

Anything can be elided if you know how: clausal ellipsis without identity

Till Poppels and Andy Kehler

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(slides available at <http://tiny.cc/poppels>)

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—I did (know that VPs can be elided as well).
- (3) **Sluicing:** Joe was murdered but we don't know how (he was murdered).
 - There are many other types of ellipsis.
 - This talk focuses on **sluicing**: ellipsis of clauses that are embedded under interrogative wh-phrases, as shown in (3).

Theories of ellipsis

A running example

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Central claim: Material can only be elided if it is identical to its antecedent.

(e.g. Chung, 2006, 2013; Merchant, 2001; Rudin, 2018; Sag, 1976)

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Referential theories of ellipsis

Central claim: Ellipsis involves a null pro-form that presupposes that its referent is topical and uniquely identifiable in common ground.

(e.g. Hardt, 1993; Kehler, 2019; Poppels & Kehler, 2017; Webber, 1978)

Evidence that ellipsis involves discourse reference

Table: Diagnosing anaphoricity in ellipsis

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| "Split" antecedents | | | | | |
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| "Sloppy" readings | | | | | |

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(Hardt, 1993; Kehler, 2019; Poppels & Kehler, 2017, 2019a, 2019b; Tomioka, 2008; Webber, 1978)

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Our running example again...

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- 2 theories of ellipsis: IDENTITY and Discourse Reference
- (7) appears to favor IDENTITY theories
- However: independent reasons to hold on to referential theory
- **Goal for today:** re-evaluate both ID-based explanations of (7)
 - Expts 1-3 test the **No New Words** explanation
 - Expt 4 tests the **Voice Mismatch** explanation

The “No New Words” Generalization

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- (8) a. Joe was murdered but we don't know who # (he was murdered **by**).
- b. Joe was murdered but we don't know by who (he was murdered).
- (9) a. Joe is jealous but he didn't say who # (he was jealous **of**).
- b. Joe is jealous of someone but he didn't say who (he was jealous of).

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- Ironically, Chung (2013) provides a counterexample in the title:

(10) Syntactic identity in sluicing: how much and why

Expt 1: Stimuli

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10 classic minimal pairs from the literature

- (11) a. Joe is jealous. —Do we know who? [Classic Bad]
b. Joe is jealous of someone. —Do we know who? [Classic Good]

⇒ **NNW prediction**: clear bimodal distribution in acceptability.

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(13) Can I borrow your textbook? —Why?

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20 unrelated fillers (distraction from manipulation)

- (14) a. The jug broke. —Any idea who? [Bad filler]
b. You didn't answer my question. —Which question? [Good filler]

Expt 1: Acceptability task

A: Do you mind if I put on some music?

B: **What kind of music?**

*(Consider what the **second speaker** says. Is this an acceptable English sentence/question in this context?)*

(unacceptable)

(fully acceptable)

Use number keys or click boxes to answer.

Expt 1: Paraphrase task

A: Do you mind if I put on some music?

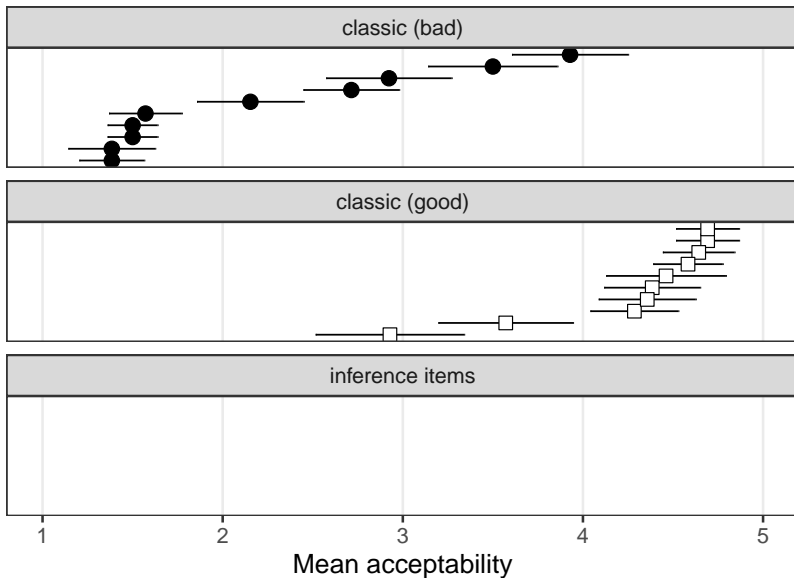
B: **What kind of music?**

*(What exactly does the **second speaker** mean?)*

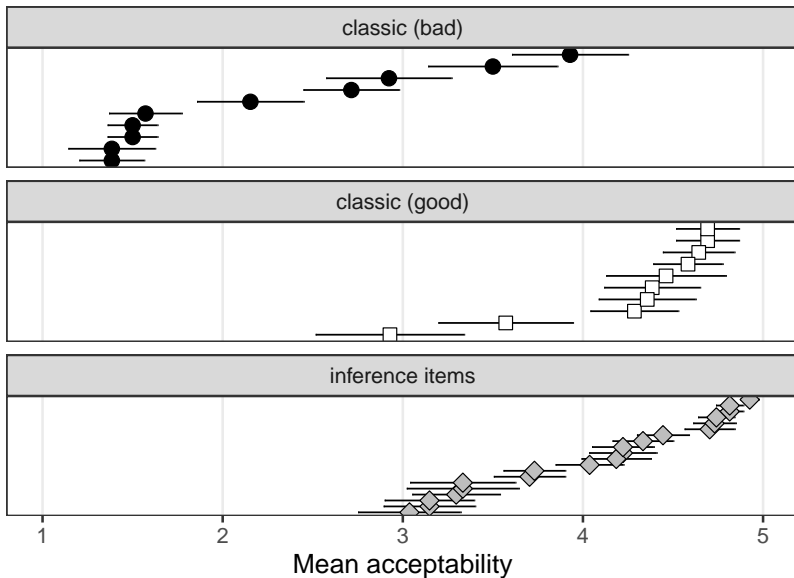
B: "What kind of music ?"

→ [Click here to continue](#)

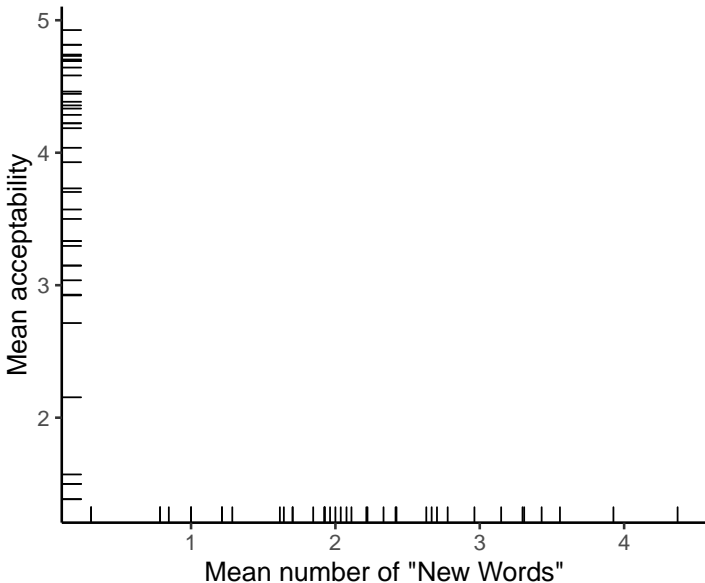
Results: acceptability



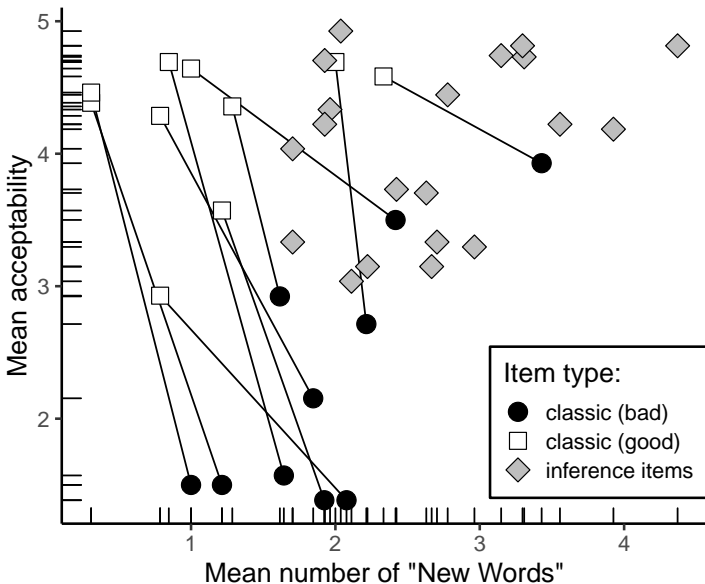
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Results (cont'd): # of "New Words"



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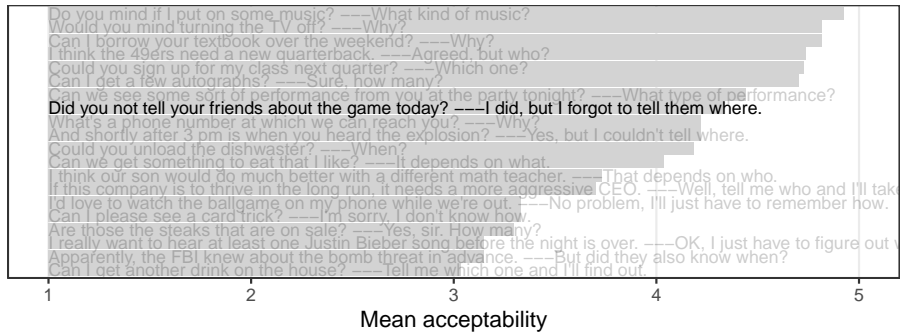
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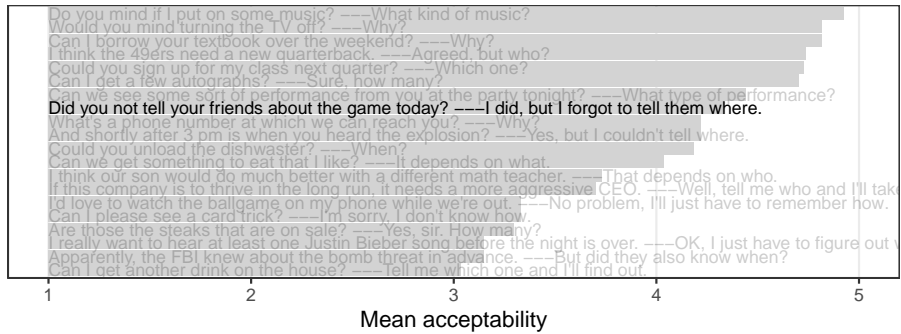
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| "Sloppy" readings | ✓ | ✓ | ✓ | ✓ | X |

Expts 2 and 3: Sluices with nominal antecedents

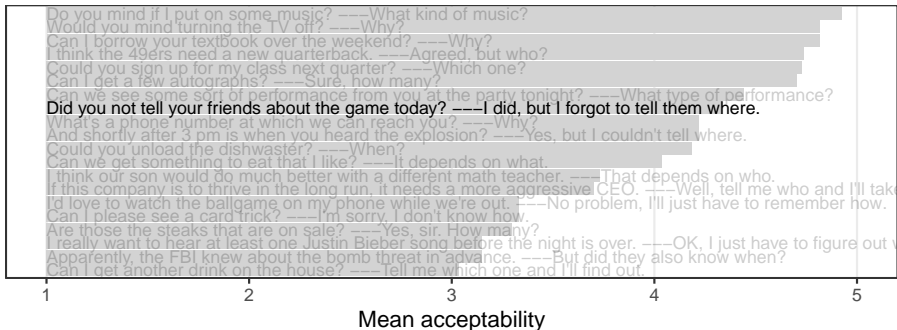


Expts 2 and 3: Sluices with nominal antecedents



- (15) Did you not tell your friends about the game today? —I did, but I forgot to tell them where (the game would be; it would take place; ...).

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- Nominal-antecedent sluices are problematic for IDENTITY theories.
- Only previous mention: Beecher (2007).

Expt 2: Stimuli

(16) 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}.

- 30 sluices with nominal antecedents like (16):
 - 6 contexts
 - 5 wh-phrases
- 12 fillers
- 63 participants

Expt 3

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- **Question:** can we explain this gradability?
- Challenging for IDENTITY theories
- QUD theories: sluicing depends on the availability of a relevant Question under Discussion (QUD) (AnderBois, 2014; Barros, 2014; Roberts, 2012)
- Plan for Expt 3:
 - Measure predictability of sluiced question (QUD)
 - Check if this 'QUD availability' measure predicts acceptability

Expt 3: passage-completion task

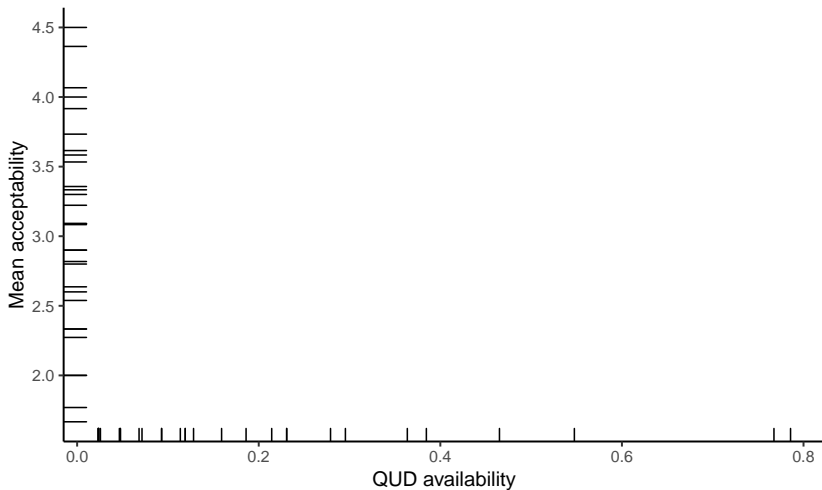
(Instructions: carefully read the passage below, carefully read all continuations, and then choose the continuation you find most likely.)

"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...

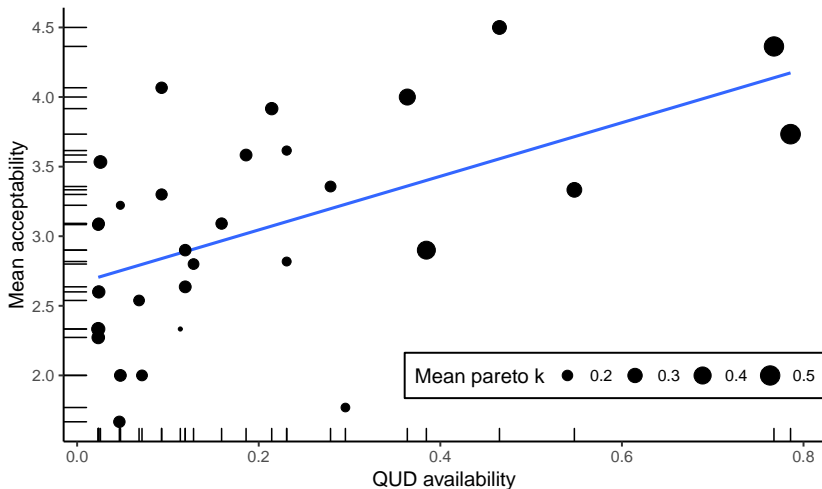
1. ...where I was performing."
2. ...how long it would last."
3. ...when it was going to start."
4. ...why they should be in the audience."
5. ...what it was about."

- Answer choices: established in separate norming experiment (paraphrase task analogous to Expt 1)

Results: QUD availability



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- Frequentist analysis: $\beta = 1.826$, $p = 0.037$
- Bayesian analysis: $P(\beta > 0) = 0.983$

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- Some are impeccable, some are terrible.
- Some of the variance can be explained by 'QUD availability'.
- Caveat: most of the variance remains unexplained.
- Another caveat: haven't yet tested unelided controls.

Sluicing and Voice Mismatches

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Voice mismatch explanation

b. #(he was murdered **by**).

"No New Words" explanation

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Voice mismatches matter beyond this example (anonymous CLS53 reviewer):

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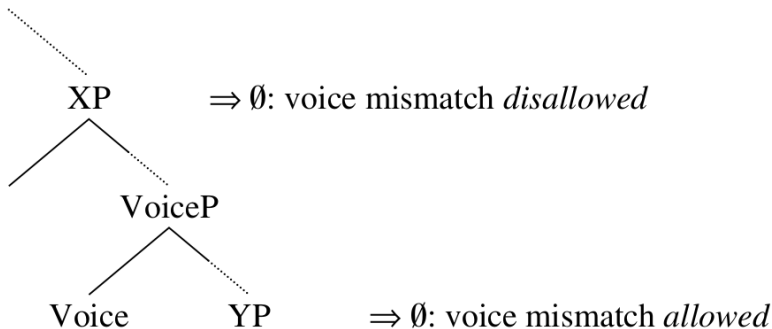
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From Merchant (2013, p. 78):

The generalization that emerges is that when the target of ellipsis is a small amount of structure, such as a VP, mismatches in voice appear to be possible, but when more structure is targeted, as in sluicing and the like, no voice mismatch is allowed.

Sluicing and Voice Mismatches

Merchant (2013, Fig. 1):



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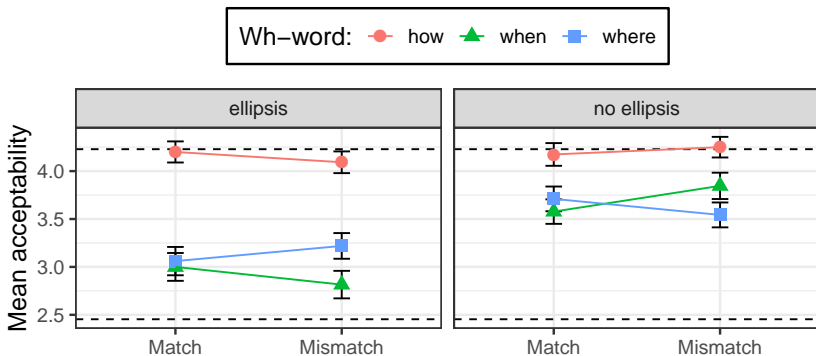
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- 24 items like (18)
- 2x2x3 design:
 - mismatch vs. no mismatch
 - ellipsis vs. no ellipsis
 - how vs. **when** vs. **where**

Results (Expt 4)



- *How* sluices at ceiling.
- *When* and *where* items degraded, more so under ellipsis.
- **Main result:** No mismatch penalty anywhere.

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a. (to elide it)

⇐ Mismatch!

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- b. (Republicans need to be persuaded) ⇐ Match unavailable!

From tough alternation to voice mismatch

Tough alternation:

(19) Brake fluid is pretty easy to replace if you know how (to replace it).

Voice mismatches:

(20) Anything can be elided if you know how (???)

- a. (to elide it) ⇐ Mismatch!
- b. (it can be elided) ⇐ No mismatch!

(21) Republicans need to be persuaded but nobody really knows how (???)

- a. (to persuade them) ⇐ Mismatch!
- b. (Republicans need to be persuaded) ⇐ Match unavailable!

Caveat: no experimental data yet!

Conclusion

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Motivating puzzle:

(22) Joe was murdered but we don't know who #(???)

a. #(murdered him)

Voice mismatch explanation

b. #(he was murdered **by**)

"No New Words" explanation

⇒ both explanations derived from IDENTITY theory of ellipsis

Conclusion

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Eliding "New Words" can be OK:

(23) Can I borrow your textbook. —Why?

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Eliding "New Words" can be OK:

(23) Can I borrow your textbook. —Why?

Eliding voice-mismatched questions can be OK:

(24) Republicans need to be persuaded but nobody really knows how.

Partee's marbles

On a referential theory:

(25) Joe was murdered but we don't know who ϕ .

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Other pro-forms show similar behavior (“Partee's marbles”):

- (26) a. I dropped 10 marbles and I found all but 1 of them. It has to be under the sofa.
b. I dropped 10 marbles and I only found 9 of them. #It has to be under the sofa.

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But:

(27) When Joe was kidnapped, they kept him in the dark for days.

Results (Expt 1): examples of “New Words” in paraphrases

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Classic cases

(28) Joe is jealous. —Do we know who?

- a. Joe is jealous of
- b. he is jealous of
- c. Why is Joe jealous
- d. Joe is specifically jealous of

Results (Expt 1): examples of “New Words” in paraphrases

Classic cases

(28) Joe is jealous. —Do we know who?

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- b. he is jealous of
- c. Why is Joe jealous
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“Inference” items

(29) Can I borrow your textbook over the weekend? —Why?

- a. do you want to borrow it
- b. do you need it
- c. do you want my textbook next weekend
- d. Why would A like to borrow the textbook over the weekend?

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