

Focused object fronting is emphatic — an effect of syntax or prosody?

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- **Background** on the relation between emphasis, prosody, and syntax
- **Experiments:**
 1. Is object fronting emphatic? (written experiment)
 2. If yes, is this due to syntax or prosody? (auditive experiment)

Distinguishing emphasis from other notions:

- **Focus:** often considered as a linguistic category having to do with alternatives (Rooth 1985, 1990) that is systematically marked in most languages.
- **Contrast:** controversial status — independent information structural category, subcategory of focus, or can it be reduced to emphasis?
- **Emphasis:** usually considered a paralinguistic notion — speakers can freely choose to highlight parts of the utterance without changing what is said. Gussenhoven (2002) relates this effect to the universal *Effort Code* (greater production effort → greater emphasis).

Hartmann (2008)'s view:

- Focused elements can optionally be realized with **additional prominence** to express emphasis, using available grammatical means:
 - **syntactically:** by movement to the left periphery, e.g. in Hausa (tone language)
 - **prosodically:** by more prominent pitch accents in intonation languages
- However, this additional marking is not systematic and depends on pragmatic factors, such as the choice to highlight unexpected discourse moves.

Emphasis — prosody — syntax in German

German potentially provides both prosodic and syntactic means to express emphasis:

- Focus is marked by **pitch accents**, which can be produced gradually higher or steeper.
- The **prefield** as a special syntactic position which has to be filled in declarative clauses (V2); it has been suggested that filling the position by the closest element is unmarked, whereas non-minimal fronting is marked (...).

Is there a difference between in situ and fronted objects?

- Focused objects are **equally acceptable** in situ and in prefield position (Fanselow et al. 2008), suggesting that focus licenses non-minimal fronting.
- However, Frey (2010) suggests that there is an **interpretative difference**: fronted objects are necessarily emphatic (i.e., ranked high on some salient scale). Frey implements this by a conventional implicature associated with the prefield position, but it also fits with the effort code idea.

Fronted objects in German

Example supporting this claim:

(1) *from Frey (2010:1424):*

Was hat Otto dieses Mal Besonderes auf dem Markt gekauft?

'What extraordinary thing did Otto buy on the market this time?'

(a) Papayas₁ hat er dieses Mal t₁ gekauft.
papayas has he this time bought
'He bought papayas this time.'

(b) Er hat dieses Mal Papayas gekauft.

Frey's intuition: (a) is preferred over (b) in this context; reason: match between the emphatic status of the object introduced by the word 'extraordinary' in the context and the emphasis expressed by the fronting.

My intuition: I agree, but (a) also seems to involve extra prosodic prominence.

Syntax or prosody?

- Frey notes that the movement operation that fronts *papayas* necessarily comes with “stress” on the fronted element. However, he establishes a causal relation between the syntactic position and the emphatic interpretation, and not between prosody and interpretation.

→ Goal: study in which both syntax and prosody are controlled.

Experiments: research questions

The **goal of the experiments** is to answer the following questions:

- 1 Is a fronted focused object more emphatic than in situ?
→ tested in experiment 1 (written)
- 2 Is this effect due to syntax or prosody?
→ tested in experiment 2 (auditive)

Written experiment: design and method

The experiment is based on Frey's example, but reversed:
participants had to **choose between contexts**:

Was hat Lena Besonderes gekauft? Was hat Lena gekauft?

Lena hat Bananen gekauft.

Written experiment: design and method

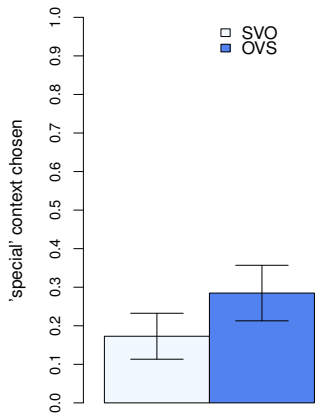
Design:

- 2 conditions: OVS vs. SVO (within items)

Method:

- online questionnaire
- contexts presented in random order
- 16 items, intermixed with 16 fillers
- 20 participants

Written experiment: results



SVO	OVS
17.3%	28.5%

Logistic regression model:

$p < 0.01$

Written experiment: results (fillers)

A look at the fillers:

	with adj.
What (warm thing) does Martin have in his wardrobe? Martin has a fur coat in his wardrobe.	58.8%
What (fancy thing) does Robert have in his wardrobe? Robert has a tuxedo in this wardrobe.	58.8%
What (uninteresting thing) did Klaus watch in the cinema? Klaus watched a horror movie in the cinema.	5.9%
What (new thing) did Karl bring along? Karl brought along a board game.	12.5%

- It seems that the task worked in the intended way:
participants chose the context with the adjective if the target
object necessarily/typically has the corresponding property.

Auditive experiment: design

Design:

- Factor 1: OVS vs. SVO (within items)
- Factor 2: maximal pitch of the accent, high vs. low (within items)

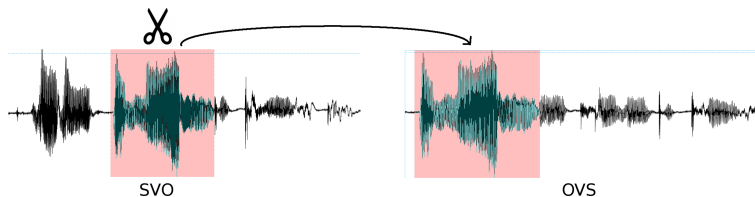
Method:

- participants listened to the sentence via headphones, then chose between contexts
- contexts presented in random order
- the same 16 items, intermixed with 16 fillers
- 20 participants

Auditive experiment: materials

Materials were created as follows:

- each item was recorded as SVO and OVS separately
 - the objects was **cut out** of the SVO utterance and inserted in the initial position in the OVS sentence
- the object was **phonetically identical** in both versions



Auditive experiment: materials

In the “high accent” condition, the object was produced with a much **higher maximal pitch** than in the “low accent” condition:

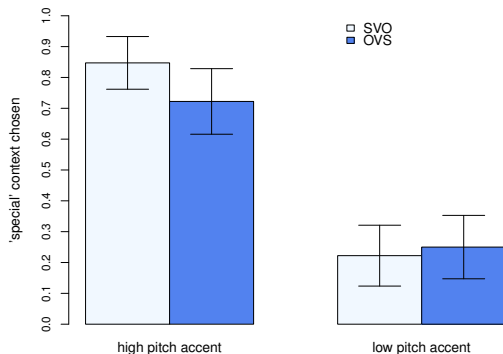
	max. pitch	min. pitch	mean pitch
high accent	325 Hz	188 Hz	244 Hz
low accent	242 Hz	179 Hz	215 Hz

Auditive experiment: examples

Examples for all four conditions:

- (a) Lena hat [Bananen]_H gekauft.
- (b) [Bananen]_H hat Lena gekauft.
- (c) Lena hat [Bananen]_L gekauft.
- (d) [Bananen]_L hat Lena gekauft.

Auditive experiment: results



SVO_H	O_HVS	SVO_L	O_LVS
84.7%	72.2%	22.2%	25.0%

Logistic regression model: main effect of accent ($p < 0.001$), no main effect of order ($p = 0.08$), no interaction ($p = 0.15$).

Summary of the results:

- With **written** materials, objects are perceived as more emphatic in OVS than in SVO order.
- The study with **auditive** materials shows that if the object is phonetically identical in OVS and SVO order, fronting does not increase perceived emphasis.

Possible conclusion at this point:

- causal relation between **prosody and emphasis**, and not between syntax and emphasis
- **additional assumption** required: fronted objects are typically read with increased prosodic prominence (to be tested)

Alternative interpretation:

- There is a direct effect of word order, but it is masked by **declination**. Listeners normalize for declination/downstep: a phonetically identical pitch accent will be perceived as higher in later positions.
 - This could increase the perceived emphasis of the object in SVO order in comparison to OVS.
- causal relation between **prosody and emphasis**, and between **syntax and emphasis**

Further research necessary:

- Are fronted objects typically read with increased prosodic prominence?
- How would the results look if declination is taken into account?

Thank you for your attention!