hans’
 a. *Nächstes Jahr wird den Hans_i erfreulicherweise eine vornehme*
 Next year will the-ACC H. happily a fine
 Dame t_i heiraten.
 lady-NOM marry.
 b. *#Nächstes Jahr wird erfreulicherweise den Hans eine vornehme*
 Dame heiraten.
- (8) a. *Sein_i Vater wird dem Otto_i wahrscheinlich das Auto ausleihen.*
 His father will the-DAT O. probably the car lend
 ‘Probably, Otto’s father will lend him the car.’
 b. **Sein_i Vater wird wahrscheinlich dem Otto_i das Auto ausleihen.*

The context in (7) requires that the object *Hans* has to be an aboutness topic in the utterance which follows. The infelicity of (7b) shows that under such circumstances the item in question has to precede a SAdj. The examples in (8) contain cataphoric pronouns. According to Kuno (1972) and Reinhart (1995), cataphoric pronouns can corefer only with topics. Under this assumption, (8a, b) also show that a topic has to be positioned in front of a SAdj.

On the other hand, the ungrammaticality of (6a, c) shows that a phrase which cannot be a topic because of its non-referential status (e.g. *fast jeder* ‘nearly everyone’, *wegen was* ‘for some reason or other’) has to follow a SAdj. This is further illustrated by the following examples:

- (9) a. **weil zu keiner Zeit anscheinend jemand davon gewußt hat*
 since at no time apparently anyone of that known has
 b. *weil anscheinend zu keiner Zeit jemand davon gewußt hat*
 c. **Hans hat an fast jedem Ort erfreulicherweise Bewunderer.*
 H. has in nearly every place fortunately admirers
 d. *Hans hat erfreulicherweise an fast jedem Ort Bewunderer.*

In sum, the examples considered so far show that in the middle field a topic has to occur in front of a SAdj and that the phrases in front of a SAdj have to be a topic.² It follows that the base positions of the arguments (cf. (6a, b)), causal adjuncts (cf. (6c, d)), temporals (cf. (9a, b)) or locatives (9c, d)) are c-commanded by a SAdj.

There is another restriction on the distribution of SAdJs. It is possible to move a complex verbal projection to the prefield of a German clause (so called VP-fronting). Such a constituent cannot contain a SAdj:

- (10) **[Glücklicherweise viel gelacht]*₁ *wird*₂ *in diesem Land* *t*₁ *t*₂.
 luckily a lot laughed is in this country
 ‘Luckily people laugh a lot in this country.’

This can be related to the fact that a SAdj has scope over all the temporal information of a clause, as illustrated by the following sentence:

- (11) **Gestern hat Otto bedauerlicherweise gewonnen, aber heute bin ich*
 Yesterday has O. unfortunately won, but today am I
froh darüber.
 glad about it

This sentence cannot express that yesterday the speaker regretted that Otto has won, but today he is glad about it. (11) is contradictory because the regret is not temporally restricted.

Scope relations in semantics correspond to c-command relations in syntax. The finite verb is one of the representatives of the temporal information of the clause. The semantic relation between a SAdj and the temporal information therefore is reflected by the requirement that a SAdj has to c-command the finite verb. This explains the ungrammaticality of (10). The SAdj in (10), being part of the fronted VP, does not c-command the finite verb.

Before we state the restriction for the position of a SAdj, let us have a look at frame adjuncts. Frame-setting adjuncts restrict the claim which the speaker makes by his assertion. An example containing a frame adjunct is the following (Maienborn 2001):

- (12) *da ich in Deutschland weltberühmt bin* (H. Juhnke)
 since I in Germany world-famous am

In this sentence, the claim for the truth of the proposition “I am world-famous” is restricted to a certain spatial region.

Frame adjuncts are often considered topics (e.g. Chafe 1976). But it is clear that they have to be differentiated from aboutness topics (cf. e.g. Jacobs 2001). In fact, frame adjuncts that are non-referential in nature (e.g. *in keinem Land* in (13)) have to follow a SAdj, i.e. they cannot occur in the topic position of the German middle field (Frey 2000):

- (13) a. **Otto ist in keinem Land erstaunlicherweise sehr berühmt.*
 O. is in no country surprisingly very famous
 b. *Otto ist erstaunlicherweise in keinem Land sehr berühmt.*

(13b) shows that the base position of a frame adjunct is below that of a SAdj. This is confirmed by the following data:

- (14) a. *[In Peters₁ Firma] entscheidet er₁ offensichtlich allein über die Ausgaben.
 In Peter's company decides he apparently alone about the expenses
 b. [In Peters₁ Firma] entscheidet offensichtlich er₁ allein über die Ausgaben.

In (14a) there is a Principle C violation. The R-expression occurs inside a frame adjunct which is situated in the prefield. The coindexed pronoun occurs in front of a SAdj, i.e. it is a topic. In (14b) the pronoun occurs to the right of the SAdj, it is not a topic. In this case, we do not find a Principle C violation with the R-expression contained in the preposed frame adjunct. These data follow immediately if the base position of a frame is below that of a SAdj (and higher than the base position of the subject):

- (14') a. *[In Peters₁ Firma]₂ entscheidet er₁ offensichtlich t₂ t₁ allein über die Ausgaben.
 b. [In Peters₁ Firma]₂ entscheidet offensichtlich t₂ er₁ allein über die Ausgaben.

If a frame adjunct is referential it may be positioned in the topic field above the SAdJs. According to Frey (2000), this means that an appropriate frame adjunct can become an aboutness topic:

- (15) Otto ist [in Deutschland]₁ erstaunlicherweise t₁ sehr berühmt.
 O. is in Germany surprisingly very famous

Above, we observed that a SAdj is outside the scope of the temporal information of the clause. What about frame adjuncts in this respect? The following example shows that a frame adjunct can be in the scope of tense:

- (16) Im 16. Jahrhundert haben in Deutschland Mönche viel Bier getrunken.
 In.the 16th century have in Germany monks a lot of beer drunk

The frame adjunct *in Deutschland* restricts the domain of the generic NP *Mönche*. The locative frame itself is restricted by the temporal frame. The

sentence refers to the monks who lived in the region of 16th century Germany. It does not refer to the monks who lived in the region covered by Germany nowadays.

The tense information on the verbal form locates the Topic Time³ with respect to the Speech Time (Klein 1994). In (16), the topic time is characterized by the temporal frame adjunct. Therefore, (16) shows that the locative frame is in the scope of the temporal information of the verb and not the other way round. Because frame adjuncts do not have to have scope over tense, they do not have to c-command the finite verb. Therefore, in contrast to a SADJ (cf. (10)), a frame adjunct can appear inside a verbal projection in the prefield of a German clause:

- (17) [*In Deutschland viel Bier getrunken*] *wurde bedauerlicherweise*
 in Germany a lot of beer drunk was unfortunately
damals.
 at that time
 ‘In Germany people unfortunately drank a lot of beer at that time.’

Let us now compare the base position of a frame adjunct with the base positions of the arguments. The following example shows that a frame adjunct is base-generated higher than arguments:

- (18) **dass wer in diesem Dorf weltberühmt ist*
 that someone in this village world-famous is

It can also be shown that a frame adjunct is generated higher than, for example, the event-external adjuncts, which will be discussed in the next section. The following sentence (with Verum Focus, cf. note 1) illustrates this with respect to a causal adjunct:

- (19) a. *Eva IST wegen mindestens einem Lied in fast jedem Land*
 E. is for at least one song in nearly every country
weltberühmt. (∃∀ or ∀∃)
 world-famous
 b. *Eva IST in mindestens einem Land wegen fast jedem Lied*
weltberühmt. (only ∃∀)

Let us now formulate the constraints for the base position of a SADJ and of a frame adjunct in German:

(20) **SADJs**

The base position of a SADJ has to c-command

- (i) the base positions of all arguments and of all other adjuncts and
- (ii) the base position of the finite verbal form.

(21) **Frame adjuncts**

The base position of a frame adjunct c-commands the base positions of all arguments and of all remaining adjunct types except SADJ.

(21) is not fully justified yet. However, from the considerations in the next section, it will follow that the data in (19) already show that frames c-command the base positions of *all* adjunct types except SADJ.

It can easily be shown that in German the conditions in (20) hold for all the three subtypes of SADJs mentioned at the beginning of this section. There are ordering restrictions between the subtypes of SADJs (cf. e.g. Cinque 1999; Ernst 2002). These restrictions can be justified in purely semantic terms (cf. e.g. Ernst 2002). Therefore, it is questionable whether these restrictions have any syntactic encoding. I will come back to this question in the next section.

We can check now whether a condition like (20) also holds for English. We find the following distribution of a SADJ (disregarding the case in which the SADJ follows the sentence with ‘comma intonation’):

- (22) a. *(Unfortunately) She (unfortunately) will (unfortunately) be (*unfortunately) talking (*unfortunately) about this subject (*unfortunately).*
- b. *(Unfortunately) She (unfortunately) talked (*unfortunately) about this subject (*unfortunately).*

Nowadays, it is commonly assumed that the subject of an English clause is moved to the surface position from its base position inside the verbal projection. Furthermore, most syntacticians assume that a finite auxiliary in English is base-generated in a V-position and moved to the I-position.⁴ A finite main verb, however, is not moved to I.

- (23) a. $[_{IP} She_1 will_2 [_{VP} t_2 [_{VP} be [_{VP} t_1 talking\ about\ this\ subject]]]]]$
- b. $[_{IP} She_1 [_{VP} t_1 talked\ about\ this\ subject]]]$

We can indicate these assumptions for (22) as follows:

- (22') a. (*Unfortunately*) [_{IP} *She*₁ (*unfortunately*) [_{VP} *will*₂ (*unfortunately*) [_{VP} *t*₂ *be* (**unfortunately*) [_{VP} *t*₁ *talking* (**unfortunately*) *about this subject* (**unfortunately*)]]]]]
- b. (*Unfortunately*) [_{IP} *She*₁ (*unfortunately*) [_{VP} *t*₁ *talked* (**unfortunately*) *about this subject* (**unfortunately*)]]]

The sentence final occurrence of the SADJ will be commented on in Section 8. The remaining distribution patterns in (22') are immediately explained by (20). In (22a', b), all occurrences of the SADJ in front of the main verb fulfil condition (20i). In (22b'), these occurrences also c-command the finite verb, i.e. they fulfil (20ii). In (22a'), however, only the first three occurrences of *unfortunately* c-command the base position of the finite verb.⁵ The occurrence of the SADJ right after the main verb in (22a') and (b) neither fulfils condition (i) nor condition (ii). Due to the binary right-branching structure of the English clause (Haider 1993; Kayne 1994), the SADJ in this position neither c-commands the subject nor the finite verb.

Note that according to (20), all the admissible positions of the SADJ in (22) are base positions of the adjunct. In all these positions, the SADJ satisfies the imposed requirements.

According to (20i), a SADJ has not only to c-command the base positions of the arguments but also the base positions of other adjuncts. This explains, for example, the contrast between (24a) and (24b):

- (24) a. *John fortunately will therefore have read the book.*
 b. **John therefore will fortunately have read the book.*
 c. *John therefore will have read the book.*
 d. *John will fortunately have read the book.*

In (24b), the SADJ does not c-command the causal adjunct. Note that the positions which the causal adjunct and the SADJ occupy in (24b) are in principle possible for these adjuncts (cf. (24c, d)). But if both co-occur in a clause the SADJ has to precede.

The same can be shown with respect to a SADJ and a frame adjunct. The temporal adjunct in the following examples characterizes the topic time, i.e. it is a frame. If a SADJ co-occurs with such a temporal adjunct, then the SADJ has to c-command the temporal frame as predicted by (20i), although the positions involved in (25b) are possible for these adjuncts, cf. (25c, d):

- (25) a. *John probably has now read four books.*
 b. **John now has probably read four books.*
 c. *John has probably read four books.*
 d. *John now has read four books.*

3. Event-external adjuncts and event-internal adjuncts

With regard to their syntactic behaviour, many authors place temporal, causal, purpose, local and instrumental PP-adjuncts together into one class, e.g. Cinque (1999), Ernst (2002), Haider (2000). According to Ernst (2002) for example, they are not ordered with respect to each other because they are without scope requirements. According to Cinque (1999), they are unordered because they do not occupy the specifier positions of distinct functional projections above VP, in contrast to AdvPs proper. Neeleman (1994) and Zwart (1993) state that temporal and locative adjuncts may adjoin to all maximal projections within the clause. Usually, these adjuncts are all considered to be of the same semantic type. It is assumed that they all are predicated on the event-variable which is part of the argument structure of the verb. However, in the following, I will argue that it is inappropriate to treat all these adjunct types alike.

Let us first investigate which base position a locative adjunct occupies. In the following examples, test (I) of Section 1 is applied to a locative adjunct and the subject:

- (26) a. *weil wer wo das Buch verloren hat*
 since someone somewhere the book lost has
 b. **weil wo wer das Buch verloren hat*

These sentences show that a locative adjunct is base-generated below the subject position. Next, the base position relative to the object has to be determined:

- (27) a. *Peter hat heute im Hörsaal wen beleidigt.*
 P. has today in the lecture hall someone offended
 ‘Peter offended someone in the lecture hall today.’
 b. ??*Peter hat heute wen im Hörsaal beleidigt.*
 c. *Er HAT in mindestens einem Park fast jede Dame geküßt.* ($\exists\forall$)
 He has in at least one park almost every woman kissed
 d. *Er HAT mindestens eine Dame in fast jedem Park geküßt.*
 He has at least one woman in almost every park kissed ($\exists\forall$ or $\forall\exists$)

The data in (27) show that locatives are generated above the base position of the object.

In German, there are verbs which take non-subjects as the structurally highest argument. For example, it can be shown that, in (28), the dative is base-generated higher than the nominative:

- (28) *weil einem Polizisten ein Häftling entlaufen ist*
 since a policeman-DAT a prisoner-NOM ran away is
 ‘because a prisoner ran away from a policeman’

The following data demonstrate that in such sentences the locative is base-generated below the dative and above the nominative:

- (29) a. *weil wem auf der Brücke ein Häftling entlaufen ist*
 since someone-DAT on the bridge a prisoner-NOM ran away is
 b. **weil einem Polizisten wer auf der Brücke entlaufen ist*

On the basis of this, the condition for locative or temporal adjuncts will be formulated not with respect to the subject but with respect to the highest ranked argument.

Let us now consider instrumentals. With the same test, it can be shown that, with respect to the arguments, they are positioned like locatives:

- (30) a. *weil wer mit was den Tisch beschädigt hat*
 because someone with something the table damaged has
 ‘because someone damaged the table with something’
 b. **weil mit was wer den Tisch beschädigt hat*
 c. *da Otto mit was wen am Kopf getroffen hat*
 since O. with something someone on the head hit has
 d. ??*da Otto wen mit was am Kopf getroffen hat*

With a regular transitive verb like *beschädigen* ‘damage’ the base position of an instrumental is located between the base position of the subject and the base position of the object.

Let us now see how these adjuncts behave with respect to each other:

- (31) a. *Er HAT mit mindestens einer Maschine in fast jedem Haus*
 He has with at least one machine in almost every house
gearbeitet. (only $\exists\forall$)
 worked
 b. *Er HAT in mindestens einem Haus mit fast jeder Maschine*
gearbeitet. (only $\exists\forall$)

- (32) a. *Er hat gerade wo mit was viel Geld*
 He (has) right now somewhere with something much money
verdient.
 earned
- b. *Er hat gerade mit was wo viel Geld*
 He (has) right now with something somewhere much money
verdient.
 earned

(31) shows that both orders of a quantified locative and a quantified instrumental adjunct are unambiguous. (32) shows that both orders of a locative *w*-indefinite and of an instrumental *w*-indefinite are grammatical. Thus, the data show that instrumentals and locatives are unordered with respect to each other. Therefore, it is proposed in Frey and Pittner (1998) that they belong to the same class of adjuncts. With the same tests it can be shown that other adjunct types belong to this class, e.g. benefactives.

The members of the class are referred to as event-internal adjuncts and they have to fulfil the following requirement:

(33) **Event-internal adjuncts**

The base position of an event-internal adjunct α is minimally c-commanded by the base position of the highest ranked argument β , i.e. there is, modulo adjuncts of the same class, no γ whose base position is c-commanded by β and c-commands α .

The data in (31) and (32) show that (33) is the only requirement syntax imposes on these adjuncts, i.e. the syntactic component does not differentiate between the members of this class. As a consequence, if the semantics interprets a sequence of adjuncts belonging to this class, it is only the surface order which is of relevance.

Let us assume that the same is true for the class of SADJ, i.e. that the syntactic component treats all SADJs on a par. We can then explain a well-known fact about SADJs: different SADJ may appear in one clause, but then they have to obey certain ordering restrictions. As mentioned in Section 2, these ordering restrictions are semantically motivated.⁶ Disregarding the ordering gives rise to ungrammaticality. The reason is the following: because syntax does not order SADJs with respect to each other, there is no underlying order in addition to the surface serialization. Therefore, there can be no reconstruction for the purpose of interpretation. The semantic component can only interpret the SADJs in the given order.⁷

Let us now come back to locatives. There is a complication which we must address. As we have already seen in example (12), a locative PP can

also play the role of a frame adverbial (Maienborn 2001). We expect that locatives as frames and locatives as event-internal adjuncts have different base positions:

- (34) a. *weil jeder wo die Fußballübertragung angeschaut hat*
 since everyone somewhere the soccer broadcast seen has
 b. *weil wo jeder die Fußballübertragung angeschaut hat*
 c. **In Peters₁ Büro las er₁ den Artikel durch.* (event-locating
 interpretation of the PP)
 In Peter's office read he the article through
 d. *In Peters₁ Firma ist er₁ der Schwarm aller reiferen Damen.*
 In Peter's company is he the heart-throb (of) all mature women

The sentences (34a, b) have different interpretations. The first sentence says that everyone saw the soccer broadcast somewhere. Here *wo* is an event-situating locative adverbial. The second sentence does not have this interpretation. Rather, it says that there is a place such that everyone who is somehow related to that place saw the soccer broadcast. Note that the difference in meaning between (34a) and (b) is not just a matter of scope. In (34b), the locative PP restricts the domain of quantification of the universal quantified subject. This is a typical effect of a frame adverbial. As a frame adjunct, a locative has to obey condition (21) and as an event-internal adjunct, it is subject to condition (33). These findings are confirmed by (34c, d). In (34c) the R-expression in the preposed event-internal locative induces a Principle C violation with the coindexed subject, the R-expression in a preposed frame does not, as (34d) shows.

Equally, the two different interpretations are possible for temporal adjuncts. In the English examples in (25) of Section 2, the temporal relates to the reference time (topic time), i.e. it belongs to the class of frame adjuncts. But a temporal can also relate to the event time. The following German data show that temporals have different base positions in these different uses:

- (35) a. *An Peters₁ 18. Geburtstag hatte er₁ bereits zwei Romane*
 On Peter's 18th birthday had he already two novels
geschrieben.
 written
 b. **An Peters₁ 18. Geburtstag hat er₁ Maria umarmt.*
 On Peter's 18th birthday has he Mary embraced
 c. *An Peters₁ 18. Geburtstag hat Maria ihn₁ umarmt.*
 On Peter's 18th birthday has Mary him embraced

In (35a), the temporal is a frame. As such, its base position is not in the c-command domain of a subject and therefore the sentence does not show a Principle C violation. In the prominent interpretation of (35b), the temporal is designating the event time. We expect that in this case it is subject to condition (33). (35b, c) confirm this. The Principle C violation in (35b) shows that the base position of the temporal is below the base position of the subject, the absence of a Principle C violation in (35c) shows that its base position is higher than that of the object.

Thus far, we have seen that instrumentals, benefactives, and the event-related instances of locatives and temporals belong to the class of event-internal adjuncts and have to meet condition (33) in German. What about causal adjuncts? Do they also belong to this class? There is evidence to the contrary:

- (36) a. *Wegen Peters_i hervorragenden Beziehungen hat er_i gute Chancen für den Auftrag.*
 because of Peter's excellent relations has he good chances
 for the job
- b. *DASS wegen fast jedem Vorschlag mindestens einer aufgeschrieben HAT (only $\forall\exists$)*
 that because of nearly every proposal at least one
 yelled out has
- c. *DASS mindestens einer wegen fast jedem Vorschlag aufgeschrieben HAT ($\exists\forall$ or $\forall\exists$)*

The examples in (36) show that causals are base-generated higher than the base position of the subject. (36a) demonstrates that an R-expression in a preposed causal does not give rise to a Principle C violation with the subject. The scope facts in (36b, c) show that the base position of the subject does not c-command the base position of the causal.

On the other hand, the scope data in (19) above showed that causals do not belong to the class of frames. This observation is confirmed by the following data:

- (37) a. *weil wo wegen was ein Kollege weltberühmt ist*
 since somewhere for something a colleague world-famous is
- b. **weil wegen was wo ein Kollege weltberühmt ist*

So there exists a class of adjuncts which are base-generated higher than the subject but lower than frame adjuncts.⁸ This class will be called event-external adjuncts.

(38) **Event-external adjuncts** (e.g. causals)

The base position of an event-external adjunct α minimally c-commands the base position of the highest ranked argument β , i.e. there is, modulo adjuncts of the same class, no γ whose base position c-commands β and is c-commanded by α .

There are other adjunct types which belong to this class. Consider the following data with a concessive:

- (39) a. *Trotz der guten Beziehungen von Peters₁ Frau hat er₁ den Job*
 Despite the good relations of P.'s wife has he the job
nicht bekommen.
 not got
- b. *DASS trotz mindestens eines seltsamen Vorfalls fast jeder*
 that despite at least one odd incident nearly everyone
ausharrte (only $\exists\forall$)
 held out
- c. *DASS fast jeder trotz mindestens eines seltsamen Vorfalls*
ausharrte ($\exists\forall$ or $\forall\exists$)
- d. *Sie SIND in fast jedem Land trotz mindestens eines Flops*
 They are in nearly every country despite at least one flop
weltberühmt. (only $\forall\exists$)
 world-famous
- e. *Sie SIND trotz mindestens eines Flops in fast jedem Land*
weltberühmt. ($\exists\forall$ or $\forall\exists$)

The absence of a Principle C violation in (39a) shows that a concessive is base-generated above the subject's base position. This is confirmed by the scope facts in (39b, c). On the other hand, the scope data in (39d, e) demonstrate that a concessive is generated below the base position of frame adjuncts. All in all, the data in (39) show that concessives belong to the class of event-external adjuncts. As was shown for the other adjunct classes, it could also be demonstrated for the class of event-external adjuncts that syntax does not order the different members with respect to each other.

With the conditions (21), (33) and (38) we can now explain the following data. In German, filling the prefield with a temporal or a causal adjunct may result in an unmarked structure. In contrast, filling it with a locative yields a marked structure:

- (40) a. *Nach dem Essen hat der Kanzler angerufen*
 After dinner has the chancellor called
 b. *Wegen eines Formfehlers hat Hans den Prozess gewonnen.*
 Because of a technicality has H. the trial won
 c. *In einem Flugzeug hat Hans das Problem gelöst.*
 In an airplane has H. the problem solved

The temporal in (40a) can naturally be taken to refer to the reference time, that is, it can be interpreted as a frame adjunct. As a frame, the temporal is generated above the base position of the subject, cf. (21). The causal in (40b) has to obey condition (38). It is also generated above the subject. There is evidence that the structurally highest element in the middle field of a German clause, and only this one, can be moved without any additional informational effect to the prefield of this clause (cf. Fanselow 2002; Frey 2000). Let us call this preposing ‘formal preposing’. Since the base position of the adjuncts in (40a, b) would be the highest position in the middle field, the unmarkedness is maintained under formal preposing of the adjuncts. On the other hand, the locative in (40c) is an event-internal adjunct. It is subject to (33), i.e. it is base-generated below the subject. Therefore, its base position is not the highest position in the middle field of (40c) and its movement to the prefield (be it ‘scrambling plus formal preposing’ or direct movement from the base position) has an additional pragmatic effect. (Direct movement from a lower base position to the prefield is associated with focusing).

Let us now look at some English data containing adjuncts of these different classes. The asymmetry with respect to Principle C effects, illustrated in (41), also provides evidence for their different base positions in English:

- (41) a. *On Ben₁'s birthday he₁ took it easy.*
 b. *For Mary₁'s valour she₁ was awarded a purple heart.*
 c. *?*In Ben₁'s office he₁ lay on the desk.*
 d. **With Mary₁'s computer she₁ began to write a book of poetry.*

If we assume that the conditions (21), (33) and (38) also hold for English, these data are easily explained. In (41a, b) we have a temporal frame and a causal adjunct. For these adjuncts, conditions (21) and (38) are relevant, respectively. These conditions allow the base-generation of the adjunct phrases in clause initial position. The coindexation therefore does not induce a Principle C violation. (41c, d), however, involve adjuncts (a locative, an instrumental) belonging to the class of event-internal adjuncts. These are required to be generated below the base position of the subject in accor-

dance with condition (33). Therefore, the adjuncts in (41c, d) have reached their surface position by movement. After reconstruction of the moved phrase we get a Principle C violation.

There are further differences between frames, event-external and event-internal adjuncts in English:

- (42) a. *John₁ (by then) will (by then) have (by then) t₁ read the book.*
 b. *John₁ (therefore) will (therefore) have (therefore) t₁ read the book.*
 c. *John₁ (*here) will (*here) be (*here) t₁ reading this book.*

In formal/written registers, even some heavier adjuncts are possible in what Ernst (2002) refers to as Aux range. Ernst (2002) gives the following examples and judgements:

- (43) a. *They₁ had two weeks earlier been t₁ fixing the bookshelf.*
 b. **They₁ had with a hammer been t₁ fixing the bookshelf.*
 c. **They₁ had for Lisa been t₁ fixing the bookshelf.*

These contrasts can be explained in terms of conditions (21), (33) and (38). Aux-adjacent positions c-command the base position of the subject, and so may host frames (e.g. temporals) and event-external adjuncts (e.g. causals) but not event-internal ones (e.g. locatives, benefactives, instrumentals). Thus, the temporal frame adjunct in (43a) is fine, whereas the event-internal adjuncts in (43b, c) are deviant.

The same kind of reasoning explains the distribution of the adjuncts in (42). In all of the positions indicated, *by then* fulfils condition (21), *therefore* fulfils condition (38) while *here* fails to meet condition (33).

That, in English, frames and event-external adjuncts are also subject to the different conditions, (21) and (38) respectively, is shown by the following data:

- (44) a. *They had two weeks earlier been for some reason fixing the bookshelf.*
 b. **They had for some reason been two weeks earlier fixing the bookshelf.*

According to these conditions, a frame has to precede an event-external adjunct.

In principle, it is possible in English to have an adjunct between the verb and a prepositional object:

(45) *John has spoken carefully about the subject.*

We will defer discussion of such examples to Section 5. However, at this stage, we have to rule out the following ungrammatical sentences. They contain a locative and a temporal respectively between the main verb and a (non-extraposed) PP-complement:⁹

- (46) a. *John_i will have t_i spoken (*by then) about the subject.*
 b. *John_i will t_i speak (??here) about the subject.*

Since Larson (1988), most syntacticians assume a binary right-branching structure for English. This leads to a so-called Larsonian shell structure. For a verb with two objects, the shell structure has roughly the following form:¹⁰

(47) [_{vP} NP [V₁V] [_{vP} XP [_{v'} t_i XP]]]

The subject moves further to a functional projection to check grammatical features.

Due to binary branching, the vPs of the sentences in (46) are as follows:¹¹

(48) **[_{vP} John speak_i [_{vP} by then/here [_{v'} t_i about the problem]]]*

Both kinds of adjunct are not possible below the verb, but for different reasons. The frame is not possible because it does not c-command the base position of the subject, thereby violating condition (21). The locative is not possible because it is not minimally c-commanded by the subject. The interference of the verb-v complex violates condition (33).

In addition to (42c), we have to rule out the following structure:

(49) **John_i will be [_{vP} t_i here [_{v'} reading this book]]]*

This structure cannot arise because there is neither a spec position nor an adjunction position available if we assume that an adjunction to the structural theta-assigner v' is not allowed. In English, there is no position available for an adjunct between the verb and the base position of the subject.

Thus, we have seen that, in English, event-internal adjuncts can neither appear in the Aux range nor in any place between the base positions of the subject and the objects. The only possible position considered so far is the clause-initial one, to which these adjuncts can be moved. The canonical

position for these adjuncts is clause-final. This position will be discussed in Section 8.

4. Mental-attitude adjuncts

There is an interesting difference in the interpretation of the following English and German sentences:

- (50) a. *that Peter willingly was examined by the doctor*
 b. *dass Peter bereitwillig von dem Arzt untersucht wurde*

In sentence (50a), the mental-attitude adjunct *willingly* relates to *Peter*. However, in the corresponding German sentence in (50b), the adjunct relates necessarily to *Arzt* ‘the doctor’.

Furthermore, as is well-known, if in English the adjunct is positioned after the main verb, the interpretation changes compared to (50a):

- (51) *that Peter was examined willingly by the doctor*

In (51), *willingly* relates to *the doctor* as in the German example (50b).

Let us first try to determine the base position of the German mental-attitude adjuncts:

- (52) a. *da wer bereitwillig den Auftrag übernahm*
 since someone deliberately the task took on
 b. **da der Knabe was bereitwillig vorgesungen hat*
 since the boy something deliberately sung has
 c. *da der Knabe bereitwillig was vorgesungen hat*

These data seem to show that German mental-attitude adjuncts are base-generated below the subject and above the object. A closer look, however, reveals that they relate to the highest ranked argument. This does not have to be the subject, as was already demonstrated in (28). Another example with a non-subject as the highest argument is the following:

- (53) *weil einem Bekannten eine wichtige Vorstellung entgangen ist*
 because a friend-DAT an important performance lost is
 ‘because a friend missed an important performance’

In such a construction, a mental-attitude adjunct is base-generated between the dative and the nominative:

- (54) *weil wem versehentlich was entgangen ist*
 since someone-DAT inadvertently something lost is

Thus the condition for a mental-attitude adjunct seems to be that its base position is minimally c-commanded by the base position of the highest ranked argument. However, the English example (50a) shows that this cannot be quite right. In (50a), the mental-attitude adjunct relates to the subject of a passive. Therefore the following condition is proposed:

(55) **Mental-attitude adjuncts**

The base position of a mental-attitude adjunct

- (i) is minimally c-commanded by the base position of the highest ranked argument of the main predicate, or
- (ii) c-commands the maximal projection of the main predicate and is c-commanded by the highest ranked argument in the main predicate's extended projection.

Semantically, a mental-attitude adjunct relates to the highest ranked argument closest to, and c-commanding, its base position.

The first disjunct of this condition equals the condition for event-internal adjuncts in (33). We therefore assume that mental-attitude adjuncts are special members of the class of event-internal adjuncts, which have the further options described in the second disjunct. Thus, if a mental-attitude adjunct and another event-internal adjunct co-occur inside the projection of the main predicate, the syntactic component will not prescribe an ordering between these adjuncts.

Let us now try to explain the contrast in interpretation between (50a) and (50b). We expect that the difference is not due to different behaviour of the adjuncts in the two languages but rather due to independently established structural differences.

Two differences are the following. Most prominently, Haider (1993) argues that the two languages differ in the position of the subject. Furthermore, connected to the first point, he argues that an auxiliary heads its own projection in English whereas in German it constitutes a verbal complex with the main verb. One of the arguments for different subject positions is the fact that a German subject clause allows extraction of a constituent whereas an English one does not:

- (56) a. *Mit wem₁ würde [t₁ Schach spielen zu dürfen] dich sehr freuen?*
 b. **Who₁ would [to play chess with t₁] have pleased you?*

Haider (1993) concludes that, in contrast to English, the subject of a German clause remains in the licensing domain of the main predicate.

Among the arguments that an auxiliary and a main verb constitute a verbal complex in German are the observations that they may be moved together to the prefield, cf. (57a), and that nothing may intervene between them, cf. (57b):

- (57) a. [*Gelesen haben*] *sollte jeder diesen Artikel.*
 Read have should everyone this article
 ‘Everyone should have read this article.’
 b. **da dieser Artikel von jedem gelesen bald wird*
 since this article by everyone read soon will-be

Applied to (50), these two differences between English and German imply that in (50a) the passive subject and the adjunct are part of the projection of the auxiliary, whereas in (50b) both are part of the projection of the verbal complex.

Next we have to look at the argument structure of a passive predicate. The agent may be left unrealized or be realized by a *by*-phrase. The *by*-phrase has properties of an adjunct. Corresponding to that, it can be shown that the agent is present in the structure even if there is no *by*-phrase present. Therefore the agent of a passive is called an implicit argument.

- (58) a. *The ship was sunk in order to get the insurance.*
 b. *Briefe wurden einander geschrieben.*
 Letters were to each other written.

In (58a) the implicit argument acts as an controller, in (58b) it is the binder of the reciprocal. Roberts (1987) takes the passive morphology on the verb as the syntactic representation of the implicit argument.

The implicit argument of a passive is accessible to a mental-attitude adjunct in the domain of the main predicate. First, the agent is present in the syntactic structure. Second, according to the definition of c-command in Chomsky (1981), a head c-commands all elements within its projection, i.e. for a head, and only for a head, c-command equals m-command. Therefore, the implicit argument, whose structural representative is the verb, c-commands all constituents within the verbal projection.

In German, a mental-attitude adjunct is base generated higher than the subject of a passive:

- (59) a. *weil absichtlich wer heruntergestoßen wurde*
 because intentionally someone pushed-down was
 b. **weil wer absichtlich heruntergestoßen wurde*

In German, there is no obligatory movement of the ‘deep object’ in passives. The mental-attitude adjunct in (59a) is base-generated above the passive subject as it would be base-generated above the corresponding object of the active.¹² The base position of the mental-attitude adjunct is minimally c-commanded by the implicit argument.

We can now explain the differences observed in the examples in (50), repeated here for convenience:

- (50) a. *that* [_{IP} *Peter*₁ *willingly* *was* [_{VP} *t*₁ *examined by the doctor*]]
 b. *dass* [_{VP} *Peter bereitwillig von dem Arzt untersucht wurde*]

The subject of (50a) does not belong to the projection of the main verb, rather it is part of the projection of the auxiliary. The highest ranked argument inside this projection c-commanding the adjunct is the surface subject. Therefore, the adjunct relates to this constituent, i.e. to *Peter*. The situation is different in (50b). The German auxiliary does not head its own projection rather it forms a verbal complex with the main verb. The whole middle field is dominated by a projection of the verbal complex. The adjunct is a constituent within this projection. The verbal complex c-commands the adjunct. Therefore, the implicit argument, which is represented by the verbal form, c-commands the adjunct. The implicit argument is the highest ranked argument inside the verbal projection. That the subject of (50b) c-commands the adjunct on the surface is merely an effect of the (optional) scrambling of this subject, as (59) shows. Hence, in the German example the adjunct relates to the implicit argument.

If in English the adjunct is positioned as in (51), we have the same situation as in the German example (50b). The adjunct is part of the projection of the main verb. It is c-commanded by the verb. The verb is the representative of the agent. Therefore, the adjunct relates to the agent.

Finally, the following sentence shows that mental-attitude adjuncts have a wide distribution in the Aux range of English. In all its positions in (60), the adjunct meets (55ii):

- (60) *Terry (intentionally) has (intentionally) been (intentionally) reading Hamlet.*

5. Manner adjuncts

Many authors assume that manner adjuncts are positioned higher than the arguments or at least higher than the internal arguments (e.g. Ernst (2002) for English and French, Cinque (1999) for Italian, Eckardt (1996, this volume) for German). Our tests for German, however, do not confirm this assumption:

- (61) *Peter will jetzt was konzentriert lesen.*
 Peter will now something carefully read

(61) shows that the manner adjunct is c-commanded by the base position of the object. The non-specific *w*-indefinite object cannot be scrambled.

Scope facts also show that manner adjuncts are generated below the object:

- (62) a. *Er HAT mindestens eine Kollegin auf jede Art und Weise umworben.* (only $\exists\forall$)
 He has at least one colleague in every way courted
- b. *Er HAT auf mindestens eine Art und Weise fast jede Kollegin umworben.* ($\exists\forall$ or $\forall\exists$)
 He has in at least one way nearly every colleague courted

According to the Scope Principle in (2), the absence of an inverse scope reading in (62a) shows that there is no trace of the direct object below the manner-adjunct. The availability of an inverse scope reading in (62b) shows that a trace of the manner-adjunct is below the direct object.

Thus, our tests indicate that manner adjuncts should be generated adjacent to the base position of the main predicate. However, proponents of the view that manner adjuncts are generated higher than at least the objects might point to examples like the following:

- (63) a. *Otto hat heute heftig einen Kollegen beschimpft.*
 O. has today strongly a colleague insulted
- b. *Sie hat heute wunderbar Sonaten gespielt.*
 She has today wonderfully sonatas played

In (63), the manner adjuncts occur in front of the objects. Furthermore, it is unlikely that these adjuncts are scrambled to this position because manner adjuncts in the form of adverbs do not like to be scrambled.¹³

So it seems that examples like (61) on the one hand, and (63) on the other, might constitute contradictory evidence. However, in Frey and Pittner (1998) we argue that the examples in (63) do not illustrate the general case but are due to a special phenomenon. Consider the following sentences:

- (64) a. ??*Otto hat heute heftig viele Kollegen beschimpft.*
 O. has today strongly many colleagues insulted
 b. ??*Sie hat heute wunderbar die Sonaten gespielt.*
 She has today wonderfully the sonatas played

In (64a), the indefinite object of (63a) is replaced by a quantified NP. In (64b), the bare plural of (63b) is replaced by a definite NP.

Based on this observation and other data, Frey (2001) argues that an indefinite can participate in the formation of a complex predicate. One of the additional pieces of evidence is the following: If in German an auxiliary combines with a modal, the standard order of the verbal elements does not sound very good. Instead the inversion of the modal is preferred:

- (65) a. (?)*dass Hans heute dieses/jedes Hemd bügeln müssen wird*
 that H. today this/ every shirt iron must will
 b. *dass Hans heute dieses/jedes Hemd wird bügeln müssen*
 c. **dass Hans heute wird dieses Hemd bügeln müssen*
 d. **dass Hans heute wird jedes Hemd bügeln müssen*

(65a) shows the standard order of verbal elements and (65b) shows the preferred inversion. (65c, d) illustrate that an argument cannot be carried along in such an inversion structure. This suggests that only elements of the complex predicate can participate in the inversion.

Interestingly, indefinites can be part of the inversion ((66a)). The same is true for resultatives, for instance, which are often considered to be part of the complex predicate in German ((66b)):

- (66) a. *dass Hans heute wird Hemden bügeln müssen*
 b. *dass Hans heute die Vase wird sauber wischen müssen*
 that H. today the vase will clean wipe have
 ‘that today H. will have to wipe the vase clean’

Under the assumption that inversion only affects elements of the complex predicate, (66a) shows that indefinites may belong to a complex predicate.

Thus, cases like (63) are not at variance with the claim that manner adjuncts are generated next to the predicate. The objects in these examples are part of the predicate due to integration.¹⁴

So there is evidence that the order shown in (61) is the basic serialization pattern of an object and a manner adjunct. Why then is it so often assumed that manner adjuncts are generated above the arguments? One reason might be the alleged integrity of the theta domain. Many syntacticians assume that there is a certain domain of pure theta assignment in which no adjunct can appear. However, we also find examples in English for which it is hard to maintain that manner adjuncts are generated outside of the theta domain:

(67) *John has spoken (nicely) to his mother (nicely) about her letter.*

It is possible to have a manner adjunct between the verb and a prepositional object. The crucial observation of Costa (1998) is that these PPs are not extraposed:

(68) *What₁ has John spoken to his mother nicely about t₁?*

The fact that a prepositional object following a manner adjunct does not show freezing effects for movement is a strong argument that it is in its base position. Note the contrast to the following example, which shows that the PP is extraposed (cf. note 9):

(69) **What₁ did John speak to his mother yesterday about t₁?*

Examples such as (67) suggest that in English the same constraint for manner adjuncts might be operative as in German. In the following structure, the traces left by verb movement inside vP are indicated:

- (67') a. *John₂ has [_{vP} t₂ spoken₁ [_{VP} to his mother [_{V'} t₁' [_{VP} nicely [_{V'} t₁ about her letter]]]]].*
 b. *John₂ has [_{vP} t₂ spoken₁ [_{VP} nicely [_{V'} t₁' [_{VP} to his mother [_{V'} t₁ about her letter]]]]].*

In both structures, the manner adjunct immediately c-commands a trace of the predicate. Because, ultimately, all the verb positions in (67') are necessary to license the arguments, they may all count as 'base positions' of the verb.

Given structures like (67'), we expect that manner adjuncts which are PPs should be allowed in these positions. This expectation is confirmed:

- (70) *What has John spoken (with great care) to his mother (with great care) about?*

We can now formulate the constraint for manner adjuncts, which is supposed to apply in English and German alike:

- (71) **Process-related adjuncts** (e.g. manner adjuncts)
The base position of a process-related adjunct minimally c-commands a base position of the main predicate.

(71) enables us to explain the following contrast between English and German:

- (72) a. *Today John [worried₁ [greatly [t₁ about every girlfriend]]].*
b. ??*Hans hat sich heute maßlos über jede Freundin geärgert.*
H. has REFL. today extremely about every girlfriend get-annoyed
c. *Hans hat sich heute über jede Freundin maßlos geärgert.*

The manner adjunct in (72a) is licensed because it minimally c-commands the trace of the verb. In (72b), however, the adjunct does not minimally c-command the predicate on the surface. Thus, the manner adjunct has been moved and because this kind of manner adjunct does not like to be scrambled, the sentence is not fully grammatical.

Let us now look at another possible position for manner adjuncts in English, namely the clause-final position. Due to the binary right-branching structure of the English clause, the adjunct is sister to a trace of the verb (cf. Larson 1988):

- (73) a. *John has talked to his mother nicely.*
b. *John has [talked₁ [to his mother [t₁ nicely]]].*

The adjunct in (73) satisfies condition (71). In contrast, the following occurrences of a manner adjunct do not fulfil (71):¹⁵

- (74) *(*Nicely) John (*nicely) will (*nicely) have spoken to his mother about her letter.*

The reason is that the adjuncts in (74) do not minimally c-command the main predicate.

It still remains to explain one occurrence of adjuncts which are usually classified as manner adjuncts. This is their occurrence directly in front of the main predicate:

(75) *John will carefully study her letter.*

In this sentence *carefully* does not fulfil (71) because the base position of the subject intervenes between the adverb and the predicate. However, it is important to note that *carefully* in this example is not a pure manner adjunct. As the following observations show, the preverbal use of such an adjunct assigns a property to the subject instead of just characterizing the process.

Cinque (1999) notes that a sentence like (76a), in contrast to (76b), does not contain any contradiction, which entails that, in (76a), *cleverly* does not belong to the type manner adjunct.

- (76) a. *John has been cleverly talking about the problem stupidly.*
 b. **John has been talking cleverly about the problem stupidly.*

This is interesting because *cleverly* in (76a) is not understood as a sentence adjunct either, that is, the situation is not evaluated by the speaker. In German, one can even see from the morphology that the corresponding element, i.e. *geschickt*, is not a SADJ:

- (77) *Hans hat geschickt die Fragen dumm beantwortet.*
 H. has skilfully the questions stupidly answered

The pertinent SADJ would have the ending *-weise* (cf. *geschickterweise*).

Not all adjuncts which can appear as manner adjuncts postverbally may also occur preverbally:

- (78) a. *John handled the situation terribly.*
 b. **John terribly handled the situation.*
 c. *He played the sonata beautifully.*
 d. **He beautifully played the sonata.*
 e. *He has danced with Mary marvellously.*
 f. **He has marvellously danced with Mary.*

However, as Blight (1997) notes, the adjuncts of (78) can occur in front of a main verb in the passive voice:

- (79) a. *The sonata was beautifully played.*
 b. *The situation was terribly handled by John.*

Blight argues that only active verbs move to *v*, while passive verbs stay in VP. Therefore the structural position of the preverbal adjuncts in (78) is different from the position of the preverbal adjuncts in (79). The adjuncts in (79) do fulfil the condition for manner adjuncts in (71).

We have to understand what makes it possible for adjuncts like *carefully* to appear in a position which is not a position for manner adjuncts in general. Bartsch (1972) makes a distinction within manner adjuncts which might be of importance here. She notes that only some allow a paraphrase in which they are not directly predicated of the process but only via a predication on the subject. Consider the following sentences:

- (80) a. *He will work on the project carefully.*
 b. *He will work on the project and in doing that he will be careful.*
 c. *He will play the sonata beautifully.*
 d. *He will play the sonata and in doing that he will be beautiful.*

(80a) with *carefully* might be paraphrased as (80b). In contrast, *beautifully* does not allow such a paraphrase. (80c) and (80d) have very different meanings. If we check the adjuncts in (78), we see that they all do not allow such a paraphrase. However, the manner adjuncts which are possible in front of an active verb do allow Bartsch's paraphrase.

In (80b), *careful* does not characterize the process. Rather, it is used to characterize the subject in relation to the whole action described by the sentence.¹⁶ Seen in this perspective, it makes sense that only manner adjuncts which allow Bartsch's paraphrase may appear preverbally. In this position, they minimally c-command vP. Furthermore, they relate to the c-commanding subject. The structural condition that the elements fulfil in this position is a narrower form of the condition for mental-attitude adjuncts formulated in (55ii) in Section 4.

It follows that manner adjuncts which do not allow Bartsch's paraphrase, i.e. adjuncts which allow only the strict manner reading, cannot appear preverbally. The condition in (71) cannot be fulfilled in this position and condition (55) is not appropriate for these adjuncts.

Let us finally ask whether there are adjuncts in addition to manner adjuncts which are subject to condition (71)? Ernst (2002) calls the reading of the adjunct in the following example the ‘means-domain’ reading:

(81) *They classified all the examples morphologically.*

Ernst notes that this kind of adjunct behaves largely as manner adverbs do. This is confirmed by the following German examples:

- (82) a. *Otto hat die Romane alphabetisch geordnet.*
 O. has the novels alphabetically arranged
 b. **Otto hat alphabetisch die Romane geordnet.*
 c. *Maria hat Otto was operativ entfernt.*
 M. has O. something surgically removed

In contrast, pure domain adjuncts belong, as we expect, to the class of frames:

- (83) a. *(Professionally) John (professionally) will (professionally) be very successful.*
 b. *dass am Schwebebalken wer Ute sehr überlegen ist*
 that at the beam someone U.-DAT very superior is
 c. **dass wer am Schwebebalken Ute sehr überlegen ist*
 d. **dass Ute wem am Schwebebalken sehr überlegen ist*

For other adjunct types which fulfil condition (71), the reader is referred to Maienborn (2001, this volume) and Pittner (this volume). Maienborn develops an analysis of what she calls ‘internal locative modifiers’ illustrated by the following example:

- (84) *Der Koch hat das Hähnchen in einer Marihuana-Tunke zubereitet.*
 The cook has the chicken in a marijuana sauce prepared

Maienborn does not only give a semantic analysis of this kind of modifier but she also adduces evidence that they fulfil the condition in (71).

Pittner shows that German *wieder* (‘again’) with the restitutive reading meets the condition in (71). Pittner argues that restitutive *wieder*, like manner adjuncts, applies semantically to internal aspects of the situation denoted by the verb.

- (88) *(Frequently) she (frequently) has (frequently) been (frequently) talking (frequently) to Mary (frequently).*

This suggests that frequency adjuncts in English are distributed over the same various adjunct classes as in German.

Let us finally consider the following examples discussed by Andrews (1983) and Cinque (1999):

- (89) a. *John intentionally knocked on the door twice.*
 b. *John twice knocked on the door intentionally.*

Cinque (1999) notes that (89a) is ambiguous: *intentionally* can have scope over *twice* or *twice* can have scope over *intentionally*. In contrast, (89b) has only one reading: *twice* has scope over *intentionally*.

Given our conditions for the different adjunct classes, we can explain the observed distribution of readings. Adjuncts occurring at the right periphery of an English clause may be process-related, event-internal, event-external or frame adjuncts, cf. Section 8. A frequency adjunct like *twice* may belong to the first, second or fourth of these adjunct classes. If in (89a), *twice* is analysed as a process-related adjunct, it is in the scope of the event-internal adjunct *intentionally* because event-internal adjuncts c-command process-related adjuncts. If it is analysed as a frame, it has scope over *intentionally* because frame adjuncts c-command event-internal ones. In (89b), however, *twice* can only be a frame adjunct. Therefore this sentence has only the reading with *twice* having scope over *intentionally*.

7. On the clause initial occurrence of adjuncts in English and German

Let us start with subject-oriented adjuncts like *rudely* or *cleverly*. Like many other adjunct types, they do not only occur clause internally but may also introduce an English clause:

- (90) a. *John cleverly made no reply.*
 b. *Cleverly John made no reply.*

With these adjuncts, the speaker evaluates a proposition with respect to the subject of the clause: *It was clever of John that he made no reply.*

Subject-oriented adjuncts differ from the mental-attitude adjuncts considered in Section 4 not only in their semantics but also in their syntactic behaviour. In German, for example, a mental-attitude adjunct may appear as

part of a complex verbal projection in the prefield. In the same position, a subject-oriented adjunct is less good:

- (91) a. *Absichtlich das Fenster zerstört hat Otto.*
deliberately the window destroyed has Otto
‘O. deliberately destroyed the window.’
b. *??Netterweise das Fenster repariert hat Otto.*
nicely the window repaired has O.
‘It was nice of O. to repair the window.’

This difference follows if we realize that subject-oriented adjuncts share one important property with SADJs. Like the SADJs characterized in (20), they always have scope over the temporal setting of the sentence, i.e. they have to c-command the base position of the finite verb. As characterized in (55), mental-attitude adjuncts do not have to c-command the finite verb.

In fact, in the literature, subject-oriented adjuncts are usually classified as SADJs. However, the fact, that by using a subject-oriented adjunct the evaluation by the speaker is attributed to the subject, constitutes an important semantic difference to other SADJs. Is the difference reflected in syntax? There is evidence that the answer is yes. Compare the following sentences:

- (92) a. *weil erfreulicherweise wer antwortete*
because fortunately someone answered
b. **weil intelligenterweise wer antwortete*
because wisely someone answered
c. **weil wer intelligenterweise antwortete*
d. *weil Hans intelligenterweise antwortete*

In (92a), the SADJ behaves as characterized in Section 2. However, it cannot be replaced by a subject-oriented adjunct, as (92b) shows. (92b) indicates that a subject-oriented adjunct cannot be positioned above the surface position of the subject. Rather, it has to be c-commanded by the subject. Thereby it is structurally reflected that a subject-oriented adjunct is semantically attributed on the subject. However, (92c) shows that the base position of a subject-oriented adjunct cannot be below the base position of the subject. That (92d) is fine, in contrast to (92c), therefore has to be attributed to the fact that a subject like the one in (92d) does not have to stay in its base position, i.e. the subject of this clause has been scrambled to a position c-commanding the subject-oriented adjunct.

Our observations about subject-oriented adjuncts in German can be captured by the following constraint:¹⁷

(93) **Subject-oriented SADJs**

The base position of a subject-oriented sentence adjunct

- (i) is subject to the condition for SADJ in (20) and
- (ii) is c-commanded by an A-position of the subject it is semantically related to.

Let us now look at an interesting syntactic difference between subject-oriented adjuncts and other SADJs at the beginning of an English clause. Consider the following sentences:

- (94) a. **Who_i do you think that t_i made no reply?*
 b. *Who_i do you think that unfortunately/apparently t_i made no reply?*
 c. **Who_i do you think that stupidly t_i made no reply?*

In (94) we have subject movement out of an embedded *that*-clause. (94a) shows the standard *that*-trace effect. Interestingly, an evaluative or an evidential SADJ cancels the *that*-trace effect, as (94b) shows. Subject movement is possible across such SADJs. In contrast, a subject-oriented adjunct is not able to cancel the *that*-trace effect, cf. (94c). These facts are puzzling because the different adjuncts have the same distribution in English. Both, for example, can occur clause-initially.

Browning (1996) and Rizzi (1997) investigate the cancelling of the *that*-trace effect by adjuncts (Browning calls it ‘the adverb effect’). However, they reason as if all adjunct types showed the effect. They do not consider whether certain adjuncts do not mitigate the ungrammaticality. However Browning and Rizzi point out that preposed arguments do not mitigate the *that*-trace effect:

- (95) **Who_i do you think that [to Mary]₂ t_i made no reply t₂?*

Browning’s approach to explain the difference between adjuncts showing the effect and preposed arguments depends on the assumption that the adjuncts are base-generated in clause initial position whereas arguments are moved there.

The examples in (92) show that in German the base position of a subject-oriented adjunct has to be c-commanded by an A-position of the subject, whereas such a restriction does not hold for the other SADJs. If we assume the same difference for English, we are able to explain the contrast between

(94b) and (94c). In (94b) *unfortunately* cancels the *that*-trace effect because it is base-generated in its surface position. In contrast, *stupidly* in (94c) has reached its position by movement because it has to be base-generated below the surface position of the subject. Hence, it cannot cancel the *that*-trace effect.¹⁸ (94c) therefore shows that the condition (93) also holds in English.

The difference in grammaticality between (94b) and (94c) was explained by the difference of base generation of the adjunct versus movement. That this is on the right track is supported by the following data:

- (96) a. *Who₁ do you think that on Ben's birthday t₁ took it easy?*
 b. *Who₁ do you think that because of the bad weather t₁ stayed home?*
 c. **Who₁ do you think that in Ben's office t₁ lay on the desk?*
 d. **Who₁ do you think that with Mary's computer t₁ began to write a book of poetry?*
 e. **Who₁ do you think that for Mary's brother t₁ was given some old clothes?*

The adjunct of (96a) can naturally be interpreted as a frame adjunct. The adjunct in (96b) is an event-external adjunct. These two adjuncts have to meet the conditions (21) and (38) respectively. The adjuncts in (96c–e) are event-internal adjuncts and have to obey (33). The adjuncts in (96a, b) can be base-generated in clause initial position, they fulfil (21) or (38) in this position. The adjuncts in (96c, d, e) have to be moved to this position. Their base must be lower than the base position of the subject. Thus, we have the same situation as above. Base-generated adjuncts mitigate the *that*-trace effect, moved adjuncts do not. The explanation for the differences in grammaticality in (96) is therefore the same as for (94b) and (94c).

Let us now turn again to some German data. The examples (40) in Section 3 illustrated a difference between clause-initial temporal frames and causals on one side and locatives on the other, the former being marked and the latter unmarked. The difference between clause-initial subject-oriented adjuncts and other SADJs is even a contrast in grammaticality:

- (97) a. *??Intelligenterweise₁ hat Hans₂ t₁ t₂ das Buch gelesen.*
 wisely has H. the book read
 b. *Glücklicherweise₁ hat t₁ Hans das Buch gelesen.*
 fortunately has H. the book read

The base position of the subject-oriented SADJ in the middle field of (97a) cannot be the highest position there because, according to (93ii), the subject

had to be scrambled in the middle field across the subject-oriented SAdj. Therefore, the movement of *intelligenterweise* to the prefield goes together with an additional informational effect (cf. Section 3), in this case with focussing. SAdJs do not like to be focussed. Therefore (97a) is not grammatical. In contrast, the clause-initial position of the SAdj in (97b) results in a grammatical structure. Its base position has only to fulfil (20). Hence, this SAdj can be moved to the prefield from its base position, which is the highest position in the middle field, by formal preposing.¹⁹ As mentioned above, this fronting is without any additional informational effect on the moved item and the sentence is fine.

By the same kind of reasoning we can explain the following data:

- (98) a. *Leider hat Peter oft gefehlt.*
 Unfortunately has Peter often be-absent
 'Unfortunately Peter was often absent.'
 b. ??*Oft hat Peter leider gefehlt.* (if *oft* is not focussed)
 c. *Oft hat Peter gefehlt.*
 d. *Sehr oft hat Peter leider gefehlt.*
 Very often has P. unfortunately be-absent

The SAdj in (98a) is moved to the prefield from the highest position in the middle field. The frequency adjunct in (98b) is directly moved to the prefield from a lower position because its base position has to be c-commanded by the SAdj (cf. Section 2) and because it cannot be a topic, it cannot be scrambled to the left of the SAdj. It has to be focussed. According to Section 6, a frequency adjunct can be a frame adjunct. Therefore, in (98c), the frequency adjunct can be base-generated in the highest position in the middle field and can be moved without focussing to the prefield. (98d) is better than (98b), as F. Moltmann observed, referred to by Cinque (1999). There is a strong tendency to focus the adjunct in this example. Therefore, the informational prerequisite for direct movement from a low position in the middle field is fulfilled.

A SAdj in the prefield cannot be extracted out of an embedded clause (Doherty 1985):

- (99) **Leider₁ sagte Maria, dass t₁ Otto das Spiel verloren hat.*
 Unfortunately said M. that O. the game lost has

In (99) the SAdj cannot be moved to the prefield by formal preposing. Because it cannot be focussed either, the sentence is ungrammatical.

8. Adjuncts at the right periphery of the English clause

Except for SADJs, all adjuncts classes are possible at the right edge of an English clause. (100) gives some examples:

- (100) a. *He worked carefully with his shears in the garden yesterday.*
 b. *He worked in the garden with his shears.*
 c. *He worked yesterday in the garden.*
 d. *People eat in fast food restaurants in America.*

Note that even frame adjuncts like *in America* in (100d) can appear in this position.

Although there is a tendency to order instrumentals before locatives, and locatives before temporals, as in (100a), there are other orderings possible, as (100b, c) show. However, a causal adjunct, for example, cannot be reordered with, say, a locative:

- (101) a. *She killed her boss in his office on account of her madness.*
 b. **She killed her boss on account of her madness in his office.*

Furthermore, it is much easier to reorder an event-related temporal adjunct with an event-related locative adjunct than to reorder a reference time-related adjunct with a locative adjunct:

- (102) a. *He had eaten in the kitchen at 5.*
 b. *He had eaten at 5 in the kitchen.*
 c. *He had eaten in the kitchen by 5.*
 d. **He had eaten by 5 in the kitchen.*

So it seems that at the right periphery of an English clause, members of the same adjunct class can be reordered much more easily than members of different adjunct classes.

The data show that at the right periphery of an English clause, lower adjuncts precede higher adjuncts. This ordering would find an easy explanation if the adjuncts at the right periphery (except process-related adjuncts) were right-adjoined. However, as is well-known, binding facts give evidence that the adjuncts at the right are c-commanded by the arguments. This makes an analysis using right-adjunction highly implausible.

There is a remark on how to analyse the phrases at the right end of the clause in Chapter 4 of Chomsky (1995, 333): “if a shell structure is relevant

at all, the additional phrases might be supported by empty heads below the main verb ...". This suggestion is taken up by Haider (2000, 126): "The empty head in the extraposition subtree is just a structural licenser. In other words, it guarantees endocentricity plus binary branching, and it must be structurally licensed by a lexical head itself."

From this perspective, in English, all clause-final adjuncts except process-related ones belong to the extraposition field with its empty heads. Clause-final process-related adjuncts are part of the core clause structure, cf. Section 5. In Frey and Pittner (1999), we added the following proposal: the extraposition field constitutes a pure structural environment, in order to become interpretable, the phrases appearing in this field have to be connected to abstract markers in the interpreted domain of the clause. The abstract marker corresponding to a given adjunct has to fulfil the c-command conditions which hold for the class the adjunct belongs to. Let us assume that the paths connecting the phrases in the extraposition field with the associated markers in the interpretation domain do not cross. Then, the order of the clause-final elements will mirror the order of the elements occurring in the core clause structure.

In English, SADJs cannot appear clause-finally (except with comma intonation). SADJs are the only adjuncts which, according to our constraints, have to c-command the finite verb. Therefore, one might speculate that it is this restriction that cannot be fulfilled in the extraposition field. This leads to the assumption that the abstract markers are not able to enter a structural relation with finiteness, the reason being that elements in the extraposition field, which does not contain any functional structure, can only interact with lexical material.

The abstract markers of the other adjuncts only interact with lexical material. With regard to the structures (48), (49) of Section 3, it was observed that an event-internal adjunct, e.g. a locative adjunct, cannot fulfil the requirements put on it inside the verbal projection. This is because the verb stands in a position in which it is adjacent to the base position of the subject. We may assume that the requirement on event-internal adjuncts can be fulfilled by the associated abstract marker. An abstract marker between the subject's base and the verb does not impair their structural closeness. Therefore, in English, the base position for an event-internal adjunct like a locative is at the right periphery. The only other position in which it may occur is clause-initially. This is a position which it has reached by movement.

9. Some notes on the ‘scopal’ approach to adjunct syntax

The proposal presented here is situated between an approach like that of Cinque (1999) with only one possible position for a given adjunct and an approach like Haider (2000) (or, with minor restrictions, Ernst 2002) according to which syntax proper does not constrain the distribution of adjuncts except to exclude certain positions for adjuncts in general. Instead, semantics is supposed to regulate the distribution of adjuncts. Since critical discussions of Cinque’s approach can be found in the literature (e.g. Ernst 2002; Haider 2000; Shaer, this volume), I only want to make some remarks about the second approach.

Our findings indicate that semantic facts, on the one hand, cannot yield the necessary constraints and are, on the other hand, too restrictive to account for the freedom of adjunct placement.

According to Haider and Ernst, syntax does not impose special conditions on the various adjunct classes. The reason why there are, nevertheless, certain serialization patterns has to be sought in the mapping procedure to semantics. Preverbal adjuncts which relate to a more specified semantic domain have to c-command preverbal adjuncts which relate to a less specified domain. Haider (2000) differentiates the following three semantic domains:

(103) proposition \subset event \subset process/state

Haider (2000) and Ernst (2002) relate, for example, all the adjuncts we categorized either as event-related adjuncts or event-internal adjuncts to the verb’s event variable. Given this assumption, we would not expect any syntactic differences between members of the two classes. However, in Section 3 we found that they behave differently with regard to scope ambiguities, Principle C effects, the pragmatic effect of placement in the German pre-field, and the possibility of placement in the Aux range of a English clause. These data are all the more problematic for the ‘scopal’ approach as only one adjunct occurs per clause. In Haider’s (2000) approach, only scopal restrictions between adjuncts are expected. That the base positions of adjuncts should be sensitive to the position of arguments comes as a surprise.

Furthermore, some of our investigations made it especially clear that it is not enough to state which semantic object is modified by a given adjunct. Let us take, for example, the different behaviour of mental-attitude adjuncts in English and German discussed in Section 4. Our explanation crucially relies on a structural condition holding for the adjunct with respect to the most prominent argument and on the different sentence structures in the two

languages. Another example is subject-oriented adjuncts. Although they belong to the class of SADJs, they have to obey the extra structural condition that their base be c-commanded by a derived position of the subject. This extra structural condition was crucial for the explanation of the differences between (94b) and (94c) and between (92a) and (92b).

In addition, according to the ‘scopal’ approach, it should not be possible that members of the different adjunct classes could permute. As Shaer (this volume) points out, given the scopal approach, we expect such sentences to be more or less uninterpretable. However, in English, reordering of adjuncts of different classes only causes ungrammaticality, but not uninterpretability. Moreover, in a scrambling language like German such sentences are even grammatical.

Finally, the approaches of Haider and Ernst necessarily have the consequence that adjuncts do not scramble. All positions in which a given adjunct can appear in the German middle field are base-generated positions. However, to explain the scope facts of many of our examples, it is important to differentiate between the base positions and scrambled positions of adjuncts.

10. Summary

I have argued that the syntactic component of the grammar regulates the distribution of adjuncts. The ordering constraints cannot be reduced to semantic scope conditions. Syntax, however, does not distinguish between the different adjunct types but only between adjunct classes. Furthermore, syntax does not prescribe exactly one base position for a given adjunct. Rather, an adjunct can be base-generated in different positions as long as the c-command requirements of its adjunct class regarding certain other elements of its clause are met. Five major classes have been distinguished:

- (104) (i) **SADJs**:
The base position of a SADJ c-commands the finite verbal form, the base positions of the arguments and the base positions of the remaining adjunct classes.
- (ii) **Frame and domain adjuncts** (e.g. reference time related temporals):
The base position of a frame or a domain adjunct c-commands the base positions of the arguments and the base positions of the remaining adjunct classes except SADJ.

- (iii) **Event-external adjuncts** (e.g. causals):
The base position of an event-external adjunct c-commands the base position of the highest ranked argument.
- (iv) **Event-internal adjuncts** (e.g. event-related temporals or locatives, instrumentals):
The base position of an event-internal adjunct is minimally c-commanded by the base position of the highest ranked argument.
- (v) **Process-related adjuncts** (e.g. manner adjuncts):
The base position of a process-related adjunct minimally c-commands a base position of the main predicate.

It was shown that subject-oriented adjuncts belong to class (i) but have to meet an extra condition, that mental-attitude adjuncts belong to (iv) with an additional option and that the so-called frequency adjuncts may belong to class (ii), (iv) or (v).

In addition to the base serialization generated by (104), there are other orders possible between members of the different classes. These orders are derived by movement. In particular, it was argued that in German scrambling of adjuncts is possible.

Notes

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1. The focussing of the finite verb induces so called Verum Focus. By using Verum Focus in (3), we avoid any complicating effects that might arise by focussing one of the quantified phrases.
2. This holds with two exceptions which, however, do not affect the point of our discussion. First, all elements which are pronounced with the special pronunciation called I-contour (a kind of rise-fall on the phrase in question) can be moved to a position right after the C-projection and before the topics:
 - (i) a. *da* \sqrt{LEsen}_1 *Otto leider* *dieses Buch* $\backslash NICHT$ t_1 *möchte*
because read O. unfortunately this book not wants
'because O. unfortunately does not want to read this book'
 - b. **da Otto* \sqrt{LEsen}_1 *leider dieses Buch* $\backslash NICHT$ t_1 *möchte*

In (i) only the phrase *Otto* occupies the topic position.

Second, discourse-oriented adjuncts like *offen gestanden* 'frankly' or *kurz gesagt* 'briefly' may precede SADJs:

- (ii) *weil offen gestanden leider während deines Vortrags jemand*
 since frankly unfortunately during the talk someone
eingeschlafen ist
 fallen asleep is

There is a tendency to separate the discourse-oriented adjunct by intonational breaks. Furthermore, discourse-oriented adjuncts cannot be positioned in the prefield of a verb second clause:

- (iii) **Offen gestanden ist leider während deines Vortrags jemand*
eingeschlafen.

Both observations indicate that, in German, discourse-oriented adjuncts are parenthetical expressions, which do not belong to the syntactic structure proper. The same assumption is made e.g. by Shaer (1998) for English discourse-oriented adjuncts and by Szucsich (2000) for the Russian ones.

3. This is a notion from Klein (1994). 'Topic time' is equivalent to the 'reference time' of other frameworks.
4. Ernst (1991) gives a scope argument for this assumption. In the following sentence, *clearly* has scope over *can*. However, *clearly* cannot have scope over *already*.

- (i) *Gary already can_i clearly t_i lift 100 pounds.*

This fact finds an explanation if the base position of *can* in (i) is to the right of *clearly*. *Clearly* c-commands the trace of the auxiliary. But it does not c-command *already*.

5. In *do*-insertion contexts, the auxiliary is base generated in I. Thus, in such a sentence, a SAdj cannot occur after the auxiliary:

- (i) **John did not probably miss the lecture.*

6. To give an example:

- (i) a. *weil Otto erfreulicherweise wahrscheinlich mitmachen wird*
 since O. fortunately probably join in will
 b. **weil Otto wahrscheinlich erfreulicherweise mitmachen wird*

The unacceptability of (ib) is due to the factivity of *erfreulicherweise*.

7. That the syntactic component does not care about the ordering of members of the same adjunct class is also true for the class of frame adjuncts. This is demonstrated by the unambiguity of the following sentences:

- (i) a. *WEIL in mindestens einer Epoche in fast jedem Land Mönche*
 since during at least one period in nearly every country monks
viel Bier tranken (only $\exists\forall$)
 a lot of beer drank
 b. *WEIL in mindestens einem Land in fast jeder Epoche Mönche*
viel Bier tranken (only $\exists\forall$)

8. Like condition (33), the condition (38) refers to the highest ranked argument instead of to the subject, the reason being again that in German there are verbs which have a non-subject as the highest argument, cf. (28). It could be shown that, in such cases, it is the highest ranked argument, and not the subject, which is minimally c-commanded by the event-external adjunct.

9. If a frame or event-related adjunct occurs between the verb and an object, it can be shown that the object is extraposed. In (i) this is shown with a locative:
- (i) a. *John will speak here to his mother.*
 b. **Who_i will John speak here to t_i?*
- The freezing effect in (ib) is due to the fact that the prepositional object is not in its base position.
10. Chomsky (1995) introduced *v* to which the verb is adjoined. *v* is supposed to assign the agent theta role.
11. For the sake of concreteness, the adjuncts are assigned to the spec position of VP.
12. The same is true for an event-internal adjunct like a locative; compare (ia) and (ib):
- (i) a. *weil heute leider in einem Hof wer erschossen wurde*
 since today unfortunately in a yard someone shot was
 b. **weil heute leider wer in einem Hof erschossen wurde*
13. Compare:
- (i) *??Otto hat heftig heute einen Kollegen beschimpft.*
 O. has strongly today a colleague insulted
- Note however that PP manner adjuncts may be scrambled:
- (ii) *Otto hat auf seine heftige Art heute einen Kollegen beschimpft.*
 O. has in his vehement way today a colleague insulted
14. Eckardt (this volume) arguing for the base-generation of manner adjuncts in front of an object claims that an indefinite object preceding a manner adjunct does not show an existential but a partitive reading. However, the employed notion for partitivity is extremely weak, it is already satisfied if “we assume a common interest in what the subject did to some thing in his/her environment” (Eckardt, this volume). Thus, Eckardt’s claim that an indefinite object preceding a manner adverbial cannot have just an existential reading is hardly falsifiable for standard transitive verbs. With a sentence containing a verb of creation there is detectable effect:
- (i) a. **dass Hans eine Flöte geschickt schnitzte*
 that H. a flute skilfully carved
 b. *dass Hans geschickt eine Flöte schnitzte*

According to Eckardt, in an out-of-the-blue context the partitivity requirement which is imposed on the indefinite object by its position in (ia) cannot be fulfilled in such a sentence because of the very nature of a verb of creation.

Frey (2001) proposes another explanation for (i). A sentence containing a verb of creation can be true although the event of creation is not completed and consequently, the object does not exist in the model. The object is just part of the intentions or plans which are denoted by the verb. The syntactic correspondence of this fact is that, with a verb of creation, an existentially interpreted indefinite has to belong to the complex predicate, cf. (ib). The existential requirement which is expressed by existentially interpreted indefinites occurring outside of the complex predicate has to be fulfilled by the described event. Thus, a sentence like (ia) implies the existence of an object denoted by

the indefinite (because of the position of the indefinite) and, at the same time, it does not imply it (because of the verb of creation). This yields a contradiction.

That an existentially interpreted indefinite object of a verb of creation belongs to the complex predicate is confirmed by the fact that, with such a verb, the indefinite has to participate in an inversion construction:

- (ii) a. *dass Hans wird eine Flöte schnitzen müssen*
 b. **dass Hans eine Flöte wird schnitzen müssen*

Eckardt's account leaves the ungrammaticality of (iib) as well as the ungrammaticality of (64) unexplained.

Let me add two remarks on Eckardt's comments (this volume) on an earlier version of the present paper. First, contrary to Eckardt's view, the fact that an existentially interpreted *w*-phrase may occur after a manner adverbial does not cast any doubt on test (I). Such a *w*-phrase certainly may participate in the formation of a complex predicate. Secondly, because it is a standard assumption that a resultative adverb is part of the complex predicate in German (cf. Frey 2001 and the references cited therein), we expect the following sentence to be fine (Frey 2001):

- (iii) *Maria hat heute spielerisch einen Patienten unter den Tisch getrunken*
 M. has today playfully a patient under the table drunk

In (iii) the indefinite NP and the resultative adverb are both part of the complex predicate. There is no condition, as Eckardt seems to presuppose, that only one element may participate in the complex predicate formation. Furthermore, because a resultative relates semantically to the object, it has always to follow the object.

The same reflections apply if a verb of creation is present. Therefore, the following sentence is fine:

- (iv) *Desdemona hat ein Kleid hauteng entworfen*
 D. has a dress tightly designed

Thus, I cannot see why resultatives should pose any problems for the analysis of manner adjuncts as base-generated next to the predicate.

15. The asterisk on the occurrence at the sentence initial position is meant to refer to a base-generated and unmarked occurrence. It is possible to move a manner adjunct to this position. In this case it would be focussed.
16. Cf. for a similar point Shaer (this volume).
17. For the formulation of the constraint it is assumed, without being crucial, that scrambling is an instance of A-movement, cf. e.g. Haider (1993).
18. Browning and Rizzi share crucial assumptions to explain examples like (94b): (i) a trace can be licensed by a governing Agr, (ii) overt *that* may not host Agr, (iii) an empty complementizer may host Agr.

Rizzi assumes that by the presence of a sentence initial adjunct, an additional functional layer is generated (F^1 in (i)). By that, in a sentence like (94b) an empty complementizer that can host Agr becomes adjacent to the trace of the subject:

- (i) *Who_i do you think that [unfortunately [[Fⁱ+Agr₁ [F^j]] [t₁' [Fⁱ+Agr₁ [t₁ made no reply]]]]]?*

The subject trace t_1 is licensed by the empty functional projection F^i which is endowed with Agr features. These Agr features are licensed by the intermediate subject trace t_1' in the specifier position of F^i . How is t_1' licensed? Rizzi (1997) assumes that in English the enriched functional head F^i +Agr can move to the higher functional head F^j . From there it can license t_1' .

It is reasonable to assume that a moved adjunct carries an index. Therefore, we get the following ill-formed structure for a sentence like (94c):

- (ii) * ... [*stupidly*₂ [[Fⁱ+Agr₁ [F^j₂]] [t₁' [Fⁱ+Agr₁ [t₁ t₂ made no reply]]]]]]

By obligatory spec-head agreement, the index on *stupidly* is present on F^j . The head-to-head movement of F^i +Agr₁ to F^j , which would be necessary to license t_1' , therefore results in contradicting indices on F^j .

19. The German prefield is generally assumed not to be a position for base-generation. Therefore, in the text, it is assumed that the condition (20) has to be fulfilled in the middle field. The argumentation would not be affected if we were to allow base-generation in the prefield. In this case, only SADJ which are subject to (20) could be base-generated there, whereas due to (93ii) subject-oriented SADJ could not.

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