



On Exceptional Vorfeldbesetzung

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Overview

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 - What are Exception Phrases?
 - Exception Phrases in German
- Corpus Study
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 - Raw Linearization Results
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 - The Nature of EWs
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General Idea

- (1) [EP **Bis auf zwei Ausnahmen**] sind alle genannten
 except for two exceptions are all named
 Politiker weiterhin in ihrem Zivilberuf tätig.
 politicians still in their civil job active.
*Except for two exceptions all aforementioned politicians still
 keep their normal jobs.*
- ▶ When there is an **exception phrase** in a German sentence, it has a higher than average probability of occurring in the vorfeld.
 - ▶ Information Structure does not seem to explain for that fact.
 - ▶ We find that the tendency is most likely not a vorfeld tendency but a simpler ordering tendency.

Some terminology

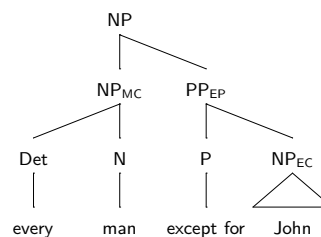
- ▶ **Exception phrases (EP)** introduced by exception words (EW): *but, except (for), außer, bis auf, ...*
 - ▶ They embed some phrase, the exception complement (EC).
 - ▶ They (maybe) modify some other constituent, the modified constituent (MC)
- (2) [EP **Bis auf** [EC **zwei Ausnahmen**]] sind [MC **alle genannten Politiker**]. . .
- ▶ The denotation of the EC is somehow subtracted from (or added to) the denotation of the MC.

Analyses I

- ▶ Semantics: von Fintel (1993), Hoeksema (1995), Moltmann (1995), Lappin (1996), Gajewski (2008).
- ▶ A bit of syntax: Reinhart (1991).
- ▶ Strong bias towards analyses of structures with NPs, analyzing *except for* etc. as prepositions.
- ▶ Extensions to sentential EPs (e.g., Moltmann).
- ▶ Some remarks on connective EWs: Pasch et al. (2003).

Analyses II

- ▶ Prototypical: [*Every man except for John*] read the book.
- ▶ The structure would be something like:



COSMAS examples with *bis auf* and *außer* I

- (3) **Bis auf kleine Änderungen** behielt das Schloss das
 except for small changes kept the castle the
 ursprüngliche Aussehen.
 original appearance
*The castle kept its original appearance with only a few
 changes.*
- ▶ Complement: NP *kleine Änderungen*.
 - ▶ Modified: NP *das Schloss* or *S*.

COSMAS examples with *bis auf* and *außer* II

- (4) **Bis auf die magere Torausbeute** konnte der neue
 except for the poor goal yield could the new
 VfL-Spielertrainer () mit den Darbietungen seiner Mannen
 VfL trainer with the display of his men
 zufrieden sein.
 satisfied be
*The new VfL trainer could be satisfied with the performance
 of his team, although they didn't shoot very many goals.*
- ▶ Complement: NP *die magere Torausbeute*.
 - ▶ Modified: NP *den Darbietungen* or *S*.

COSMAS examples with *bis auf* and *außer* III

(5) **Außer ein paar Toren** hat er eh nur
 except for a few goals has he anyway just
 rumgestanden.
 stood around
He just stood around, but not when the goals were made.

- Complement: NP *ein paar Toren*.
- Modified: S? VP?

COSMAS examples with *bis auf* and *außer* III

(6) Wie schwer es ist, **außer ansehnlich** () auch ()
 how difficult it is except for aesthetically also
 erfolgreich zu spielen, erlebte () TuS Hohenecken ().
 successfully to play experienced TuS Hohenecken
*How difficult it is to play successfully as well as attractively
 was experienced by the TuS Hohenecken.*

- Inclusive/additive meaning of the EW.
- Complement: AP *ansehnlich*.
- Modified: AP *erfolgreich*.

COSMAS examples with *bis auf* and *außer* IV

(7) **Außer bei Reparaturwünschen** ist die massenhafte
 except for with repair wishes is the plentiful
 Abwesenheit von Arbeitnehmern kaum belegbar.
 absence of employees barely provable
*It cannot be proven that a substantial number of employees is
 generally absent, except when people need to get a repair job
 done.*

- Complement: PP *bei Reparaturwünschen*.
- Modified: S.

Design of the corpus study

- Data from COSMAS (3,500,000,000+ words).
- Random sample of 100 sentences with *bis auf* and *außer* each.
- Complex manual annotation.
- Careful cleanups, so *N* is usually in [165..200].
- Conditions for χ^2 were always satisfied.

EC tendencies

Not so much a tendency: *bis auf* almost exclusively takes NPs.

EC Cat.	<i>außer</i>	<i>bis auf</i>
NP	68	100
PP	28	0
S/CP/VP	4	0

MC tendencies

Tendency: *außer* slightly favors PPs as modified constituents.

MC Cat.	<i>außer</i>	<i>bis auf</i>
NP	68	69
PP	22	6
S/CP/VP	9	12

$\chi^2 = 8.84, df = 2, p = 0.01$

Field model linearization results

- In total 52% of all EPs are located in the periphery.
- **45% of all EPs are in the vorfeld.**
- Does the affinity of EP to the periphery depend on the choice of the EW?

Loc. of EP	<i>außer</i>	<i>bis auf</i>
Mf	37	57
Vf/Nf	60	42

- $\chi^2 = 7.41, df = 1, p = 0.006, \phi = 0.19$
- Answer: Yes, *außer* likes the periphery even better than *bis auf* does.

Vorfeld-specific analysis

- None of the two EWs likes the vorfeld better than the other one does.

Loc. of EP	<i>außer</i>	<i>bis auf</i>
Nf	11	3
Vf	49	39

$\chi^2 = 2.61, df = 1, p = 0.11$

Loc. of EP	<i>außer</i>	<i>bis auf</i>
Mf/Nf	48	60
Vf	49	39

$\chi^2 = 2.45, df = 1, p = 0.12$

Is this exceptional vorfeldbesetzung?

- ▶ EWs are **predominantly prepositional**.
- ▶ They mostly take NPs as their complement and in most cases assign **case** to that NP.
- ▶ **Only in 5 of 200 sentences are the EP and the MC in the vorfeld together!**
- ▶ ⇒ The EP is a highly preferred **single** vorfeld filler
- ▶ Overall probability for EPs to occur in the vorfeld: $p_{Vf}(EP) = 0.45$
- ▶ **We now need to find out how likely other PPs are as single vorfeld fillers.**

PPs in the vorfeld (token-level)

- ▶ Auxiliary study using the DWDS corpus (morphologically tagged).
- ▶ For a randomly selected PP, what is the probability of it occurring in the vorfeld?
- ▶ **Random sample of 500 PPs:** $p_{Vf} = 0.15$.
- ▶ GOF for *außer* with that distribution: $\chi^2 = 95.96, df = 1, p < 2.2 \cdot 10^{-16}$
- ▶ GOF for *bis auf* with that distribution: $\chi^2 = 46.21, df = 1, p < 1.1 \cdot 10^{-11}$
- ▶ **EPs are not do not behave like random PPs w.r.t. vorfeld positioning.**

A detailed look at some prepositions (types)

prep.	freq. band (COSMAS)	prob. (Vf)	raw freq. (DWDS)
<i>in</i>	2	0.11	1,395,204
<i>von</i>	3	0.04	836,467
<i>an</i>	4	0.06	372,708
<i>aus</i>	5	0.08	282,252
<i>durch</i>	6	0.06	259,543
<i>ohne</i>	7	0.08	64,327
neben	8	0.26	30,512
<i>hinter</i>	9	0.1	29,198
angesichts	10	0.39	6,014

- ▶ Syntactic status of PP (subcategorized/V adjunct/N adjunct/etc.) was not taken into account.
- ▶ A more detailed analysis would probably result in an even more favorable picture.

More comparison

- ▶ Probability of occurring in the vorfeld for most PPs: $0.05 < p_{Vf} < 0.1$.
- ▶ **neben** ('aside from', 'next to') has $p_{Vf} = 0.26$, but actually has an **exception reading** besides a simple local reading.
- ▶ **angesichts** ('in view of') has $p_{Vf} = 0.39$, but most likely only forms PPs which are sentence adverbials (frame setters), which are expected to occur in the vorfeld often anyway.
- ▶ Notice that PPs which prototypically modify/form a constituent with an NP (such as *von*, 'of') have a significantly less than average probability of occurring in the vorfeld ($p_{Vf} = 0.04$).
- ▶ **EPs are exceptionally good vorfeld fillers.**

Is the vorfeld story the full story?

(8) Das Gesundheitsamt hat **[bis auf zwei]** [alle Duschen] die health authority has except for two all showers wieder freigegeben.
 again approved
The health authority has approved all but two showers.

- ▶ **What is the probability that the EP simply precedes the MC** (regardless of syntactic fields)?
- ▶ **Only 38 MCs precede the EP** ($p_{EP>MC} = 0.8$)
- ▶ Is this explained by the affinity to the vorfeld?
- ▶ **No!** GOF with $p = (0.45, 0.55)$ for (153, 38): $\chi^2 = 95.10, df = 1, p < 2.2 \cdot 10^{-16}$

Plausible Conclusions

- ▶ **The simple ordering tendency is significantly stronger than the vorfeld affinity.**
- ▶ Not vorfeld affinity itself is the reason for the preferred occurrence of EPs in that field.
- ▶ In many cases, it might be the only position where EPs can land and satisfy the dominant simple ordering constraint.

The nature of EWs?

- ▶ We have mostly treated EWs as prepositions, but they show a far more flexible behavior.
- ▶ Similar to *statt* ('instead of') as described by Oppenrieder (2008).
- ▶ EPs Obey a constraint on linearization: EP > MC.
- ▶ As a result, EPs occur in the vorfeld quite often.
- ▶ Otherwise, the affinity to the vorfeld seems hard to explain.

Could IS explain for the ordering?

- ▶ A qualitative look at the data suggests that the EC can be given or new and older or newer than the MC.
- ▶ For NPs as EC, we can test for and **exclude a connection between definiteness and ordering:**

	def.	indef.
Vf	48	25
not Vf	58	37

$$\chi^2 = 0.22, df = 1, p = 0.64$$

	def.	indef.
MC > EP	21	9
EP > MC	82	51

$$\chi^2 = 0.73, df = 1, p = 0.39$$

Hypothesis

- ▶ The semantic effect of the EP is probably rather complex. . .
- ▶ . . . so **ordering might facilitate processing**.
- ▶ Also, the exceptions are **what the sentence is not about**.
- ▶ Is IS also related to processing?
- ▶ *The statuses to be discussed here [. . .] all have to do with the speaker's assessment of how the addressee is able to **process what he is saying against the background of a particular context**. (Chafe 1976:27)*
- ▶ If IS-induced ordering is ultimately related to processing, the explanation for the behavior of EPs would not be in terms of IS, but in terms of the same underlying principle.

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