

Minimalist Syntax of German(ic)

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Part II: Examples of minimalist descriptions of German syntax

The so-called *Topologisches Feldermodell* is a classic description of German sentence structure. It attributes to any German sentence the following sequence of 'fields':

	Vorfeld	linke Satzklammer	Mittelfeld	rechte Satzklammer
Declarative:	Peter	hat	die Katze gestern	gesehen.
"	Peter	sieht	die Katze nicht.	
Yes/No-Q.		Sieht	Peter die Katze?	
"		Hat	Peter die Katze	gesehen?
Wh-Question	Wer	hat	die Katze	gesehen?
"	Wen	hat	Peter	gesehen?
subordinate:		dass	Peter die Katze	sieht.
General:	\pm Wh	V_{fin} or C	Arguments, adjuncts	$V_{\pm fin}$

We will highlight a sample of syntactic properties for each of these parts of a sentence:

II.1. Basic word order difference: CP and TP in English and German

II. 2. Re-arranging arguments by *scrambling* in English, German and Dutch.

II.1. German(ic): English, German and Dutch compared

II.1.1. V2 vs. SVO word order

Word order property	German	English
V-to-T	yes	no (V), yes (Aux)
T-to-C	yes	no
Subject-to-SpecTP	yes	yes
Topic-to-SpecCP	yes	no
T is:	right-headed	left-headed

The basic word order of V2 (German) and SVO (English) follows from their use of CP. The 'sentence bracket' of German is explained by assuming a right-headed TP.

II.1.2. On scrambling types and subject expletives

Scrambling type	German	Dutch	English
'Pull' type	yes	yes	no
'Complex' type	yes	no	no
subject expletives in SpecTP	no	yes	yes

German allows more complex scrambling than both English and Dutch: English does not allow re-arranging of material within TP at all, and Dutch only allows to 'pull' material over adverbials (but not to re-arrange them, cf. (0 a)). German, on the other hand, allows for complex re-arrangements of arguments within TP (0 b):

- (0) a) Topic V **Subj** (Adv) **Obj** (Adv) V vs. *Topic V **Obj** (Adv) **Subj** (Adv) V
 b) Topic V **Subj** (Adv) **Obj** (Adv) V Topic V **Obj** (Adv) **Subj** (Adv) V

The other noteworthy fact about TP is that German, unlike English and Dutch, does not allow subject expletives in SpecTP:

- (0) b) He claimed [_{CP} that [_{TP} there was discovered a new language]] (English)
 c) *Er sagte, [dass [es wurde eine neue Sprache entdeckt]] (German)
He said, that Expl was a new language discovered
 dat (er) gedanst wordt (Dutch)
that (Expl) danced becomes
'that there is dancing'

Is there a connection between lack of SpecTP expletives and having complex scrambling?

II.2. Re-arranging arguments by scrambling

Argument DPs, in German, seem to line up in different orders, depending on what the context of an utterance is, and which kind of information they bring to the conversation. How can these different orders be accounted for in a minimalist grammar?

II.2.1. Projecting arguments in vP

Just like in English, there is good reason to assume that arguments in German are projected in a *fixed* order. Thus, arguments seem to be arranged in the base order first, only to be then *re-arranged* to fit the sentence into context.

But why shouldn't arguments be arranged in the order they appear in right from the start? Why assume a base order that is only waiting to be changed?

As Lenerz ('77) points out, some sentences are more marked when it comes to specific information structure contexts:

- | | | |
|-----|--|---|
| (i) | Q: Was ist los?
What is loose
'What's going on?' | A: Peter hat der Katze das Futter gegeben
Peter has the cat the food given
'Peter has given food to the cat' |
| | | A': #'Der Katze hat Peter Futter gegeben'
A'': #'Futter hat Peter der Katze gegeben'
A''': #'Der Katze hat Peter Futter gegeben'
A''': #'Peter hat das Futter der Katze gegeben' |

Answers A'-A'''' are not per se ungrammatical. Rather, they are inadequate contextually (indicated by #), i.e. they need a special context for them to be adequate. Consider (ii), where the indirect object is in the focus:

- | | | |
|-------|---|--|
| (ii): | Q': Wem hat Peter Futter gegeben?
To-who has P. food given
'Who has Peter given food to?' | A': 'Der Katze hat Peter
Futter gegeben'
A''': 'Peter hat das Futter der
Katze gegeben' |
|-------|---|--|

In this context, A''' and A'''' are perfectly acceptable. Hence, it seems that it is the specific context introduced by Q' that makes them contextually adequate. In (i), this specific context is lacking, because Q introduces a general purpose, out-of-the-blue context.

Going through all possible contexts, it turns out that A is adequate in *any* context. Given that this sentence is the least marked word order, we can assume that this is the base order projected as vP. For all other word orders, we will have to devise a system that re-arranges arguments to meet specific contextual requirements.

II.2.2. Scrambling arguments around

Scrambling is the process that derives the different word orders we observe in German. The name was originally coined by J.R. Ross: Word order in German, he quipped, looks much like the outcome of scrambling eggs. As we will see, things are not that bad. In (iii), the Topologisches Feldermodell is mapped unto a generative tree structure. Also, (iii) demonstrates the major generalizations about German word order:

- | | | | | |
|--------|---|---------------------|---------------------|---------------------|
| (iii) | [CP ... VF ... [TP ... linkes Mittelfeld... [vP (AdvP) [vP ... rechtes Mittelfeld...] V _{fin}]] | | | |
| | <table border="0" style="width: 100%;"> <tr> <td style="text-align: center;">topics</td> <td style="text-align: center;">DPs_{-Foc}</td> <td style="text-align: center;">DPs_{±Foc}</td> </tr> </table> | topics | DPs _{-Foc} | DPs _{±Foc} |
| topics | DPs _{-Foc} | DPs _{±Foc} | | |

The relevant generalizations are:

- *Don't scramble focus!* (Lenerz '77, 2002)
- Unfocussed DPs can occur on either side of Adverbs (Lenerz 77, 2002).
- Scrambled DPs, too, tend to replicate the base order (Meinunger 2000).
- DPs are almost never scrambled over subjects (Lenerz 2002, Rosengren 94).
- Scrambling is clause-bound (Lenerz 2002, Müller & Sternefeld 94, Rosengren 94).

II.2.3. Representing Scrambling in German(ic): A minimalist approach

Recall that in the MP, internal and external merge are associated with different semantic tasks on LF:

- Only external merge merges arguments (Chomsky 2006: 7, 2005: 7).
- Only internal merge yields scopal or information structure effects (ibid).
- Internal merge is 'blind' to the semantics, i.e. it occurs for purely syntactic reasons (Chomsky 2006: 15).
- In the optimal case, only phase heads force internal merge (Chomsky 2005: 9).

Summing up these properties, Biberauer & Richards propose (iv) for the syntax-semantics interface of natural languages¹:

- (iv) "Optional rules (operations, EPP-features,...) feed obligatory interpretations;
Obligatory rules (operations, EPP-features,...) feed optional interpretations"
(2006: 40)

German, upon inspection, seems to be the exception to the rule:

- Focus, i.e. the clearly marked elements, appear to the right of adverbs, i.e. in their *unscrambled* base positions.
- *Scrambled* elements, on the other hand, should be marked in terms of information structure - but they are not: Don't scramble focus!

There are two ways to proceed from here:

- Conclude that German uses a language-specific, non-UG mechanism.
- Try to find triggers for scrambling movements which are in line with (iv).

II.2.3.1. Triggers

a) 'Antifeatures' Molnarfi (2002)

Noting the counter-intuitive positioning of arguments in the German middlefield, Molnarfi proposes that the left Mittelfeld is projected from [antifocus] features, which attract an element in order for it to 'escape' the focus domain to the right (2002: 1131f.). He argues:

"Note that there can be no A PRIORI objection against such a proposal: [...] antifocus licensing should enable a constituent to escape the focus domain" (2002: 1132).

A posteriori, however, we might add that [antifocus] is a rather isolated proposal: other elements do not move for [anticase] or [anti-Wh], either.

¹ Cf. Chomsky: "Optional operations can apply only if they have an effect on outcome"(99: 28). If there is no effect on outcome, the operation should not occur (99: 29).

b) [Topic] as the trigger feature: Meinunger (2000)

Unlike Molnarfi, Meinunger identifies a [topic] feature as the trigger for scrambling (2000: 64). All scrambled DPs, he argues, are "familiar" and "commented on" (2000:90).

Meinunger is certainly right about this interpretation effect. However, the MP proposes an even stronger correlation between internal merge and interpretative effects: If the interpretative effect can be achieved *without* moving, internal merge should not occur.

Unfortunately, this is a problem for German: Familiar arguments can be commented upon even when they are not scrambled (cf. Lenerz 2002: 179):

- (v) Q: Wem hast Du das Buch gegeben?
To-who have you the book given
'Who have you given the book to?'
- A: Ich habe [dem/einem Studenten] das Buch gegeben.
- A': Ich habe das Buch [dem/ einem Studenten]_F gegeben.

Both of these sentences are equally acceptable, and *das Buch* is mentioned in the context. Hence, *familiar/commented-on arguments need not scramble*. Thus, there is no effect on outcome. [Topic] can be licensed in its base position, so by (iv), it should be.

c) Edge features of vP as the 'blind' solution

In some older analyses, scrambling was represented as adjunction to VP (e.g. Müller & Sternefeld 93). Minimalism affords a new way to a similar representation with so-called *edge features*. Edge features simply represent the fact that a syntactic object is available for merge with another object. Given that internal merge is essentially free, Chomsky concludes: "EF of a phase head PH can seek any DP in the phase and raise it to Spec-PH" (2005: 17). This would entail, as pointed out above, that some semantic effect or other should result from the movement. Hence:

- DPs that can serve as binders in the scrambled position or take scope over other phrases can be scrambled by internal merge & EF.
- However, the DPs in (v) still cannot be scrambled by EF, because no new binding configuration or scopal reading arises.

- Also, EF might be liable to overgenerate structures which are, as a matter of fact, impossible, e.g. scramble foci.
- This problem cannot be remedied by assuming that *Don't scramble focus!* is actually a requirement of LF: LF is supposedly universal for all languages, but some languages (e.g. English) have no need for such a requirement. Furthermore, other languages allow for or even require foci to be moved.

To sum up, EF can serve as a trigger for some, but not all scrambling movements.

II.2.3.2. On optionality in minimalist syntax

In early versions of minimalist syntax, optionality was to be eschewed: Given that movements were triggered by the 'greed' of the moved element, either the element had the incentive to move, or it did not.

However, this strict correlation of a (primarily morphological) incentive with forced movement does not seem to do the data justice:

Webelhuth points out that German seems to be a language that does not always license the EPP of T in the same way (cf. 84: 207). I.e., in some sentences, the subject is not moved to SpecTP, it seems, insofar as it is not the leftmost element in the middlefield:

- (vi) dass dem Mann_{DAT} das Buch_{NOM} geschenkt wurde
that the man the book given-as-p was
 'that thee book was given to the man as a present'

Furthermore, impersonal passives simply contain no subject argument that qualifies for movement to SpecTP to begin with:

- (vii) Es wurde getanzt.
it was danced
 'People danced'

Interestingly, German does *not* allow expletives in the middlefield of these constructions:

- (viii) dass (*es) dem Mann das Buch geschenkt wurde
that it the man the book given-as-p was

Gestern wurde (*es) getanzt.
yesterday was it danced

Biberauer & Richards (2006) propose that the EPP of SpecTP is indeed satisfied in (vi, vii):

- SpecTP seems, in fact, to be occupied by some object or other, as EXPL is impossible.
- The sentences are, quite simply, grammatical.

Given that subject-to-SpecTP does not seem to have occurred, how is the EPP licensed? Biberauer & Richards propose that EPPs have to be satisfied obligatorily, but the means to this end are an instance of true optionality:

- In English, the subject DP containing the goal features is raised to SpecTP.
- This means that DP material *other than the goal features* is pied-piped.
- In German, the DP contains the goal, but *the whole of vP is pied-piped* along to Spec-TP. This explains why EXPL is not possible: SpecTP is taken up by the raised vP (2006: 18).

Also, one might add, this might explain why subjects can 'stay low': given a copy theory of movement, as there is now two copies of the subject available (see 3. below) :

[_{TP} [_{vP} **Subj** v iO dO V] [_{vP} AdvP [_{vP} **Subj** v iO dO_{Foc} V]] V]

Thus, the amount of material that is moved in order to satisfy an EPP feature is a matter of true optionality, as far as UG is concerned: individual languages make individual choices.

II.2.3.3. Scrambling without a scrambling trigger

Biberauer & Richards' proposal provides us, I think, with the kind of mechanism needed to identify the 'second' source of scrambling, in addition to EF (cf. 1.c):

Raising vP explains the otherwise unmotivated movements (see 3.1.).

The theory of *Distributed Deletion* (Fanselow & Cavar 2002) explains how elements can also, optionally, stay below the adverb (see 3.2.).

II.2.3.3.1. Up

Recall that it was precisely the elements that had *no* reason to raise that were the ones that could raise *optionally*. Raising vP allows us to capture just this: An element that has *no* reason to raise out of vP can be affected by vP-to-TP raising.

(ix) [_{TP} [_{vP} Subj v iO dO V] [_{vP} AdvP [_{vP} Subj v iO dO_{Foc} V]] V]

If the 'upper' copy of, say, iO is spelled out, the scrambling effect arises:

(x) [_{TP} [_{vP} Subj v iO ~~dO~~ V] [_{vP} AdvP [_{vP} ~~Subj~~ v iO dO_{Foc} V]] V]

= Subj ... **iO** Adv dO... V

As the EPP of T has to be satisfied obligatorily, no special interpretation is implied when vP moves to SpecTP.

Suppose, on the other hands, that some elements had vacated vP *before* vP-to-TP could occur, these elements would, seemingly, 'stay behind', even though they, in fact, were the ones that *had* a reason to move! For example, a QP might move in order to affect the scopal outcome of a derivation:

(xi) [_{vP} QP [_{vP} Subj v ~~QP~~ Obj V]] V]

Suppose that this movement leads to the deletion of the lower copy of QP. Once *vP* raises to SpecTP now, QP is 'left behind':

(xii) [_{VP} Subj *v* QP Obj *V*] AdvP [_{VP} QP [_{VP} Subj *v* QP Obj *V*]] V
 = Subj ... Obj ... Adv... **QP** V

In this way, the 'less qualified' elements could appear to the left of the elements which actually had a reason to move: Whoever did *not* get out of *vP* was 'taken along for the ride'.

II. 2.3.3.2. Down

According to Lenerz (77), focus in German has to occur to the right of Adv. Fanselow & Cavar observe that focus is also obligatorily found in the right copy of a so-called split movement (2002: 72):

(xiii) Autos aus Deutschland gefallen mir KEINE.
 Cars from Germany please me none
 'As for cars from Germany, I don't like any of them'

The DP "no cars from Germany" is 'split up' by the movement. Fanselow & Cavar offer the following solution:

Distributed Deletion

"Suppose that XP bears a feature *f*₁ that requires that XP be overtly realized in position A, and an additional feature *f*₂ that forces XP into position B. Then XP is split up in [...] German" (ibid.: 85)

In (xiii), the DP "keine Autos aus Deutschland" has to serve both as a topic (at the left edge of the sentence) and as the focus (at the right edge of the middlefield). Hence, the deletion of the copies is "distributed":

(xiv) ~~Keine Autos aus Deutschland gefallen mir keine Autos aus Deutschland.~~
 = Autos aus Deutschland gefallen mir keine.

Scrambling, we may propose, could use the same mechanism:

- Elements in focus spell out on the right of adverbials (= Don't scramble focus!)
- Elements not in focus spell out wherever (= no effect on outcome, hence still in *vP*)
- The subject preferably spells out in SpecTP, but other material in this position can waive this requirement (= *vP*-to-TP always allows satisfying the EPP).

II. 2.3.3.3. Evidence for the analysis: to affect outcome or not to affect outcome...

So far, we have identified two ways for elements to scramble:

- By EF, i.e. with effect on outcome
- By EPP of TP/ pied-piping, i.e. without effect on outcome

3.3.1. and 3.3.2 demonstrate that, indeed, some scrambled elements affect outcome, while others do not.

II.2.3.3.3.1. Binding by scrambled elements

German shows a so-called "anti-crossover effect" (cf. Webelhuth 84: 211f.):

- (xv) daß doch [seine_i Eltern]_k jeder_i t_k liebt
that part his parents everybody loves
'that everybody loves his/her parents'

In (xv), the subject 'jeder' binds the object 'seine Eltern' (i.e. people love their *own* parents, not somebody else's). Hence, the observed order (object *outside* of binding domain of subject!) is immaterial to the binding interpretation. Our analysis predicts this:

- (xvi) daß [_{VP} doch [_{VP} jeder_{Foc} seine Eltern]] [_{VP} doch [_{VP} jeder_{Foc} seine Eltern]] liebt

If it is only vP that is raised to SpecTP, with distributed deletion yielding the observed word order, the subject *can* bind the object: as a matter of fact, the binding configuration is not affected by vP-to-TP.

Likewise, scrambling objects across subjects does not always result in new binding options (cf. Müller & Sternefeld 94: 354):

- (xvii) *daß [_{IP} den Fritz_i [_{IP} sich_i t_i gewaschen hat]]
that the Fritz himself washed has
'that Fritz has washed himself' (intended)

Again, this is expected if scrambling was brought about by vP-to-TP:

- (xviii) daß [sich den Fritz] [sich den Fritz] gewaschen hat.

'Fritz', in (xviii), is illicitly bound by 'sich' even after vP-to-TP.

II.2.3.3.3.2. No need to invert scopus inversion

In complex foci, two parts of the sentence can be in focus:

- (xix) weil ein einzelner Arzt (ALLEN Patienten ja NICHT) wird helfen können.

because a single doctor all patients part not will help can
'because a single doctor might not be able to help all patients'

'because, for all patients, the doctor will not be able to help them'

but not:

Again, the observed order gives an unexpected scopal reading. According to Krifka ('98), this is evidence for that fact that focus can un-invert the scopal inversion caused by scrambling in (xix).

With vP-to-TP, there is no inversion to begin with, and hence no inversion of the inversion:

(xx) [_{VP} ein einzelner Arzt /ALLEN P.] ja [_{VP} NICHT [_{VP} ~~ein einzelner Arzt~~ /ALLEN P._{Foc}]]...

In sum, scrambling of German could be explained given the means of the MP. Hopefully, then, German, too, is in line with UG after all!

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