

Do repeated mention and expectancy independently affect prosodic prominence?

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Theoretical Background

- Predictable words are less prominent than less predictable words (Jurafsky et. al, 2000; Pluymaekers, Ernestus, & Baayen, 2005; Watson, Arnold, & Tanenhaus, 2008).
- Repeated words are less prominent than non-repeated words (Fowler & Housum, 1987; Bard & Aylett, 1999).
- Predictability and repeated mention are correlated in natural speech (Arnold, 1998).

Theories of Acoustic Prominence

- Listener centered:** Speakers lengthen unpredictable words to make them easier for listeners to identify (e.g. Aylett & Turk, 2004).
- Speaker centered:** Speakers make unpredictable words more prominent because they are more difficult for the speakers to produce (e.g. Bell et al., 2009).

Motivation

To test predictability and repeated mention independently to see if they lead to separate independent effects on prosodic prominence. Test whether effects are listener or speaker driven.

Procedure

- 1.) Twelve images appear on the screen
- 2.) One of the images shrinks. The participant describes this event.
- 3.) One of the images gets circled. The participant watches this event.
- 4.) One of the images flashes. The participant also describes this event.

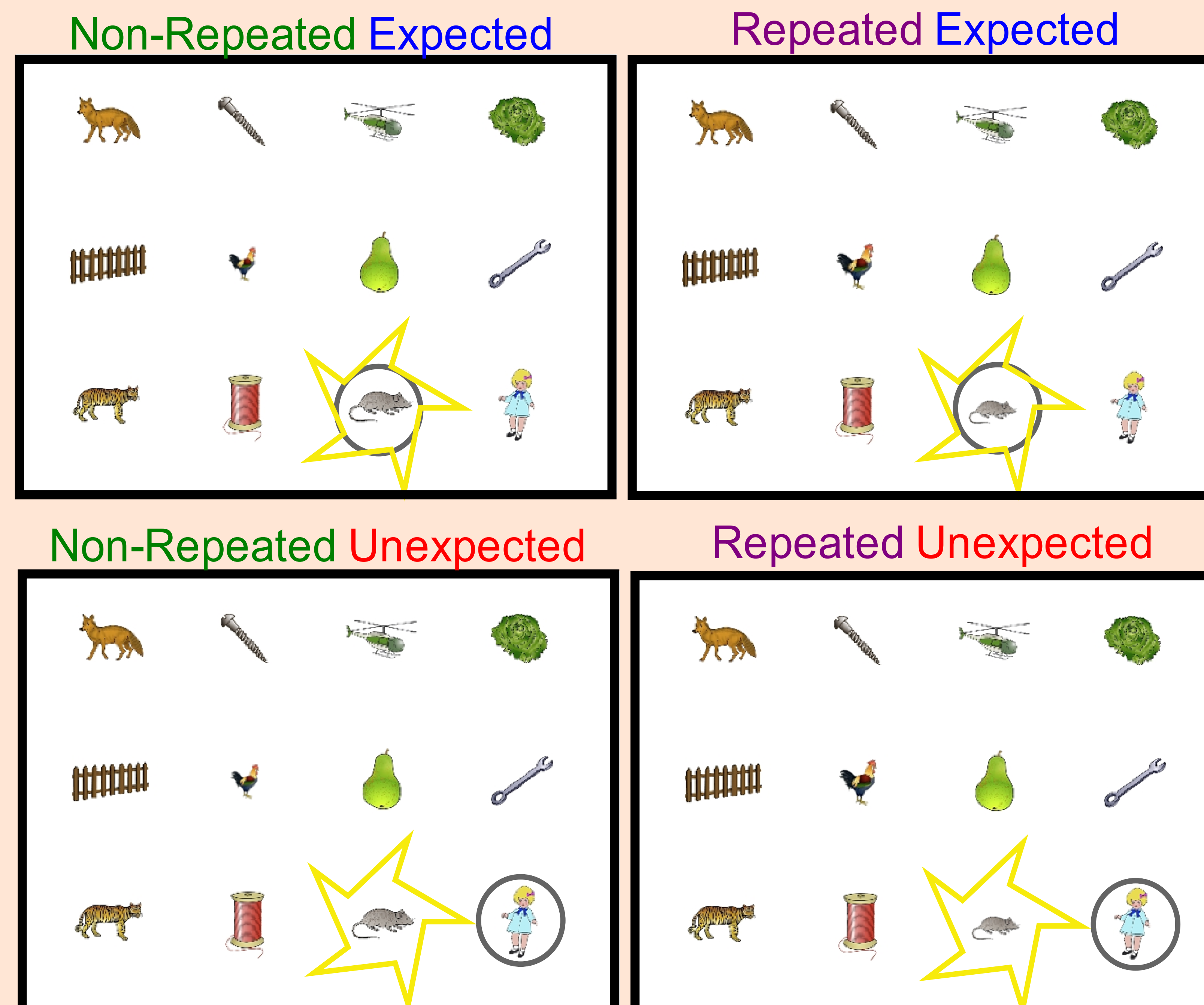
Repeated Mention

- **Repeated:** the object that shrank also flashed
- **Non-repeated:** one object shrank, and a different object flashed

Expectedness

- **Expected:** a grey circle cued the participant to the object that flashed.
- **Unexpected:** a grey circle miscued the participant to an object that did not flash

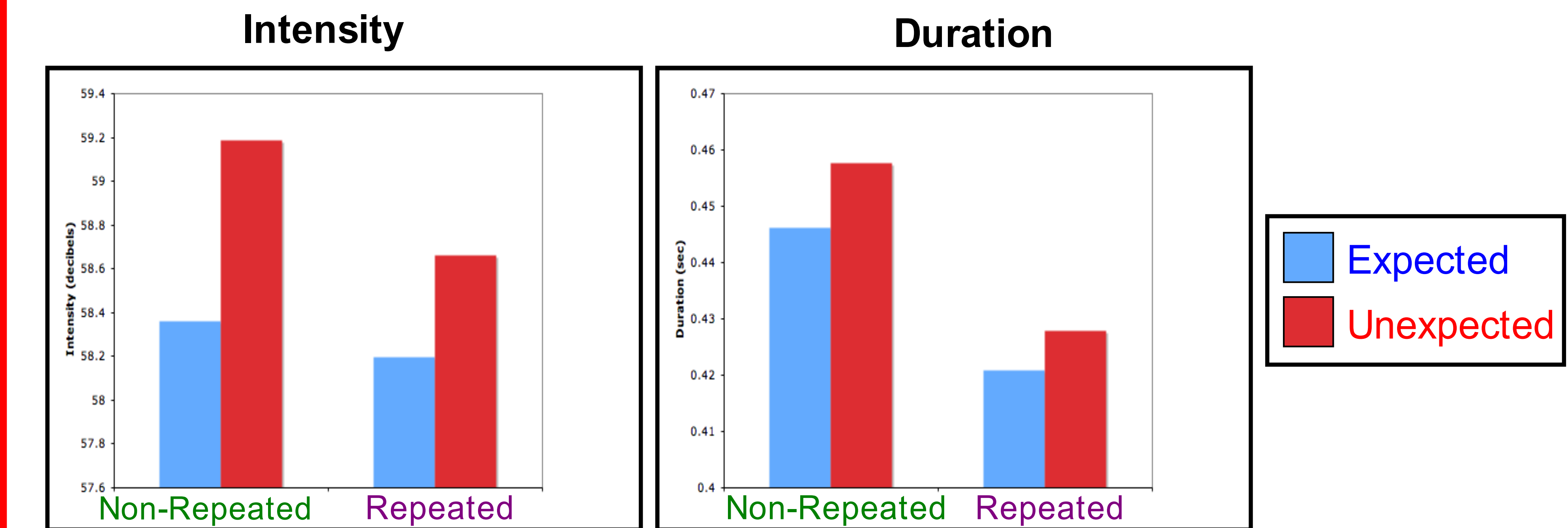
Conditions



Predictions

- If predictability affects prosodic prominence, unexpected words should be more prominent than expected words.
- If repeated mention affects prosodic prominence, repeated words should be more reduced than non-repeated words.
- Listener centered theories argue that predictability should affect duration.

Results



Results Summary

Linear mixed effects regression model tested for effects of predictability and repetition on Intensity and Duration.

Predictors	Intensity	Duration
Expectedness	*** ↓	n.s.
Repeated Mention	** ↓	**** ↓
Expectedness*Repeated Mention	n.s.	n.s.

Conclusions

These results suggest that predictability and repeated mention do indeed have separate measurable effects on prosodic prominence. While predictability seems to affect only intensity, repeated mention leads to reduction in both intensity and duration. These data are inconsistent with a listener centered theory of duration.

