

## Ellipsis and the QUD: evidence from sluicing with nominal antecedents

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**Background** Sluicing, exemplified in (1), is a cross-linguistically prevalent form of clausal ellipsis that occurs after interrogative wh-phrases.

(1) John ate something, but I don't know what ~~he ate~~.

Traditionally, IDENTITY theories have postulated that sluices are acceptable only if the elided material (~~he ate~~ in ex. 1) is identical to its antecedent (underlined) either semantically (Merchant, 2001), syntactically (Chung, 1995; Rudin, 2018), or both (Chung, 2013; Merchant, 2013). Alternatively, QUD theories propose that sluices will be acceptable insofar as they correspond to a Question under Discussion (Roberts 1998/2012) made salient by the antecedent clause (AnderBois, 2011, 2014; Barros, 2014; Kotek & Barros, 2018). While IDENTITY and QUD theories tend to make overlapping predictions in canonical cases of sluicing, we aim to distinguish them by examining sluices with nominal antecedents, exemplified in (2).

(2) A: I can't see your parents in the audience. Did you not tell them about your performance today? B: I did, but I forgot to tell them {when|where|what about|how long|why}.

According to IDENTITY theories, the lack of a clausal antecedent should render such cases categorically ungrammatical. QUD theories, on the other hand, predict that the acceptability of such sluices will depend on the propensity of the context to serve up the relevant QUD.

**Experiment 1** 63 native English speakers were recruited via Amazon.com's Mechanical Turk to rate the acceptability of 30 sluices with nominal antecedents (Fig. 1), constructed by combining 6 contexts with 5 different wh-phrases each, as shown in (2). Each participant saw 6 sluices (one in each context) along with 6 acceptable and 6 unacceptable fillers, which were sampled from the literature and involved canonical sluicing with clausal antecedents. The results revealed considerable variability across items (Fig. 3): nominal-antecedent sluices (gray) covered the entire range of possible acceptability ratings. This is unexpected under IDENTITY theories for two reasons. First, a subset of the cases received high ratings despite the lack of an identical antecedent. Second, the striking gradience in acceptability casts doubt over the possibility of capturing the data in a categorical fashion. Under QUD theories, on the other hand, such gradience may arise if it turns out that the availability of the relevant QUD varies as well.

**Experiment 2** To test this prediction, Expt 2 ( $N=47$ ) aimed to measure the availability of the QUD associated with each sluice. Participants performed a forced-choice passage completion task in which they were presented with incomplete variants of the items from Expt 1 (the entire passage except for the sluice) and selected the sentence continuation they thought was most likely in this context (see Fig. 2). The possible continuations consisted of overt wh-questions corresponding to each of the sluices from Expt 1, which were determined in a separate norming experiment ( $N=31$ ) that had participants paraphrase each sluice in a free-response task. The probability distributions resulting from the passage completion task provide an estimate of comprehenders' expectations regarding the upcoming QUD in each context. As predicted by QUD theories, this measure of QUD availability explained a

significant amount of the variance in acceptability we found in Expt 1 ( $\beta = 1.8, p = 0.037$ ), as indicated by the significant upward trend in Fig. 4.

**Conclusion** Our key findings are twofold. First, contrary to the predictions from IDENTITY theories, we found the acceptability of sluicing with nominal antecedents to be highly variable across sluices and contexts (Expt 1). Second, as predicted by QUD theories, a significant portion of that variance can be explained in terms of the degree to which the context makes the relevant QUD available.

(Instructions: carefully read the passage below, carefully read all continuations, and then choose the continuation you find most likely.)

A: I can't see your parents in the audience. Did you not tell them about your performance today? B: I did, but I forgot to tell them where.

(unacceptable)  1  2  3  4  5 (fully acceptat

Use number keys or click boxes to answer.

"A: I can't see your parents in the audience. Did you not tell them about your performance today? B: I did, but I forgot to tell them...

1. ...where I was performing."
2. ...how long it would last."
3. ...when it was going to start."
4. ...why they should be in the audience."
5. ...what it was about."

Figure 1. Sample trial from Expt 1.

Figure 2. Sample trial from Expt 2.

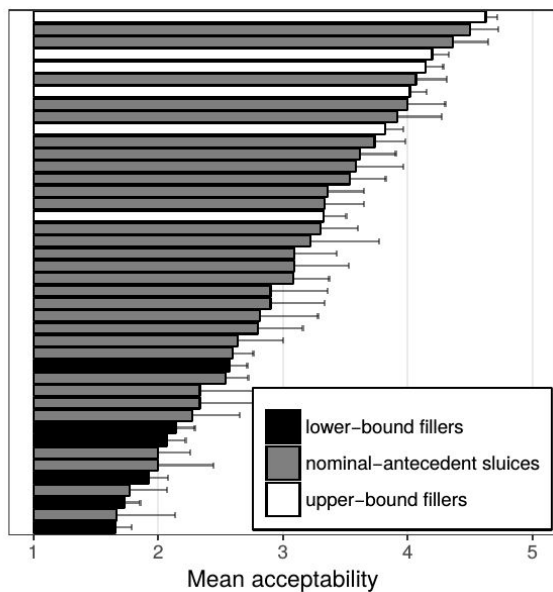


Figure 3. Average acceptability ratings of nominal-antecedent sluices (gray) alongside acceptable (white) and unacceptable (black) fillers measured in Expt 1. Error bars show Standard Errors.

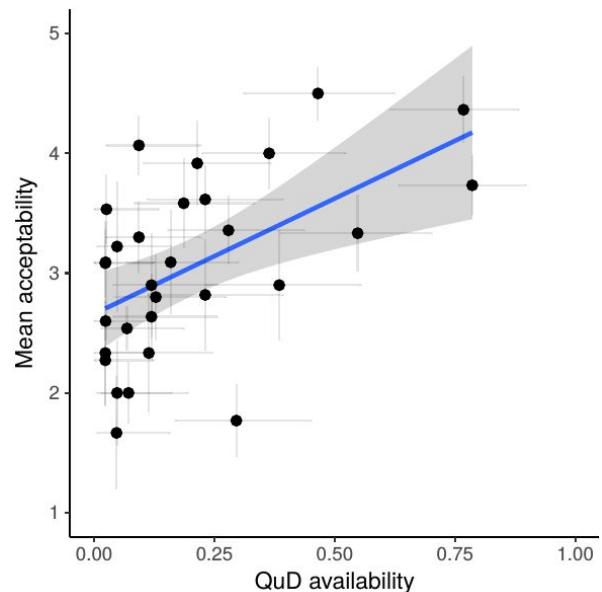


Figure 4. Forced-choice passage completion estimate of QuD availability (Expt 2) explains some of the variance in acceptability rating for nominal-antecedent sluices (Expt 1). Error bars show Standard Errors (y) and 95% Clopper-Pearson exact CIs (x).

## References

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