Agreement attraction across sentence positions
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Agreement attraction is a well-known phenomenon whereby a verb erroneously agrees with a non-target constituent (the "distractor") within a sentence [1–3]. In comprehension, this leads to facilitation facilitation when processing ungrammatical agreement, realised as either an incrase in perceived acceptability, or faster reading times. One prominent explanation for this effect invokes Cue-based Memory Retrieval [4–6], suggesting that comprehenders use feature associated with the verb to identify (sic. "retrieve") the intended subject. Importantly, some proportion of the time, this process retrieves the wrong NP, thus spuriously satisfying agreement even when it is globally ungrammatical [7, 8, i.m.a.].

However, one contentious issue for this account is which features are actually employed by the parser in resolving agreement dependencies. Some studies suggest that structural features like subjecthood play a strong role in the process of resolving agreement dependencies [9], while others suggest that arguments actually make less tempting distractors than non-arguments (e.g. PP modifiers) [8]. In the current study, we present a novel test of this competing considerations by pitting prominent, canonical subjects (matrix subjects) against the kinds of distractors more usually employed in agreement attraction studies (e.g. NPs embedded in modifying prepositional phrases).

Experiments: We conducted two experiments using the same set of 48 bi-clausal sentences patterned on (1). Experiment 1 (n=64) was a speeded acceptability-judgment study, while Experiment 2 used the same materials in a self-paced reading task (*current n*=120, *target n*=144). These experiments manipulated (*i*) *grammaticality*: whether the embedded subject matched, or mismatched the number of the embedded plural auxiliary (*ii*) *PP*: whether the PP modifying the embedded subject contained a plural, or singular NP; (*iii*) *Matrix Subject*: whether the matrix subject was singular or plural. This manipulation enabled us to create conditions where one or the other of the two distractors (the PP or the Matrix Subject) (dis)agreed with the verb.

(1) The $\begin{Bmatrix} \text{guard} \\ \text{guards} \end{Bmatrix}$ said that the $\begin{Bmatrix} \text{youths} \\ \text{youth} \end{Bmatrix}$ on the $\begin{Bmatrix} \text{corner} \\ \text{corners} \end{Bmatrix}$ probably were causing trouble...

Results: The (preliminary) results of both experiments are shown in Figure 1. The Bayesian regression analysis for Experimetn 1 is given in Table 1, but because data collection is on-going for Experiment 2, we only report descriptive statistics for that experiment here. In Experiment 1, we find a reliable interaction of *grammaticality* and *prepositional phrase*, indicating that ungrammatical sentences were rated slightly better if the NP inside the prepositional phrase matched the verb. No similar effect was found for matrix subjects. Visual inspection of the descriptive statistics for our self-paced reading experiment suggests a similar pattern: there is a trend towards agreement attraction induced by prepositional phrases, but no similar effect observed for matrix subjects.

Conclusion: Our results are consistent with those in [8], but collectively pose a larger challenge for cue-based approaches to agreement licensing. Our results suggest that prepositional modifiers are better attractors than actual, c-commanding subjects which is decidedly at odds with most cue-basd interpretations of agreement attraction. Moreover, this makes agreement look very unlike other dependencies with surface-similar behaviour. Notably, contra [8], there is very reliable illusory NPI licensing from argument positions in relative clauses [10, i.m.a.]. Similarly, there is now non-negligible evidence that reflexive pronouns display an opposite attraction profile to what we show here: [11, 12] find strong attraction effects for reflexives from matrix subjects, where other researchers fail to find it from modifying constituents [13].
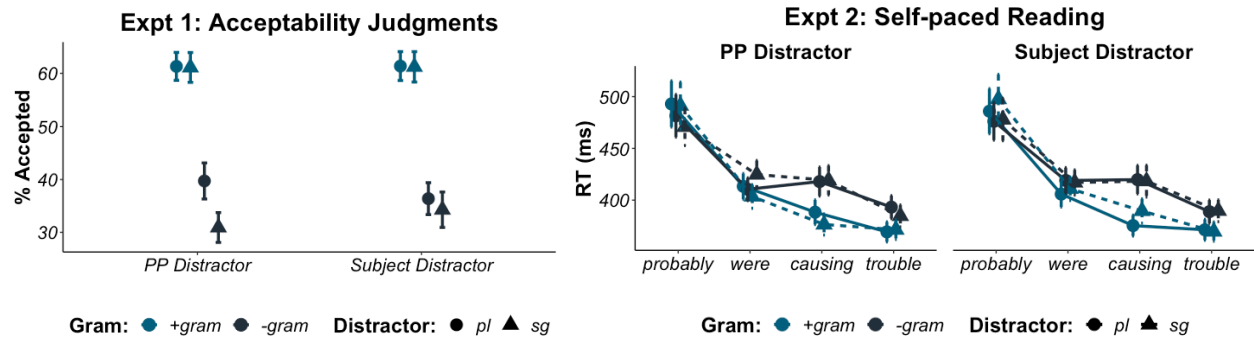
Figure 1: *By-participant means in Experiments 1 (n =) and 2 (current n = 120). Means for each distractor type are collapsed across the other distractor (e.g. means for PP distractors ignore the number of the matrix subject). Error bar represent standard error.*

	$\hat{\beta}$	SE.	95% CI
gram	1.43	0.15	[1.13, 1.73]
pp	-0.21	0.09	[-0.39, -0.04]
matrix	-0.12	0.09	[-0.29, 0.05]
gram×pp	0.39	0.18	[0.04, 0.73]
gram×matrix	0.24	0.16	[-0.08, 0.56]
pp×matrix	0.20	0.21	[-0.21, 0.61]
gram×pp×matrix	0.06	0.42	[-0.77, 0.87]

Table 1: *Estimates of a Bayesian mixed effects logistic regression fit to the data from Experiment 1. The model included the factors gram (+gram=0.5, −gram=−0.5), pp (sg=0.5, pl=−0.5), matrix (sg=0.5, pl=−0.5), and all interactions fixed effects. Every fixed effect was included as a random effect by subject and item. Estimates for which the 95% Credible Interval excluded zero are shaded. N.b. a full analysis of Expt 2 is on hold pending the completion of participant recruitment.*

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