

It was/wasn't what I expected: predicting the right antecedent

Hans Wilke¹, Jet Hoek², Hannah Rohde¹

¹ School of Philosophy, Psychology & Language Sciences, The University of Edinburgh

² Department of Language and Communication, Radboud University Nijmegen

Comprehenders make predictions about upcoming content and discourse structure based on different linguistic cues (e.g., Cristea & Webber, 1997; Roland et al., 2012). For example, comprehenders can anticipate upcoming referents based on discourse particles (Van Bergen & Bosker, 2018) or implicit causality biases of verbs (Koornneef & Sanders, 2012). Here, we investigate how at-issueness influences comprehenders' expectations about which element is most likely to be re-mentioned as discourse progresses. At-issueness concerns itself with what the main point of an utterance is (Potts, 2005; Koev, 2018) and consequently, what is felicitously available to be picked up in subsequent discourse (Hunter & Asher, 2016; Jasinskaja, 2016). For multi-clause sentences, clause type (matrix /embedded) and clause position (sentence-early/sentence-final) have been posited to contribute to at-issue status. Consider (1) and follow-up sentences (2a-b):

- (1) My sister, who was cooking dinner for her roommate, had just been out for a run.
- (2) a. It was a 90 minute interval training.
b. # It was a very elaborate recipe.

When the antecedent of the pronoun *it* appears in a sentence-final matrix clause (2a), interpreting *it* is straightforward. However, when the antecedent is located in a sentence-early appositive relative clause (ARC), retrieval may be more difficult (2b).

While there is ample evidence that matrix clauses and sentence-final clauses are more likely to be at-issue (Jasinskaja, 2016; Syrett & Koev, 2015), previous experimental research has used offline measures: choosing the better follow-up sentence (like in 1a-b), or choosing which clause in a sentence would be the more likely target for direct denial or a 'Why?' question (e.g., Syrett & Koev, 2015). We have taken an online approach and carried out self-paced reading experiments where English-speaking participants encountered an ambiguous pronoun *it* with two possible antecedents. Depending on participants' expectations about which element will be re-mentioned subsequently, their interpretation of the pronoun *it* may vary, favouring an antecedent in either the matrix or embedded clause. We measured participants' processing when *it* was disambiguated to either a referent from a matrix clause (3a) or an embedded clause (3b). We measured reading times at the disambiguation region (*a very expensive bottle* in (3)), assuming participants read faster if disambiguating information is in line with the content they were expecting to be picked up.

Context: My mom made us a fancy dinner.

- (3) a. After she brought out the caviar, she served us champagne. It was...
b. After she served us champagne, she brought out the caviar. It was...

Disambiguation: ...a very expensive bottle.

Spillover: Best champagne I ever had.

We tested adverbial clauses and ARCs and manipulated their position (sentence-early/sentence-final). For adverbial clauses, we find effects of both clause position (Figure 1) and type (Figure 2). However, for ARCs, only clause position impacted reading times (Figure 3). This difference may reflect ARCs' similarity to matrix clauses. For example, ARCs can express an independent speech act (Potts, 2005). Our findings suggest comprehenders' expectations are formed differently depending on sentence structure overall, but also specifically by the type of embedded clause they encounter.

Figure 1: adverbial clauses

disambiguation region picks up on sentence-final matrix clause or sentence-early adverbial clause

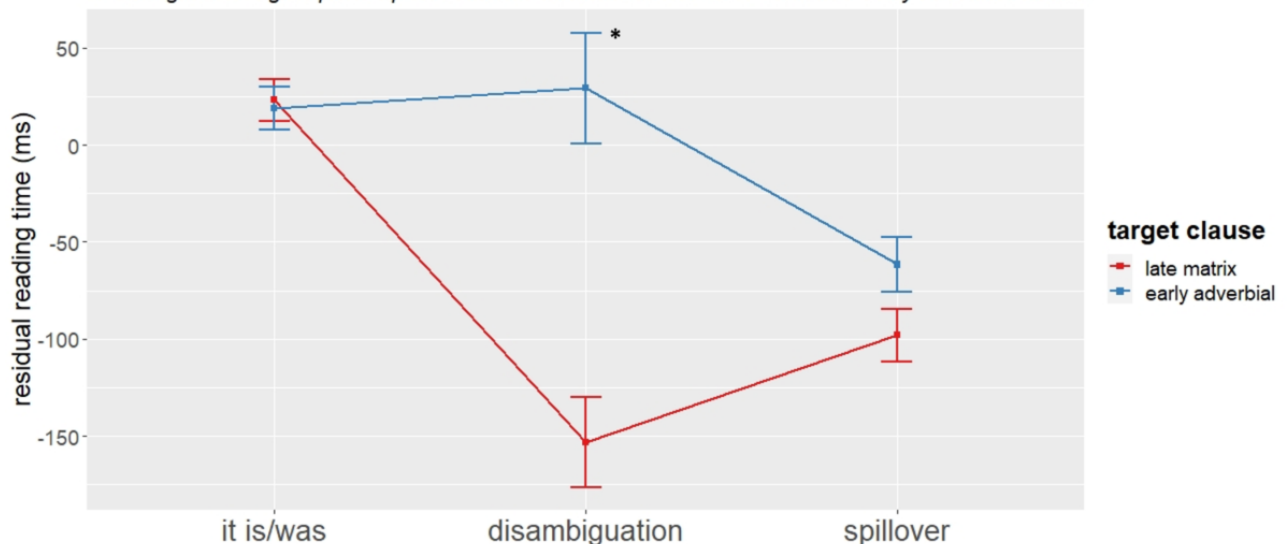


Figure 2: adverbial clauses

disambiguation region picks up on sentence-early matrix clause or sentence-early adverbial clause

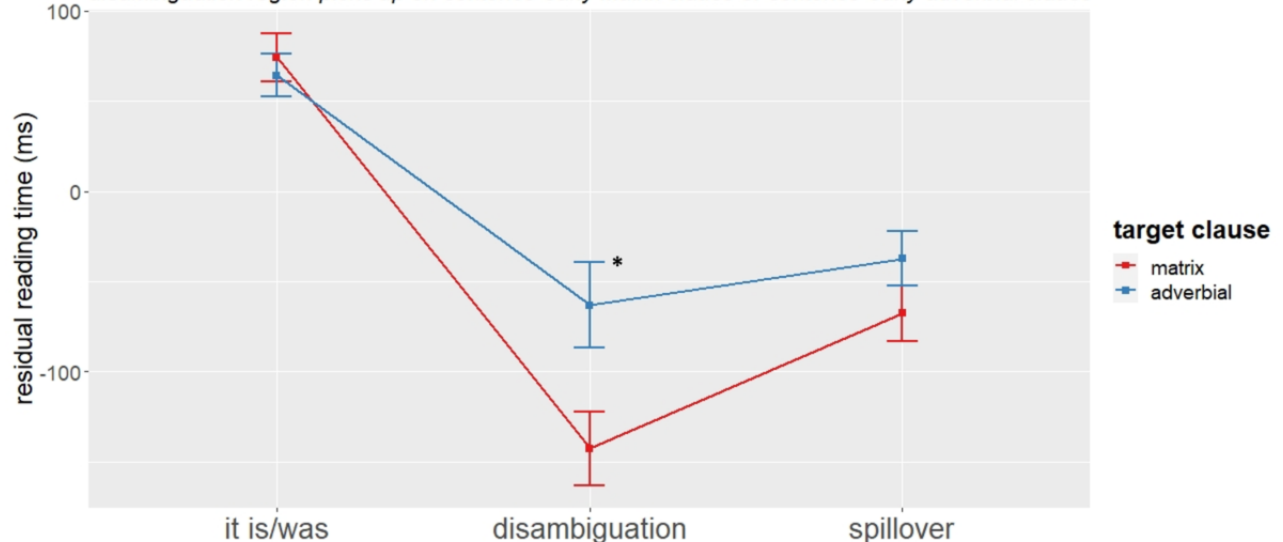
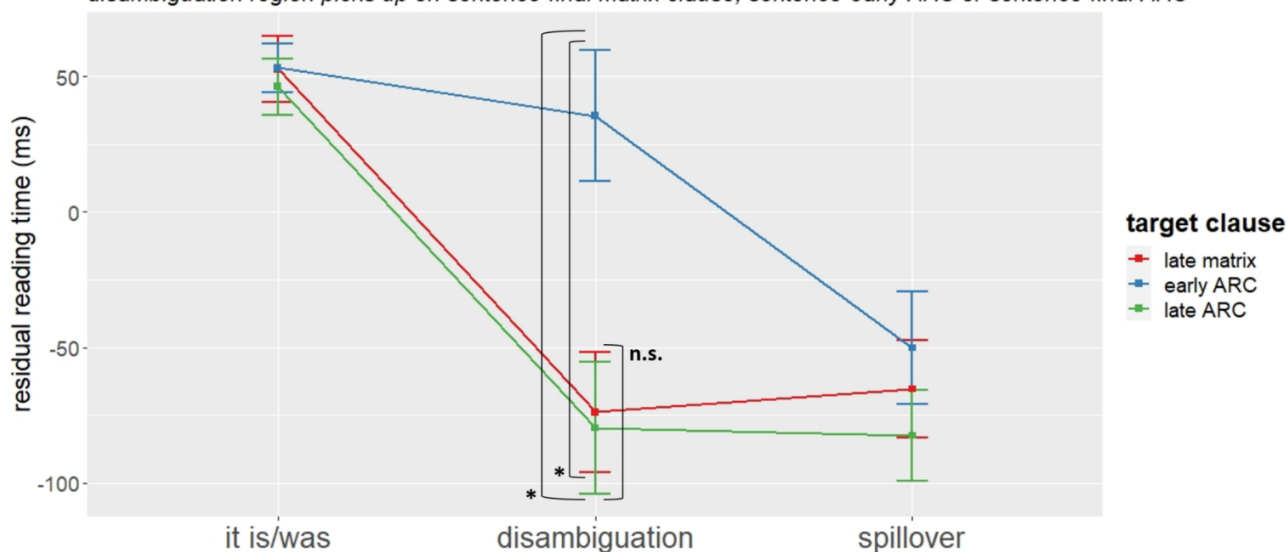


Figure 3: appositive relative clauses

disambiguation region picks up on sentence-final matrix clause, sentence-early ARC or sentence-final ARC



References

- Cristea, D. & Webber, B. L. (1997). Expectations in incremental discourse processing. In *Proceedings of the 35th Annual Meeting of the Association for Computational Linguistics (ACL/EACL-97)*. Madrid, Spain, 88–95.
- Hunter, J. & Asher, N. (2016). Shapes of conversation and at-issue content. In *Proceedings of Semantics and Linguistic Theory 26*. 1022–1042.
- Jasinskaja, K (2016). Not at issue any more [Unpublished manuscript], University of Cologne.
- Koev, T. (2018). Notions of at-issueness. *Language and Linguistics Compass*, 12(12). 1–16.
- Koornneef, A. W. & Sanders, T. J. M. (2012). Establishing coherence relations in discourse: the influence of implicit causality and connectives on pronoun resolution. *Language and Cognitive Processes*, 28, 1169–1206.
- Potts, Christopher (2005). *The logic of conventional implicatures*. Oxford University Press.
- Roland, D., Mauener, G., O’Meara, C. & Yun, H. (2012) Discourse expectations and relative clause processing. *Journal of Memory and Language*, 66, 479–508.
- Syrett, K. & Koev, T. (2015). Experimental evidence for the truth conditional contribution and shifting information status of appositives. *Journal of Semantics* 32(3), 525–577.
- Van Bergen, G., & Bosker, H. R. (2018). Linguistic expectation management in online discourse processing: An investigation of Dutch *inderdaad* ‘indeed’ and *eigenlijk* ‘actually’. *Journal of Memory and Language*, 103, 191–209.