Restricting and Generating Hypotheses about Focus Alternatives: Interpreting Only and Also in Context
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Introduction
The interpretation of sentences with focus-sensitive elements like ‘only’ depends on context to restrict the domain of relevant alternatives for evaluating the focused expression (1). For instance, the most likely interpretation of an utterance of (1) is that the speaker’s sole possession is a bike, but that of the set of things relevant to the current situation, a bike is the only one she has.

Jill has a car and a bike, plus she lives near a bus line. Only have a bike.

But what kinds of contextually available information do listeners actually use to restrict interpretive domains? Three visual word eye-tracking experiments show that listeners use linguistic context (Experiment 1), implicit knowledge about real-world scenarios (Experiment 2), and conceptual relatedness (Experiment 3). Experiment 4 compares only with also, which is also alternative-sensitive, but leads to different expectations than ‘only’ about upcoming focused elements.

Experiment 1
Do comprehenders interpret ‘only’ with respect to the items mentioned in the preceding linguistic context?
On each trial, participants heard a context sentence mentioning two items followed by a target sentence mentioning one item; the target item was either discourse-new, or overlapped with a previously mentioned item. The target sentence also varied in the presence or absence of only.

A four-picture display appeared concurrently with the target sentence. Participants were instructed to click to choose the items. Jane had, and their eye movements were tracked as they listened to the sentence and performed the task.

In experimental trials, two of the four pictures were members of the same phonological cohort (here: candy and candies). In the absence of any biasing cues, phonological overlap leads to late disambiguation between target and competitor. Early disambiguation in favor of the target indicates the presence of some additional bias.

Possible outcomes:
- Late looks to target item—no bias due to Mention or Only
- Early looks to target item—bias toward target due to Mention and/or Only

Experiment 1 results
- Main effect of Mention (F(1,21)=15.2, p<.001) 200-500 ms past target word onset (black vertical line-target word onset).
- Mention effect strengthened by the presence of only (Mention x Only interaction, F(1,21)=4.0, p<.05).
- No-Only conditions: looks to the target item relative to the cohort competitor rise earlier (375 ms) in the Mention condition compared No Mention (420 ms).

Experiment 2 results
The results support both (1) and (2). There is a general context effect, but the greatest advantage due to informativity is observed in the presence of ‘only’.

- Uninformative Context conditions pattern like Experiment 1, as expected: Mention-Only < NoMention-Only < Mention-NoOnly < NoMention-NoOnly (time to point at which target locks significantly exceed cohort competitor looks).

- Extra benefit with ‘only’: 300 ms advantage due to Informative context with Only vs. 200 ms for No Only.

- Largest advantage for Mention-Only: 332 ms earlier disambiguation in Informative vs. Uninformative Context.

Conclusions
- In Experiment 1, mentioned items restricted the alternatives of a subsequent focused element in the scope of only.
- Experiment 2 finds that conceptually enriching the information available in the context has a general restrictive effect that speeded target identification. This effect was strongest in the presence of ‘only’, suggesting that focus-sensitive elements like ‘only’ function as cues to be attentive to information in the context.
- In Experiment 3, items conceptually related to mentioned items were considered likelier as the focused element than unrelated items, suggesting listeners’ expectations are not only due to explicit mention, but have to do with recognizing a meaning dependency between the upcoming focus and discourse context.
- Experiment 4 is a first step toward distinguishing lexical properties of individual operators from general facts about processing context-dependent alternative-sensitive meanings.

References