Prepositional phrase attachment ambiguities  
in declarative and interrogative contexts:  
Oral reading data

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## TODO

# Abstract

Prepositional phrase attachment ambiguities in declarative and interrogative contexts: Oral reading data {-}

Certain English sentences exhibiting temporarily ambiguous, e.g. *she had planned to cram the paperwork in the drawer into her briefcase*, have been reported to be prone to mis-parsing of a kind is typically called a “garden path.” The phenomenon stems from the temporary ambiguity of the first prepositional phrase *in the drawer* (PP1), which is expected to initially be interpreted as the goal argument of *cram*. PP1 is then disambiguated against the expected parse due to the second prepositional phrase *into her briefcase* (PP2) being incompatable with any interpretation other than as the goal of *cram* and thus necessarily supplanting PP1’s initial position, such that PP1 must be reanalyzed as a modifier of the object NP *the paperwork*. Intuitively, interrogative versions, e.g., *had she planned to cram the paperwork in the drawer into her briefcase?* are easier to process than otherwise identical declaratives. The study presented here represents an attempt to find a behavioral correlate of this intuitive difference in processing difficulty.

The experiment employs the Double Reading Paradigm (Fodor, Macaulay, Ronkos, Callahan, and Peckenpaugh, 2019). Participants were asked to read aloud a visually presented sentence twice, first without taking any time at all to preview the sentence content (Reading 1), and then again after unlimited preview (Reading 2). The basic experimental items had been created in a 2 x 2 design with one factor being Speech Act (interrogative/Q vs. declarative/D) and the other being PP2 Status, i.e., PP2 was either a PP which could only be an argument of the verb (Arg) or else one which cpi;d ne interpreted as a modifier (Mod) of the preceding phrase. The PP2 Status factor can be thought of as a distinction between difficult to process sentences like Arg items (whether declarative or interrogative) illustrated above, and corresponding Mod forms that pose no particular processing difficulty such as, *she had planned to cram the paperwork in the drawer of her filing cabinet/had she planned to cram the paperwork in the drawer of her filing cabinet?*

Participants’ recordings of Reading 1 and Reading 2 were subjected to prosodic coding by a linguist who was naive to the research questions. Those descriptions were then analyzed statistically to extract the significant prosodic boundary patterns as a function of Speech Act and PP2 Status.

Another analysis was conducted which concerned the amount of time the participants spent silently studying a sentence after Reading 1 to be sure they understood it before reading the sentence aloud again (Reading 2). The time between readings is referred to as the inter-reading time (IRT). It was assumed that a longer IRT signified greater processing difficulty of the sentence. Thus, IRT was hypothesized to provide a behavioral correlate of the intuition under examination. If a correlate had been found, it would have taken the form of an interaction between the two factors such that the amount by which IRT was greater for Arg sentences than for Mod sentences was longer for declaratives than for interrogatives. Ultimately, however, no statistically significant interaction between Speech Act and PP2 Status was found.

Further studies are proposed for seeking behavioral evidence of the informal intuition motivating this research. Also offered are explanations for why the intuition is apparently so strong for some speakers, and why, if so, the intuition is not reflected in IRT. Ancillary findings suggest that interrogatives are more difficult to process than declaratives in general, as has been reported, and that inter-reading time (IRT) can be used as a measure of processing difficulty.

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# Introduction and background

Placeholder

## Motivations for the current study

## Structural overview of the ambiguity relevant to this study

## Interrogativity

## Prosody of questions vs. declaratives

## Evidence that prosody can affect syntactic parsing

## Predictions for the current study

# Methodology

Placeholder

## Materials

### Experimental items

### Fillers

### Length

## Participants recruitment

## Location

## Equipment and software

## Versions of the experiment

## Procedure

### On look-ahead

## Measurements of utterance timing

## Prosodic judgments

### Reliability

# Results and discussion

Placeholder

## Data for analysis

## Prosodic break patterns

### Individual break patterns

### Combined break patterns

### Break Dominance

### Regression models of prosodic break patterns

#### Break occurrence

#### Break dominance

### On Reading 1 delay

## Discussion of prosodic break patterns

## Inter-reading time

### Data cleanup

### Analysis of IRT data

### On PP2 heads

### Discussion of IRT results

### The processing cost of interrogativity

# General discussion

Placeholder

## Behavioral correlate for the 2016 intuition and the current hypothesis?

## On possible explanations for the intuition

### A prosodic account

### A processing illusion

### A semantic/pragmatic explanation

## Conclusions and future directions

### Inter-item reading time (IRT) findings

### Hesitations vs. prosodic breaks

### Future work

#### Embedded questions

#### Event-related potentials

### Summary

# Appendices

# Experimental items

Placeholder

# References