Self-organized parsing predicts encoding interference slowdowns in agreement attraction contexts

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Introduction

- Barker et al. (2001): more agreement attraction for the canoe by the kayaks than the canoe by the cabins
- Cue-based retrieval (e.g., Lewis & Vasishth, 2005) lacks an explanation for such encoding interference

Self-paced reading experiment

- 36 items, 72 fillers, 110 participants; 2 (N2 number) x 2 (semantic similarity) design
- The canoe by the cabin(s)/kayak(s) likely was damaged in the heavy storm.
- Comprehension question: What was damaged?
- (Generalized) mixed effects models, full random effects structure, likelihood ratio tests
- Residualized (list position and word length) log reading times (correct trials only)
  - Adverb: pl. N2 marginally slower than sg. ($\chi^2(1) = 3.198, p = .074$)
  - Verb: dissimilar N2 conditions faster ($\chi^2(1) = 7.610, p < .01$)
- Spillover (reduced random effects structure): significant interaction ($\chi^2(1) = 5.347, p = .021$)

Discussion

- Question accuracy: Dissimilar marginally more likely correct ($\chi^2(1) = 3.348, p = .067$)
- Question RTs (reduced ranef.): Significant effect of Similarity ($\chi^2(1) = 6.486, p = .011$): dissimilar faster
  - N2 Number marginal ($\chi^2(1) = 3.347, p = .067$): pl. faster
  - Marginal interaction ($\chi^2(1) = 2.833, p = .092$), driven by slow singular, similar N2 condition

References


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