Reconsidering asymmetries in voice-mismatched Verb Phrase Ellipsis

Introduction A critical testbed for theories of English Verb Phrase Ellipsis (VPE) is provided by cases of voice mismatch between the antecedent and ellipsis clauses [1-4,6,7]. Whereas it is well-established that mismatched VPE (1a-b) is degraded compared to matched VPE (1c-d), studies have also found differences *within* mismatches [1,7]: [P -> A] mismatches like (1a) (read: active VPE with preceding passive antecedent) tends to be more acceptable than [A -> P] mismatches like (1b). This MISMATCH ASYMMETRY may appear to pose a problem for syntactic identity theories of VPE [6], since their categorical nature offers no explanation for gradient effects of mismatch. On the other hand, the Recycling Hypothesis (RH) [1,2] -- a processing theory that posits repair strategies for satisfying syntactic identity in cases of mismatch -- posits that the asymmetry is due to the voice of the *antecedent* clause: since passive clauses are more likely to be misremembered as active than the converse [5], [P -> A] mismatches are hypothesized to be more readily misremembered as [A -> A] than [A -> P] mismatches are as [P -> P], yielding a stronger "illusion of grammaticality" for the former and hence higher acceptability. Here we present evidence from two acceptability judgment experiments which, contrary to the RH, (a) suggests that the mismatch asymmetry is due to the voice of the *ellipsis* clause rather than the antecedent, (b) rules out memory-based explanations, and (c) suggests that both syntactic and information-structural constraints are at play.

Experiment 1 Although the RH predicts that the degradation of (1b) compared to (1a) is a mismatch-specific effect, [1] did not include matched controls to establish this. Expt. 1 (N=30) remedied this by including such controls (1c-d) (both Expt. 1 and 2 included 24 items and 48 fillers exemplified in (3)). Consistent with previous findings, [A -> P] mismatches were reliably less acceptable than [P -> A] (Fig. 1, left panel). However, the difference persisted in the absence of mismatch, i.e. [P -> P] was less acceptable than [A -> A] (with no interaction), which reveals an independent penalty for passive *ellipsis* clauses, rather than active antecedents.

Experiment 2 Expt. 2 (N=30) tested cataphoric VPE as in (2), in which the order of antecedent and ellipsis clauses is reversed. Under cataphora, the predictions from the RH are likewise reversed: [P <- A] mismatches, like (2b), are expected to be more acceptable than [A <- P] mismatches like (2a), since it is the *ellipsis* clause that appears first and is hence subject to misremembering. Contrary to the RH, cataphoric VPE in Expt. 2 patterned as non-cataphoric VPE in Expt. 1, with two main effects and no interaction (Fig. 1, right panel).

Discussion Our results are inconsistent with the RH in three ways: they suggest that the mismatch asymmetry is driven by mismatch-independent factors; they implicate the voice of the *ellipsis* clause rather than the *antecedent*; and they show that the order of clauses, and thus which clause is subject to memory constraints, is irrelevant. The results instead suggest an interplay of two effects: a persistent negative effect of mismatch, and an equally persistent, and independent, negative effect of passive voice ellipsis clauses that applies to both matched and mismatched VPE. While the mismatch effect is consistent with a wide range of theories of VPE including syntactic identity accounts, these theories do not capture the across-the-board penalty for passive VPE. Expanding on existing referential and information-structural (including, but not limited to, QUD-based) accounts of VPE [4,8], we propose that the information structure of passive VPE poses greater demands on the discourse context than active VPE.

Examples

(1)	a.	The report was first read by the judge, and then the lawyer did too.	Mismatch: [P -> A]
	b.	The judge read the report first, and then the confession was too.	Mismatch: [A -> P]
	c.	The judge read the report first, and then the lawyer did too.	Match: [A -> A]
	d.	The report was first read by the judge, and then the confession was too.	Match: [P -> P]
(2)	a.	Before the lawyer did, the report was first read by the judge.	Mismatch: [A <- P]
	b.	Before the confession was, the judge read the report first.	Mismatch: [P <- A]
	c.	Before the lawyer did, the judge read the report first.	Match: [A <- A]
	d.	Before the confession was, the report was first read by the judge.	Match: [P <- P]
(3)	a.	The thief was arrested and his brother was as well.	Acceptable filler
	b.	A proof that God exists doesn't.	Unacceptable filler

Figures

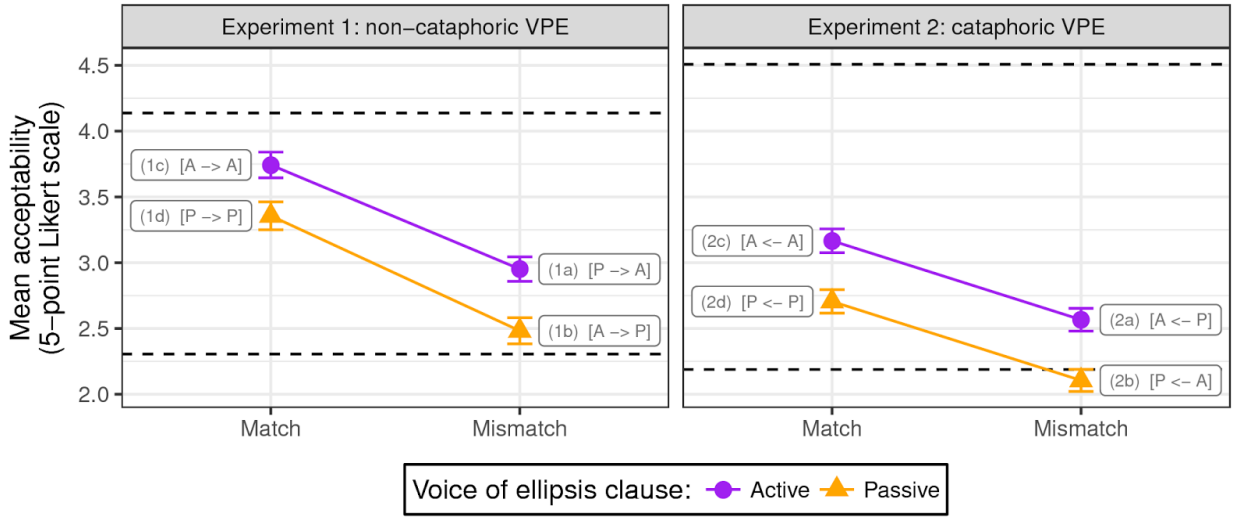

Figure 1. Results from Experiment 1 (left) and 2 (right). Both experiments revealed two significant main effects: acceptability was degraded under mismatch as well as passive voice at the ellipsis site (all $p \leq 0.001$). Parallel lines reflect absence of an interaction ($p = 0.67$ and $p = 0.99$, respectively). Dashed lines show mean ratings of (un)acceptable fillers exemplified in (3).

References

[1] Arregui, A., Clifton Jr., C., Frazier, L, and Moulton, K. (2006). *Journal of Memory and Language, 55*(2). 232–246. **[2]** Frazier, L. (2013). In *Cheng and Corver (2013)*, 485-501. **[3]** Kehler, A. (2000). *Linguistics and Philosophy, 23*(6), 533-575. **[4]** Kertz, L. (2013). *Language*, *89*(3), 390-428. **[5]** Mehler, J. (1963). *Journal of Verbal Learning and Verbal Behavior, 2*, 346-351. **[6]** Merchant, J. (2013). *Linguistic Inquiry, 44*(1), 77-108. **[7]** Parker, D. (2017). *Talk at Corpus-based and Experimental Approaches to Ellipsis workshop at the University of Kentucky.* **[8]** Kehler, A. (2016). In *Semantics and Linguistic Theory* (Vol. 25, pp. 512-532).