Prosody and Pragmatics in Processing Negative Scope Ambiguities  
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Experimental Studies on Intonation: Phonetic, Phonological and Psycholinguistic Aspects of Sentence Prosody

Background

The difference w.r.t. scope of the negation in (1a) versus (1b) is associated with distinct prosodic patterns. In (a), the negation has scope over the main clause verb [BEC>NOT], while in (b) the negation has scope over the complement clause [NOT>BEC].

![Hat pattern](image)

(1a) Peter kauft die Hose nicht, weil sie zu teuer ist.  
Peter doesn’t buy the trousers because they are too expensive.

(1b) Peter kauft die Hose nicht, weil sie ihm gefällt.  
Peter doesn’t buy the trousers because they suit him well.

Reading experiments consistently show that sentences like (1b) are more difficult and less acceptable than (1a) [1,2,3].

Two accounts for this bias:

A: pragmatic context in (b) not saturated (underinformativeness of “non-reason”)  
B: mismatch between orthography and prosody (comma in (1b) induces implicit prosodic break and blocks the hat pattern)

Experiment

Acceptability rating (reading)

3 factors (8 conditions):

- Pragmatics of causal clause:  
  [BEC>NOT] vs. [NOT>BEC]
- Comma and causal operator:  
  weil (with comma) vs. wegen (without comma)
- Position of negation: final versus nonfinal

Material

P. trinkt das Wasser nicht... /  
P. hat das Wasser nicht getrunken...  
P doesn’t / didn’t drink the water...  
..., weil es verschmutzt ist. / ..., weil es ihm gut schmeckt.  
...because it is polluted / ...because he likes it  
wegen der Verschmutzung / wegen des guten Geschmacks.  
...because of the pollution / ...because of the good taste

24 sentences in 8 conditions, rated by 46 participants in latin square design (1-7 Likert scale)

Results

![Graph of acceptability ratings](image)

Discussion

Generally, BEC>NOT preferred over NOT>BEC (confirming [1,2,3]).

In sentences with the negation immediately preceding the causal PP (wegen), the preference for BEC>NOT is diminished considerably.

Strong preference for BEC>NOT in conditions with weil is due to the obligatory comma.

Implicit prosodic phrasing induced by comma impedes the NOT>BEC reading

References


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