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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* (Jäger 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; Wagers et al., 2009)
 - 1 The key to the cabinet/s was rusty
 - 2 The key to the cabinet/s were rusty

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 accidentally shattered earlier today
 - 4 Sue saw the letter that the butler with the cup/tie accidentally 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*?

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.

(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

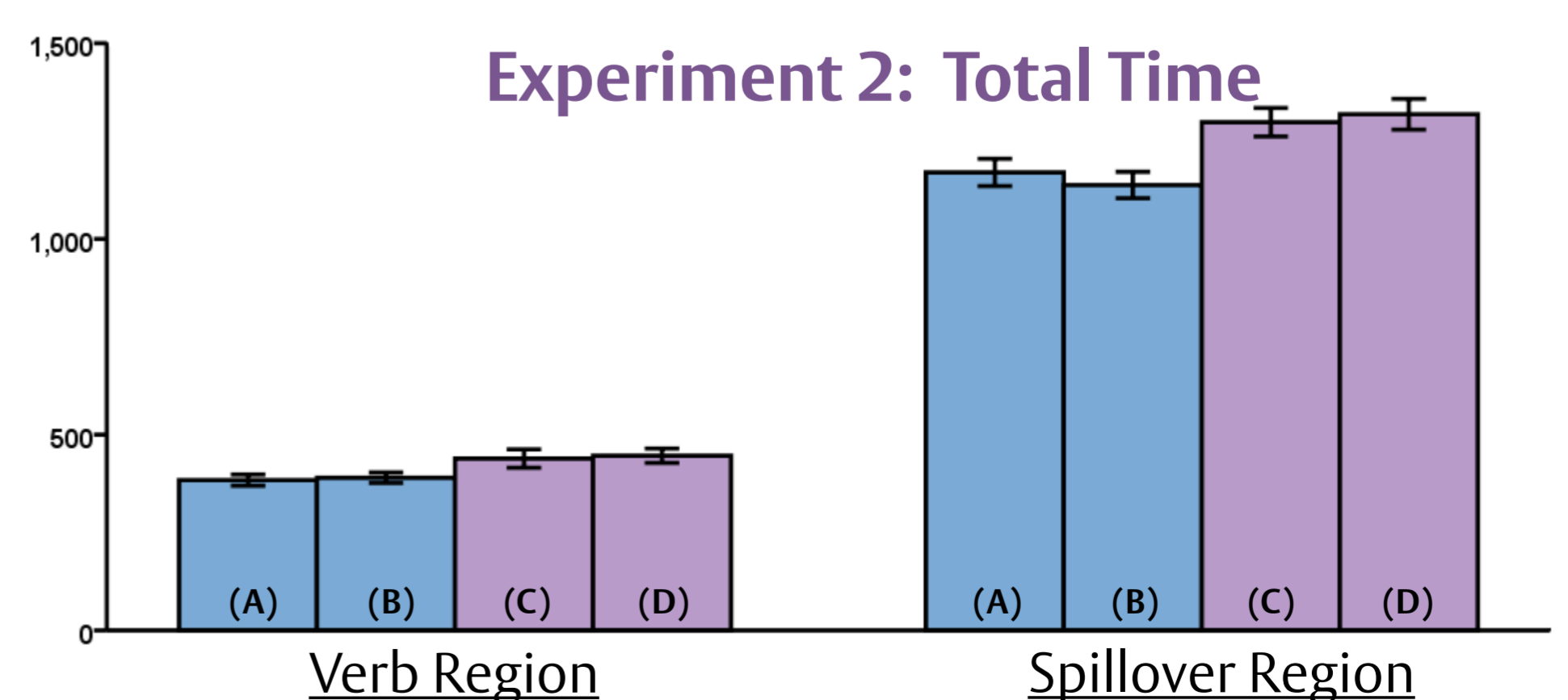
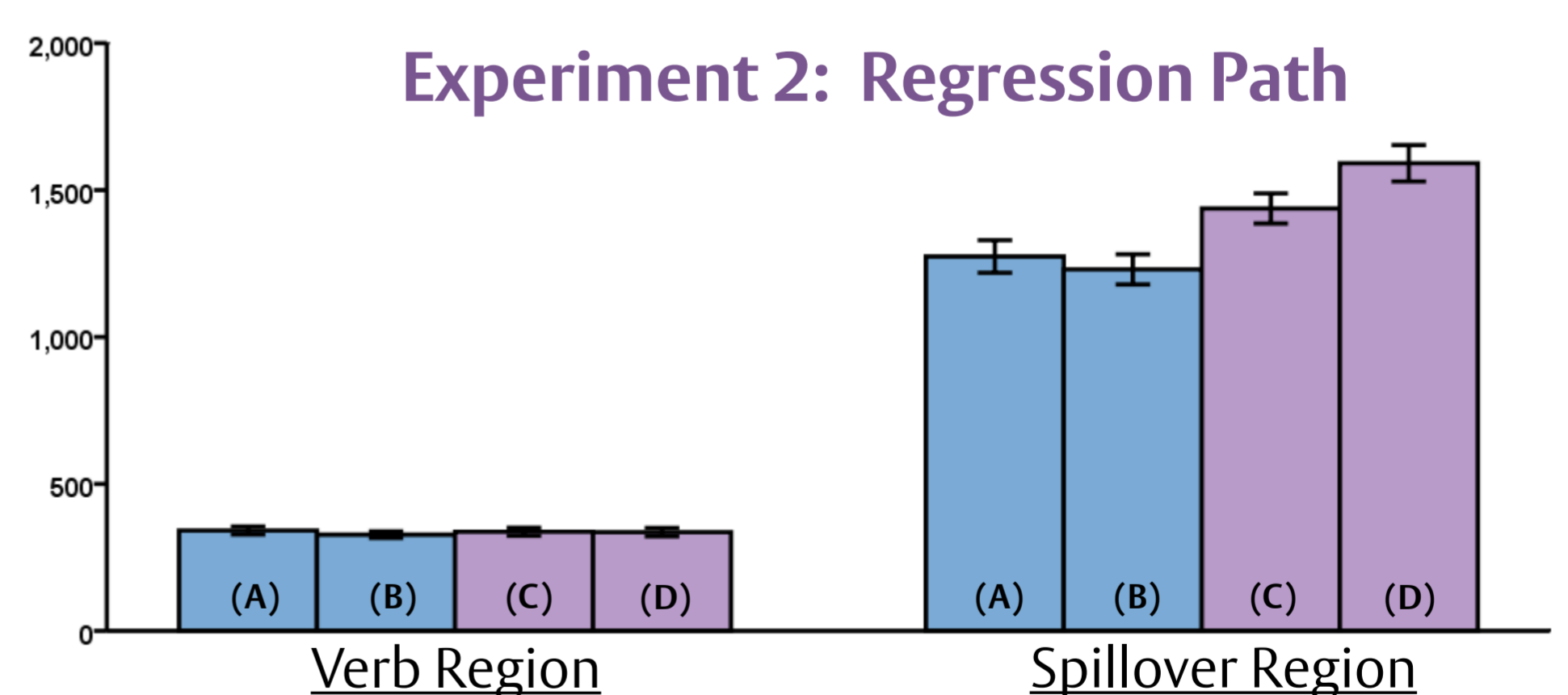
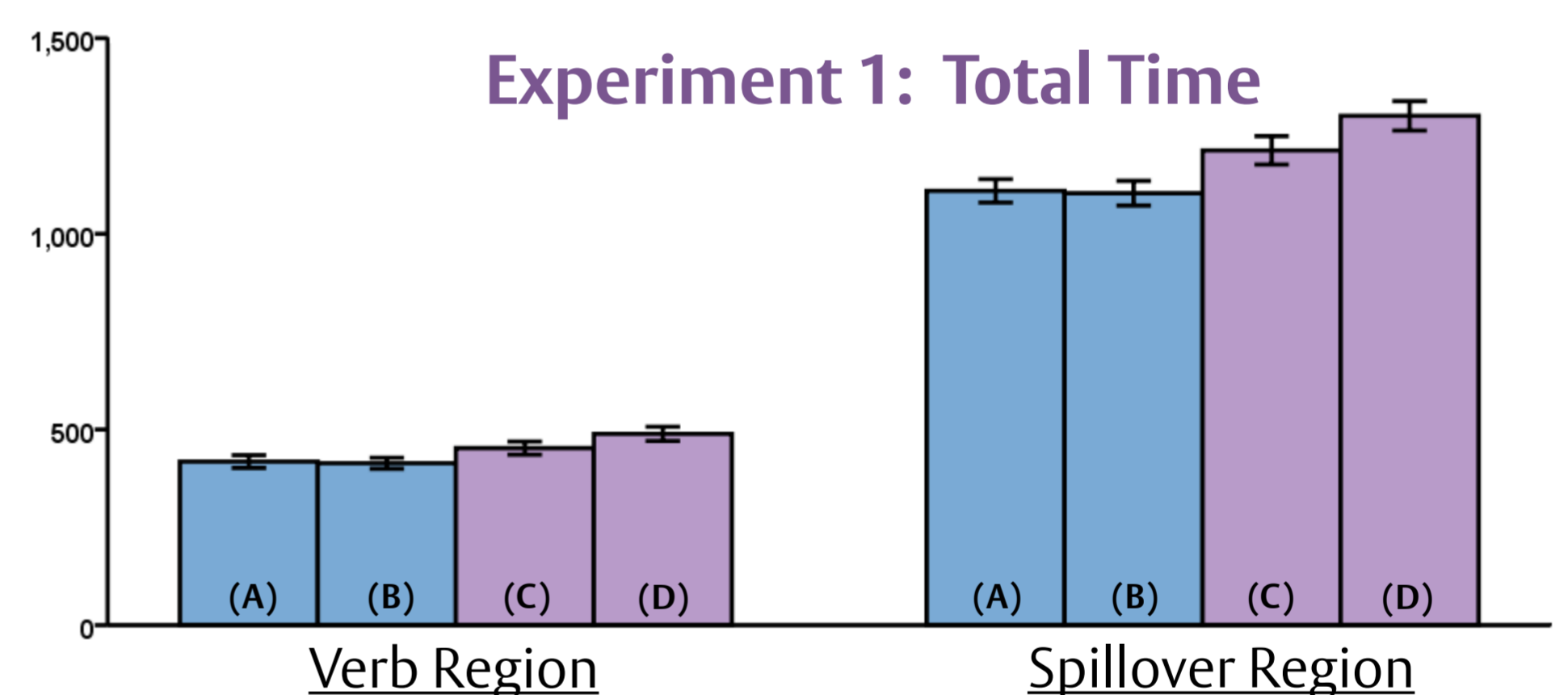
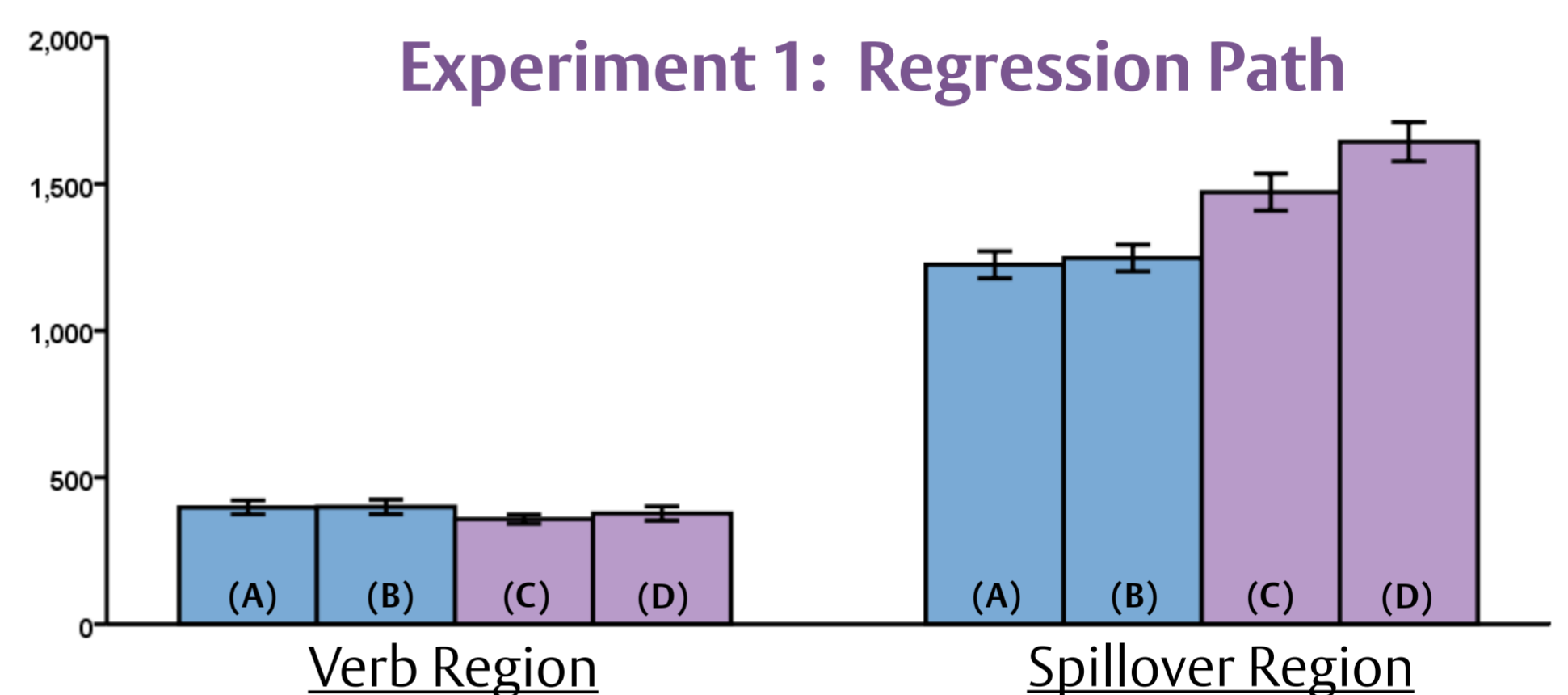
The criminal stood by the cop very calmly after arresting the robber outside the bank.

(D) Implausible, Inanimate Distractor

The criminal stood by the car very calmly after arresting the robber outside the bank.

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)



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