Against memory accounts of asymmetries in voice-mismatched VP-ellipsis

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Methods

Content-addressable memory (CAM) model

The Recycling Hypothesis

Background

2 key empirical findings:

- Mismatch penalty (2) less acceptable than (1)
- Mismatch asymmetry (2) is less acceptable than (2a)

The Phenomenon


Examples of (un)acceptable filler items:

(a). The thief was arrested and his brother was as well. (acceptable)
(b). The thief was arrested, and his brother was too. (unacceptable)

Methods

3 experiments, each with:

- 30 participants, 24 experimental items
- 48 (un)acceptable fillers, like (4)

Research Question: What drives mismatch asymmetry? Do memory constraints play a role?

- 2x2 design: Mismatch x Voice
- Passive vs. active
- Ellipsis: yes vs. no

Results from Experiments 2 and 3 by connection: Interaction in experiment 2 is driven by before items.

Discussion

2 key results:

- No Main Effect (Exp 3)
- Passive penalty

Against memory accounts:

- Prediction: passive penalty predicts order effects
- Prediction: no passive penalty without ellipsis

New puzzle: passive penalty

Examples of (un)acceptable filler items:

(a). The thief was arrested and his brother was as well. (acceptable)
(b). The thief was arrested, and his brother was too. (unacceptable)

Content-addressable memory (CAM) model

- Ellipsis resolution: retrieving antecedent from memory
- Ellipsis clause: retrieval cues (mismatch antecedent features)
- Markedness: voice cue more marked for marked passive

Stimuli & Results

Experiment 1

(5) a. The report was first read by the judge, and then the lawyer did too.
   b. The judge read the report first, and then the confession was.
   c. The judge read the report first, and then the lawyer did too.
   d. The report was first read by the judge, and then the confession was too.

Mean acceptability: [P > A] > [A > P]

Experiment 2

(6) a. The report was first read by the judge, before the lawyer did.
   b. The judge read the report first, before the confession was.
   c. The judge read the report first, before the lawyer did.
   d. The report was first read by the judge, before the confession was too.

Mean acceptability: [P > A] > [A > P]

Experiment 3

(7) a. Before the lawyer did, the report was first read by the judge.
   b. Before the confession was, the judge read the report first.
   c. Before the lawyer did, the judge read the report first.
   d. Before the confession was, the report was first read by the judge.

Mean acceptability: [P < A] > [A < P]

New puzzle: passive penalty

Explanation #1: temporary ambiguity

- a. The judge read the report and then the lawyer said... (incomplete sentence)
- Prediction: no passive penalty without ellipsis

Explanation #2: QUD analysis

- a. The judge read the report and then the lawyer said... (incomplete sentence)
- Possible explanations:
  - Ceiling effect
  - Veridicality: under QUD analysis of passive penalty (see right), before clauses may be analyzed as non-assertive

Creating: ellipsis clause: passive penalty

- [A > P] mismatch penalty and passive penalty explain all results
- Explanation for mismatch penalty in examples from Experiment 2

Possible explanations:

- Ceiling effect
- Veridicality: under QUD analysis of passive penalty (see right), before clauses may be analyzed as non-assertive

Follow-up experiment (Fig. 5) provides tentative support for QUD analysis (data collection ongoing): passive clauses degraded in the absence of ellipsis, though perhaps to a lesser extent.

References


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Figure 1. Results from Experiment 1, using stimuli like (5). A shows 2 main effects with no interaction (p = 0.02, p = 0.67): a mismatch penalty (β = -0.41, p = 0.001) and a penalty for passive ellipsis clauses (β = -0.22, p = 0.001). B and C show within-item scatterplots for the mismatch and passive penalties, respectively.

Figure 2. Results from Experiment 2, using stimuli like (6). A shows 2 main effects and a small but significant interaction (β = 0.1, p = 0.04): a mismatch penalty (β = -0.66, p = 0.001) and a penalty for passive ellipsis clauses (β = -0.25, p = 0.001). B and C show within-item scatterplots for the mismatch and passive penalties, respectively.

Figure 3. Results from Experiment 3, using stimuli like (7). A shows 2 main effects with no interaction (p = 0.001, p = 0.99): a mismatch penalty (β = -0.23, p = 0.001) and a penalty for passive ellipsis clauses (β = -0.22, p = 0.001). B and C show within-item scatterplots for the mismatch and passive penalties, respectively.