Memory Retrieval During the Processing of Adjuncts and Co-Ordination

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Memory Retrieval During the Processing of Adjuncts and Co-Ordination

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Cue-Based Parsing

- Cue-based parsing predicts linguistic dependencies should be susceptible to similarity-based interference (Piger et al., 2017; Lewis et al., 2006; McElree, 2000)
- One well-studied example of interference comes from illusions of grammaticality in subject-verb agreement (e.g., Lago et al., 2015; Rogers et al., 2009)

1. The key to the cabinet/s was rusty
2. The key to the cabinet/s was rusty

The Current Study

- We investigated illusions of plausibility in two experiments (n = 48 in each)
- Experiment 1 investigated temporal adjuncts (see below)
- Experiment 2 tested identical materials but with co-ordination e.g. The detective/criminal stood by the cop/car and then arrested the robber outside the bank.

Illusions of Plausibility

- Recent research has also implicated illusions of plausibility in filler-gap dependencies (Cunnings & Sturt, under review)
- 3 Sue saw the plate that the butler with the cup/tie accidently shattered earlier today
- 4 Sue saw the letter that the butler with the cup/tie accidently shattered earlier today
- Such illusions suggest interference influences perception of sentence plausibility as well as grammaticality

Adjuncts and Co-Ordination

- The extent to which illusions of plausibility are observed in other linguistic dependencies is not known
- Some evidence of such illusions in temporal adjuncts (Cunnings & Sturt, CUNY 2014)
- 5 The policeman/criminal who saw that the cop/car was waiting shouted loudly before arresting the robber for theft
- Can we find further evidence of illusions of plausibility?

Summary & Conclusions

- Significant plausibility effects in both experiments, with numerical but not significant interference effects
- Combined analysis of regression path in both experiments revealed significant plausibility by distractor interaction
- Results suggestive of interference in temporal adjuncts (see also Parker et al., 2015) and co-ordination
- Interference may have been attenuated here because the distractor did not match the [+SUBJECT] retrieval cue of the verb (see Van Dyke & McElree, 2011)

Experiment 1: Regression Path

- (A) Plausible, Animate Distractor
  The detective stood by the cop very calmly after arresting the robber outside the bank.
- (B) Plausible, Inanimate Distractor
  The detective stood by the car very calmly after arresting the robber outside the bank.
- (C) Implausible, Animate Distractor
  The criminal stood by the cop very calmly after arresting the robber outside the bank.
- (D) Implausible, Inanimate Distractor
  The criminal stood by the car very calmly after arresting the robber outside the bank.

Experiment 1: Total Time

Experiment 2: Regression Path

Experiment 2: Total Time

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