

The role of sentences in discourse

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1 Sentences: why would they matter?

While almost everyone will have some understanding of what a sentence is, giving an exact definition has proven to be less than straightforward. Allerton (1969) states that “a purely descriptive definition of the sentence [...] can only be in terms of the conventionalized written language, i.e. as a sequence of words (or morphs) lying between utterance-beginning or a full stop on the one side, and (utterance-end or) a full stop on the other” (p. 27); other descriptive characteristics of sentences (e.g., being able to meaningfully occur in isolation), appear to be neither sufficient nor obligatory for a sequence of words to appear as a sentence. In addition, it has been questioned whether two clauses that are coordinated (e.g., *Klaus von Heusinger is a linguist and he works at the University of Cologne*) are fundamentally different from two clauses that appear as two independent sentences (e.g., *Klaus von Heusinger is a linguist. He works at the University of Cologne*). Despite the lack of an airtight definition, the sentence, along with the grammatical clause, is often used as the basis for segmenting and analyzing discourse (e.g., Hoek, Evers-Vermeul & Sanders 2018) – a guideline usually unproblematic to implement, as most discourse analyses have focused on written language. However, this decision often appears to be arbitrary (although it will make intuitive sense to most). Is there evidence to suggest that the sentence is a meaningful unit in discourse?

2 Discourse relations between clauses vs. sentences

Although the difference between, for instance, two clauses appearing in a single complex sentence and two clauses appearing as separate sentences may seem small, as in the examples above, there appears to be a relationship between the syntactic configuration of a relation and the types of coherence relations that can be inferred. Even though *and* is a highly general connective that allows for the inference of much more specific types of relations, a relation in which the two segments are coordinated by *and* does not seem to be able to express all relations that can be conveyed using a juxtaposition of two segments, and vice versa (Carston 2002, Crible & Demberg 2018). Backward causal relations (prototypically signaled by *because*), for example, can be expressed by juxtaposed sentences, but not by a construction in which two clauses are connected by *and*. Similarly, the range of coherence relations that can be inferred between a matrix clause and a free adjunct is not equal to the range of relations inferable between two juxtaposed sentences (Kortmann 1991, Reid 2016). For example, juxtaposed sentences can express relations involving some form of contrast between the segments, but this option does not seem to be available for free adjunct constructions (or only very marginally). So even if two clauses are joined in the same sentence without a very explicit cue as to which coherence relation should be inferred between them, the fact that they do appear in a single sentence seems to affect the interpretation of the discourse.

3 Coreference and sentence boundaries

Another discourse-level phenomenon that appears to be influenced by sentence boundaries is coreference. The forced-choice pronoun interpretation task reported in Hoek (2020) compares the interpretations of ambiguous pronouns that can refer to a referent mentioned in the preceding clause or to a referent mentioned in the clause before that. The ambiguous pronoun

functions as the subject of a sentence containing a nonce verb, so that the meaning of that sentence does not provide any disambiguating or biasing information. The two potential referents for the pronoun appear either in a single sentence consisting of a main clause and a subordinate clause, as in (1a), a complex sentence consisting of two main clauses, as in (1b), or as two separate sentences, as in (1c). Although the one-sentence conditions contain a connective while the two-sentence condition does not, the coherence relation between the two clauses is held constant.

- (1) a. Nadja hat vegane Burger gekauft, weil Sabine kein Fleisch isst.
b. Nadja hat vegane Burger gekauft, denn Sabine isst kein Fleisch.
c. Nadja hat vegane Burger gekauft. Sabine isst kein Fleisch.
Sie daupte.

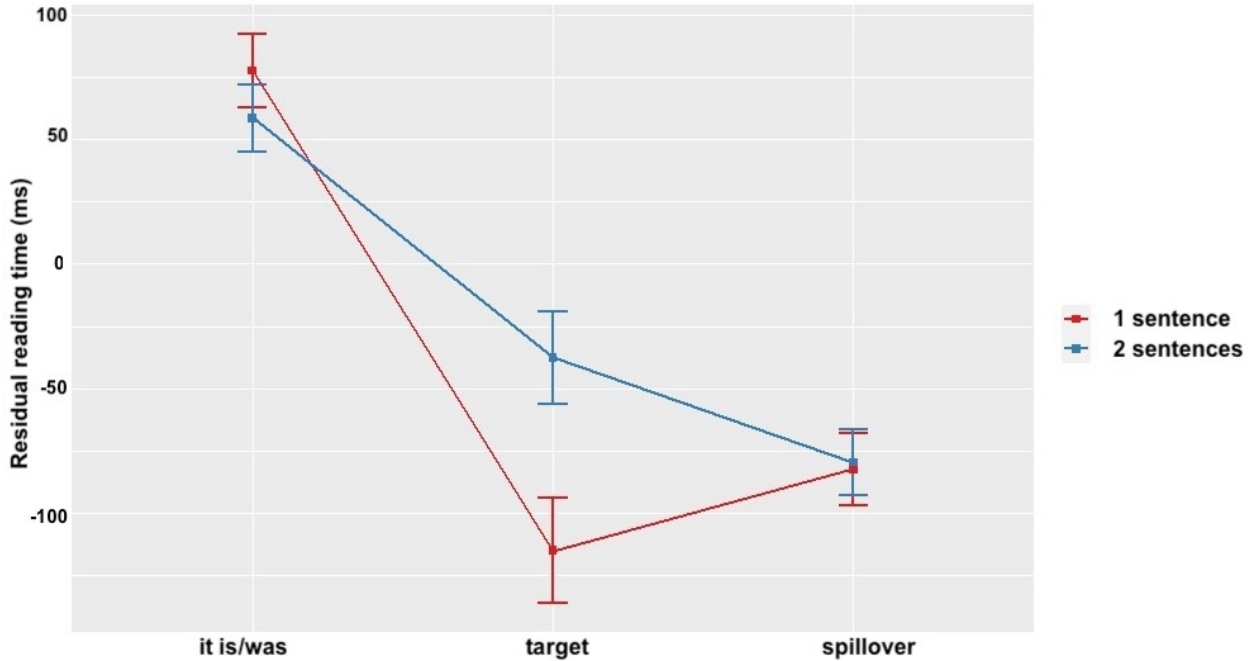
Participants were asked who the ambiguous pronoun refers to (*Wer daupte?*). Results show that the proportion of pronouns resolved to the referent mentioned in the first clause, i.e., *Nadja* in (1), is significantly higher in the one-sentence conditions (main-sub: 61%, main-main: 54%) than in the two-sentence condition (22%). This suggests that coreference is highly sensitive to sentence boundaries.

A self-paced reading experiment by Wilke, Hoek & Rohde (in prep) supports this finding. Participants were asked to read short passages containing the ambiguous pronoun *it*. The pronoun was followed by information that specified whether *it* referred to the first or second clause of the discourse. Those first two clauses either appeared in a single sentence, as in (2a) or as two separate sentences, as in (2b).

- (2) a. My nephew was playing Monopoly with his best friend, who always carries her favorite book around.
b. My nephew was playing Monopoly with his best friend. She always carries her favorite book around.
[It is] [a board game they often play together.]_{target} [My nephew usually wins.]_{spillover}

Reading times indicate that disambiguating information that revealed that the pronoun referred to the first clause of the discourse (i.e., the target region) was read faster in the one-sentence condition than in the two-sentence condition, see Figure 1. In addition to the presence of a sentence boundary, the two conditions in this experiment differ in that the ‘intervening’ clause is a subordinate clause in the one-sentence condition and a main clause in the two-sentence condition. However, the Hoek (2020) study suggests that the effect of syntactic subordination on coreference is much smaller than the effect of sentence boundaries. The self-paced reading experiment by Wilke, Hoek & Rohde (in prep) therefore seems to lend additional support for the idea that sentence boundaries matter for coreference resolution, also in real-time discourse processing.

Figure 1: Residual reading times for all three regions in Wilke, Hoek & Rohde (in prep), per condition (in ms)



4 Conclusion

The sentence thus appears to be a meaningful unit in discourse, since effects of sentence boundaries on discourse-level phenomena such as coherence relations and coreference can be distinguished from effects of clause boundaries. However, if it is difficult to give an exact definition of the sentence as a linguistic unit, the findings reported above may actually be due to something else that is closely correlated to what is commonly understood to constitute a sentence: The above effects could for instance arise mainly because of what the units of meaning are understood to be. Since the apparent sentence-boundary effects appear to be quite strong, the exact mechanism behind these effects seems like a valuable topic to explore in future research. In the meantime, however, it seems wise to continue using the sentence as a unit of analysis when studying discourse.

References

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