The ordering of syntax-prosody-interpretation mapping rules

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Outline

Questions:

- Do **mapping rules** between prosody and information structure apply **'early'** (to abstract prosodic structure) or **'late'** (to the concrete phonetic realization)?
- How do they interact with **syntactic movement**?

Proposal:

- **Focus and contrastive topic** mapping applies **early** and is trace-oriented.
- **Givenness** mapping applies **late** and is surface-oriented.

Data: foci

Object-initial sentences allow for a **VP focus** interpretation in German.

Intuitive judgments are reported e.g. by Krifka (1998):
(see also Höhle 1982, Büring 1997)

(1) Was hat Maria dann gemacht? *'What did Maria do then?'*
     Einen Roman$_i$ hat sie [t_i gelesen]$_{\text{focus}}$.
     A   novel   has she   read
     'She read a novel.'

Data: foci

The intuitive judgments are compatible with findings in **experimental studies**.

Féry & Drenhaus (2008) tested object-initial clauses auditorily:

subject type	Mean acceptability (1–6) in...	
	narrow focus	IP focus
unaccented pronoun	**5.8**	**5.5**
unaccented full DP	5.8	4.8
accented full DP	2.0	2.2

Fanselow et al. (2011) tested object-initial clauses with written materials:

subject type	Mean acceptability (1–7) in...		
	narrow focus	VP focus	IP focus
pronoun	**6.34**	**6.23**	5.19
full DP			4.48

Data: interaction with givenness

Acceptability of partial focus fronting is modulated by **subject type** (Wierzba & Fanselow, under revision — written materials).

(2)   Warum ist es so verqualmt hier? (Was hat der Lehrling gemacht?)
        'Why is the room filled with smoke? (What did the apprentice do?)'
        Die Brötchen   hat [subject] verbrannt.
        the bread.rolls has [subject] burned

| | mean acceptability (1–7) | |
subject type	subj-initial	obj-initial
def. pronoun (*er 'he'*)	6.60	**4.68**
rep. DP (*der Lehrling 'the apprentice'*)	6.48	**4.21**
coreferent DP (*der Junge 'the boy'*)	6.17	**4.12**
indef. pronoun (*jemand 'somebody'*)	6.56	**3.64**
new DP (*ein Junge 'a boy'*)	6.12	**3.33**

Hypothesis: object fronting is better if the subject is easy to **deaccent**.

Data: contrastive topics

Object-initial sentences also allow for the interpretation that the whole VP is a **contrastive topic** (CT).

Intuitive judgments are reported by Jacobs (1997: 96)
(see also Büring 1997: 72–73).

(3)   Wie wird Grass wohl auf die schlechten Kritiken reagieren?
      'How is Grass going to react to the bad reviews?'
      Nun, die Haare$_i$ wird er sich   nicht gerade [t_i raufen]$_{CT}$ ...
      well the hair   will he REFL not   PART   tear.out
      'Well, he will not tear his hair out...'
      ...aber ein bisschen ärgern wird er sich schon.
      '...but he will be a bit upset.'

Data: contrastive topics

The intuitive judgments are compatible with **experimental findings** (Wierzba 2013):

(4)   Das Päckchen hat Peter noch nicht zur Post   gebracht...
      the parcel   has Peter yet   not   to   post.office taken
      'The parcel, Peter has not yet taken to the post office...'
      ...aber den Brief. *'...but the letter.'*
      ...aber er hat abgewaschen. *'...but he washed the dishes.'*

fronted XP	mean acceptability (1–7) with...	
	narrow CT	broad CT
DP	**4.94**	**4.47**
PP	5.18	3.16
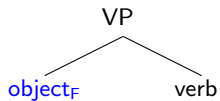
Focus projection (Selkirk 1984):
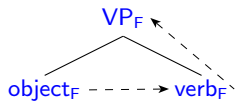
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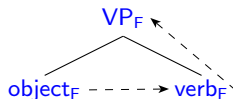
Extension to traces (Selkirk 1995):

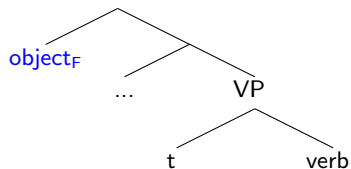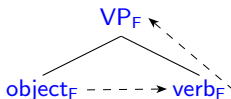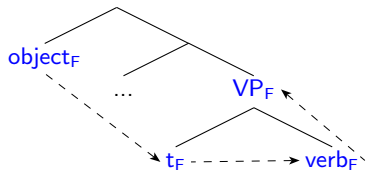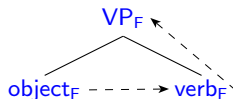# Analysis: focus / CT mapping

Focus projection (Selkirk 1984):

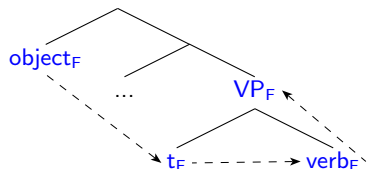**Extension to traces** (Selkirk 1995):

Analysis: focus / CT mapping

Focus projection (Selkirk 1984):

Extension to traces (Selkirk 1995):

Other approaches:

- early/cyclic mapping (Bresnan 1971, Krifka 1998)
- reconstruction for mapping (Korth 2014)

Common aspect of the analyses: **earlier stages** of the syntactic derivation are accessible when **focus**-prosody mapping takes place. Similar mechanisms are conceivable for **CT**-prosody mapping (see Büring 1997, Wierzba 2013).

Assuming that the position of **sentence stress** is also determined in an early / trace-based / reconstructing manner (in line with Bresnan 1971; contra Selkirk 1995), a **conflict** arises in an object-initial structure with VP focus and a new subject:

- Under VP focus, the object needs to carry sentence stress.
- No pitch accents can be fully realized after sentence stress.
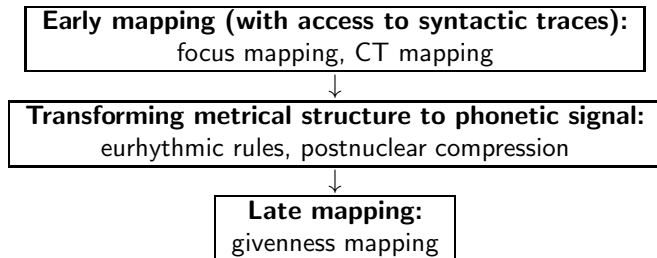- A pitch accent must be realized on a new DP.

(5)   *Why is the room filled with smoke?*
      Die Brötchen   hat ein Junge verbrannt.
      the bread.rolls has a   boy   burned.

Kügler & Féry (2016) provide evidence for a compressed register, but no complete dephrasing / deaccentuation in the postnuclear domain.

→ **postnuclear compression** does not affect the prosodic structure, only realization details **('late' process)**

→ if elements affected by it must be interpreted as given, **prosody-givenness mapping** must apply **'late'**

Early mapping (with access to syntactic traces):
focus mapping, CT mapping

↓

Transforming metrical structure to phonetic signal:
eurhythmic rules, postnuclear compression

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Late mapping:
givenness mapping

Summary: Prosody-information structure constraints apply to different stages of the derivation.

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Appendix: further details of reported experiments

- **Féry & Drenhaus (2008)** report a significant interaction between focus and subject type (no details about the individual levels).
- **Fanselow et al. (2011)** report that there was no significant difference between the narrow and the VP focus condition, but the IP focus condition with a pronominal subject differed significantly both from the VP focus condition, and from the IP focus condition with a non-pronominal subject.
- **Wierzba & Fanselow (under revision)**: both factors (subject type and word order) were sum-coded (i.e., the respective levels were compared to the grand mean). The levels definite pronoun and coreferential DP significantly interacted with word order: the SVO-OVS difference was smaller than average. For the repeated DP level, the SVO-OVS difference was not significantly different from average. A significant interaction in the direction of a larger than average SVO-OVS difference was found for the levels new DP and indefinite pronoun.
- **Wierzba (2013)** reports a significant interaction between fronted XP and contrastive topic size.