Subparts of contrastive topics and the syntax–information structure interface

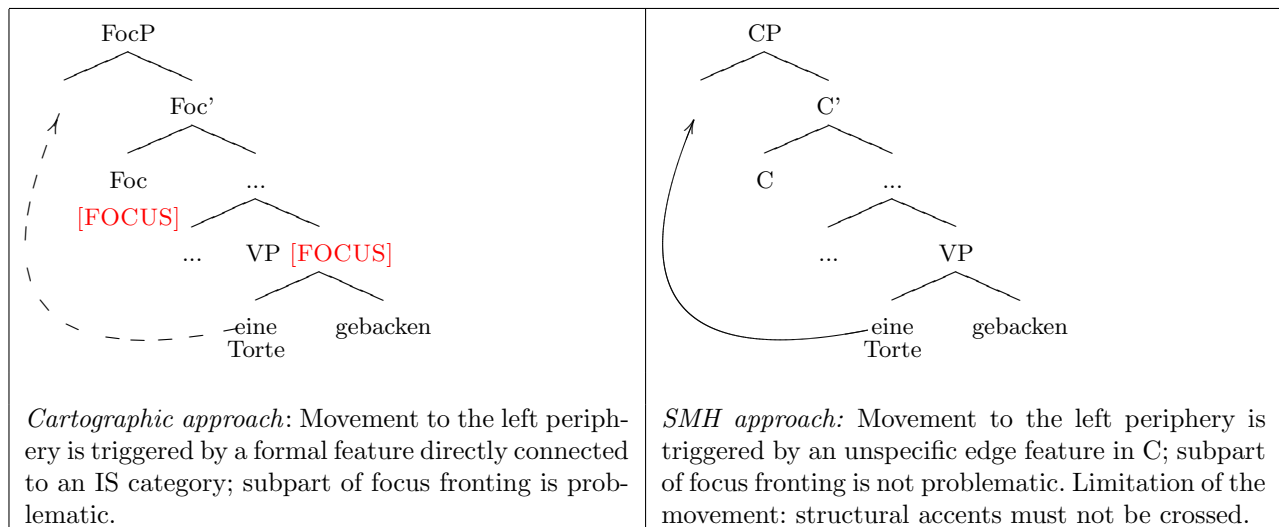## 1   The syntax–information structure interface

There are competing approaches concerning the correct analysis of movement to the left periphery in German (and in other languages).

- *Cartographic approaches* (Rizzi 1997 for Italian; e.g. Frey 2005 for German): There are syntactic categories that correspond directly to IS categories like focus or topic; movement to the left periphery is triggered by feature-checking.

- *Strong Modularity Hypothesis* "No information structure notions can be ecoded in the grammar as formal features" (Horvath 2010).

    Fanselow & Lenertová (2011) present data in favour of this hypothesis: *Subparts* of the IS category focus can move to the left periphery, which is problematic for feature-checking approaches. They suggest a model in which movement to the left periphery is triggered by an unspecific edge feature. The observed constraints result from restrictions that have to do with linearization and accentuation: structural accents are immediately linearized; thus, they cannot cross each other.

    Subpart of focus fronting example. Context: *What did Peter do?* (VP focus)

    Eine Torte hat Peter gebacken.
    a   cake   has Peter baked
    'Peter baked a cake.'

Cartographic approach: Movement to the left periphery is triggered by a formal feature directly connected to an IS category; subpart of focus fronting is problematic.

SMH approach: Movement to the left periphery is triggered by an unspecific edge feature in C; subpart of focus fronting is not problematic. Limitation of the movement: structural accents must not be crossed.

2   New empirical observations about contrastive topic movement

Main claim: Subpart of contrastive topic movement is restricted in a certain way in German. In the cartographic approach, movement is *too limited* to capture the relevant generalization, in the SMH approach, movement is *not limited enough*.

Background: contrastive topics

- Sentences containing a contrastive topic (CT) also contain a focus
- *Phonology*: CTs carry a rising accent, foci carry a falling accent
- *Pragmatics*: effect of a double contrast (cf. Büring 1997, 2003)

Observations about subparts of contrastive topics

- *Observation I: Subparts of contrastive topics can appear in the left periphery.*

    Das /PAKET hat er NICHT\ zur Post   gebracht...
    The parcel   has he not   to   post.office taken
    'He didn't take the parcel to the post office...'

  Possible continuations:
  ...aber die Briefe. ('...but the letters' — DP contrast)
  ...aber wenigstens hat er sein Zimmer aufgeräumt. ('...but at least he tidied up his room' — *VP contrast*)

- *Observation II: VP contrast is possible when the DP is fronted, and impossible when the PP is fronted.*

    a. Das /PAKET hat er NICHT\ zur Post gebracht, aber wenigstens hat er sein Zimmer aufgeräumt.
    b. #Zur /POST hat er das Paket NICHT\ gebracht, aber wenigstens hat er sein Zimmer aufgeräumt.

Proposed Generalization:

> Either the whole contrastive topic or a part of it can be fronted in German.
> In the case of *partial fronting*, it has to be *the left directly dominated sub-constituent* that moves.

Experiment

Method:

- 25 participants, stimuli were presented auditorily (16 item sets, 32 fillers; controlled intonation).

**Design:** 2×2, independent variable: acceptability rating (1–7)

- Factor 1: Fronted XP

    Level 1: Fronted DP
    Level 2: Fronted PP

- Factor 2: Type of contrast (determined by context)

    Level 1: DP/PP contrast ("narrow contrast")
    Level 2: VP contrast ("wide contrast")

Results:

- Means and standard deviations:

	DP fronted	PP fronted
narrow contrast	4.94 (1.53)	5.18 (1.51)
wide contrast	4.47 (1.57)	3.16 (1.65)

- no significant difference between narrow and wide contrast in „fronted DP" condition (t-test: $p > 0.01$)

  $\rightarrow$ subparts of CTs can be fronted in German

- highly significant interaction between the factors (ANOVA: $p < 0.001$)

  $\rightarrow$ which phrase was fronted matters

Experiment 1

*Rating* (y-axis), *Type of contrast* (x-axis): eng, weit. Fronted phrase: DP, PP.
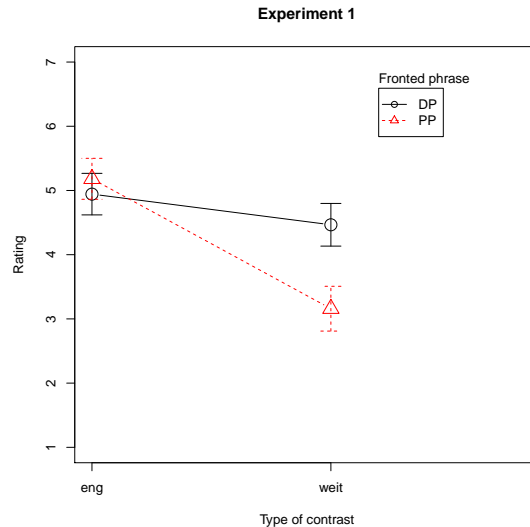
3 Theoretical consequences

A closer look at the cartographic approach by Frey (2005)

Frey (2005) assumes two different types of movement to the Vorfeld:

1. *Genuine $\bar{A}$-movement*: An element with a contrastive interpretation can be moved to Spec-Kontr (triggered by an EPP feature associated with the feature [KONTRAST]).

2. *Formal Fronting*: The highest element of the Mittelfeld can be moved to SpecFin without any pragmatic effect (triggered by an EPP feature).

CP / C' / C / KontrP / Kontr' / Kontr [KONTRAST] / FinP / Fin' / Fin ...
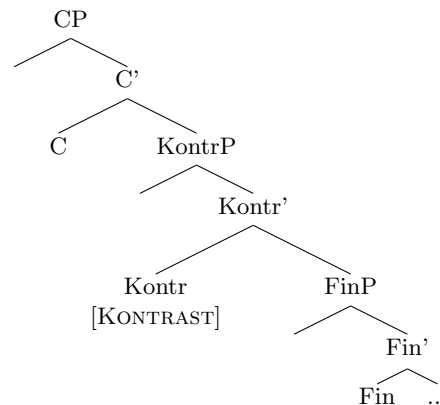
Can this approach account for my data?

(a) [Das Paket]$_i$ hat er t_i nicht zur Post gebracht.

If this is genuine $\bar{A}$-movement, the only available interpretation should be that "das Paket" alone is contrasted.
$\rightarrow$ **incompatible with my results**

(b) [Zur Post]$_i$ hat er das Paket nicht t_i gebracht.

If this is genuine $\bar{A}$-movement, the only available interpretation should be that "zur Post" alone is contrasted.
$\rightarrow$ **compatible with my results**

But is it correct that (a) has to be analyzed as genuine $\bar{A}$-movement?

— No, it could also be **Formal Fronting**! 'Das Päckchen' can be the highest element of the Mittelfeld.

$\rightarrow$ Genuine A-bar-movement is *too limited* to account for the experimental results, but the data can be captured by Formal Fronting — further research necessary.

A closer look at the SMH approach by Fanselow & Lenertová (2011)

How freely an element can move to the left periphery depends on its accentuation status:

- Fronting of *structurally accented elements* is limited: No other structural accent must be crossed, because structural accents are immediately linearized in relation to each other.

- Fronting of *structurally unaccented elements* — including elements with **contrastive accents** — is *not constrained*.

Can this approach account for my data? Since CTs carry a contrastive (= non-structural) accent, the model predicts that *any subpart of a CT* should be able to move to SpecCP.

> → The experiment has shown that movement of elements with non-structural accents is *more restricted* than the model predicts.

4   Summary

- Subparts of contrastive topics can appear in the German Vorfeld. Fanselow & Lenertová's argument that partial fronting is problematic for cartographic approaches also applies to this type of movement. The concrete cartographic implementation by Frey (2005), however, has not been falsified, because the presented data could be accounted for by 'Formal Fronting'.

- In the approach by Fanselow & Lenertová (2011), fronting operations are not directly connected to IS categories. Any element can be fronted, as long as no structural accent crosses another structural accent — a restriction which follows from the independently motivated assumption that *structurally* accented elements are immediately linearized. I claim that this approach cannot capture the observed restrictions on contrastive topic fronting, since it predicts that fronting of *contrastively* accented elements should be unrestricted.

5   Open questions

- Are further predictions of my generalization borne out? (fronted PP → V' contrast)

- Does the Formal Fronting explanation make correct predictions for other cases?

- Are there other (pragmatic, non-syntactic) factors which might have caused the difference between the conditions?

6   References

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