Retrieval cues hierarchy in sluice resolution: The case of French

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Introduction. Ellipsis resolution requires retrieving a correlate using cues provided by the remnant. Under the cue-based direct access account Martin and McElree (2011), retrieval success depends on cue diagnosticity: cues are effective when they uniquely identify the target. Hassen and Abeillé (2025) argue that in French sluicing, preposition omission in the remnant (*Paul is talking to someone but I don't know who* instead of *to whom*) interacts with the informativity of the remnant and correlate, suggesting that the preposition may function as a retrieval cue. However, this has not been directly tested, particularly not in an interference paradigm. The present study tests whether the preposition contributes to correlate retrieval when a competing referent NP is present.

Methods. 58 native speakers of French completed an online experiment (PCIbex). We manipulated COMPETITOR TYPE (±Human) and PREPOSITION (±Prep) in a 2x2 design (24 items, see (1), and 38 fillers). Participants rated the items' acceptability (1–5), then answered "To whom does *qui* refer?" by choosing between the object NP and the PP-complement NP in the antecedent clause. Response times were computed as the latency from the onset of the forced-choice screen until response.

Predictions. Since *qui* is restricted to human referents, this restriction alone should identify the target when the competitor is −Human, making the preposition redundant. When the competitor is +Human, this would cause ambiguity, and the preposition should improve retrieval. This predicts an interaction: a preposition effect only in the +Human conditions.

Results. Ratings showed no differences across conditions (all means≈3.9–4.1/5), suggesting that interference effects are more noticeable in retrieval choices than in acceptability judgments. The forced-choice data showed a clear pattern (see Figure 1 and Table 2). In the −Human conditions, participants almost never chose the object, regardless of the preposition. In +Human−Prep, object choice mean was near chance, but this reflects individual variation rather than genuine uncertainty: most participants consistently preferred either the P-complement or the object, with only a minority showing mixed choices. With the preposition, choices changed significantly toward the P-complement regardless of individual strategies in the −Prep condition. A mixed-effects logistic regression with sum-coded predictors confirmed a significant main effect of PREPOSITION and a significant interaction between COMPETITOR TYPE and PREPOSITION (see Table 2). RTs were slower in the +Human conditions, with a slight increase with the preposition (see Figure 2).

Discussion. Results show that the preposition functions as a retrieval cue only when the remnant's animacy cue fails to uniquely identify the correlate. When the competing referent is +Human, similarity-based interference causes ambiguity, and the preposition increases cue specificity, improving correlate retrieval. In the +Human conditions, RTs were overall slower and increased with the preposition. Although one might expect a more informative cue to speed processing, this pattern is compatible with cue-based retrieval, where the cue helps retrieval but does not eliminate interference costs. The results suggest a hierarchical weighting of retrieval cues in sluicing: the remnant's semantic cue dominates when diagnostic, while syntactic information (here the preposition) in the remnant contributes when it is not. This study raises the broader question of how different semantic and syntactic cues are weighted during ellipsis resolution.

(1) a. Alice a signalé un élève à un superviseur, mais je ne sais pas à qui.
Alice has reported a pupil to a supervisor but I NEG know not to whom
'Alice reported a pupil to a supervisor, but I don't know to whom.' **(+Human+Prep)**

b. Alice a signalé un élève à un superviseur, mais je ne sais pas qui.
Alice has reported a pupil to a supervisor but I NEG know not who
'Alice reported a pupil to a supervisor, but I don't know who.' **(+Human-Prep)**

c. Alice a signalé un problème à un superviseur, mais je ne sais pas à qui.
Alice has reported a problem to a supervisor but I NEG know not to whom
'Alice reported a problem to a supervisor, but I don't know to whom.' **(-Human+Prep)**

d. Alice a signalé un problème à un superviseur, mais je ne sais pas qui.
Alice has reported a problem to a supervisor but I NEG know not who
'Alice reported a problem to a supervisor, but I don't know who.' **(-Human-Prep)**

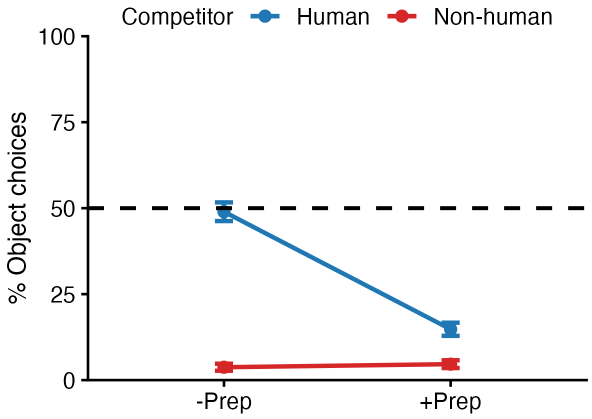

Figure 1: Proportion of object choices by condition. Dashed line = chance (50%). Error bars = SE.

Competitor	Prep	% Obj	% P-comp
Human	−Prep	50.2	49.8
Human	+Prep	14.8	85.2
Non-human	−Prep	5.1	94.9
Non-human	+Prep	5.6	94.4

Table 1: Forced-choice proportions by condition.

Predictor	Est.	SE	z	p
(Intercept)	−2.707	0.195	−13.88	$< .001$***
Human	−1.705	0.204	−8.36	$< .001$***
Prep	0.301	0.169	1.78	$= .075$
Human:Prep	−0.637	0.184	−3.47	$< .001$***

Table 2: Mixed-effects logistic regression for forced-choice responses.

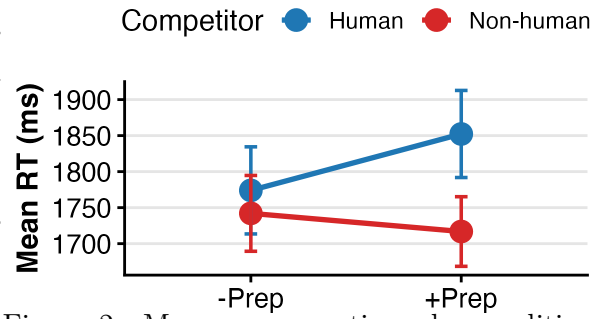

Figure 2: Mean response times by condition. Error bars = SE.

References

Amal Hassen and Anne Abeillé. Preposition omission in french interrogative sluices: empirical findings and theoretical implications. *Glossa: a journal of general linguistics*, 10(1), 2025. doi: 10.16995/glossa.15197.

Andrea E. Martin and Brian McElree. Direct-access retrieval during sentence comprehension: evidence from sluicing. *Journal of Memory and Language*, 64(4):327–343, 2011. doi: 10.1016/j.jml.2010.12.006.