
What counts as a discourse signal?

Markus Egg & Debopam Das

Humboldt-Universität zu Berlin

markus.egg@hu-berlin.de, dasdebop@hu-berlin.de

Discourse signals (connectives and non-connective signals) vary in strength (Asr & Demberg 2012); e.g., *and* is a weak ambiguous signal. Also, for a given relation the presence of a potential signal can be incongruous (Hoek et al. 2019), or sometimes even contradictory (Zeldes & Liu 2020); e.g., *antonymy* in an ELABORATION relation. Generally, the annotation of discourse signals in previous work, e.g., the PDTB corpus (Webber et al. 2018), follows a principle of “signal relevance”, annotating only the signals deemed relevant for the interpretation of the relation. Crible (2022) criticises this strategy, advocating and undertaking an annotation that includes all the signals present in a relation, irrespective of whether they signal the relation or not. The general question of what exactly makes a signal relevant for a relation remains implicit, however.

Our study focusses on the extent and the impact of non-contributing or even contradicting discourse signals. In this way, we want to contribute to a definition of the notion of “signal relevance”, but also to assess the gravity of the criticism levied against relevance-based signal annotation approaches. To this end, we examined about 1,000 discourse relations in the RST Signalling Corpus (Das et al. 2015) for signals relevant to the respective discourse relations, and also annotated those relations for all other potential signals present in them.

Annotating the full range of signals returned two more signals per relation on average, i.e., 50% more signals. They were restricted to a subset of the signals, in particular, lexical chains, and other semantic relations (especially repetition), reference, and indicative words (similar to PDTB “AltLexes”). Also, additional lexical chains typically showed up in relations where other lexical chains had already been annotated. Furthermore, the indicative words emerged as particularly hard to delimit (i.e., which words/phrases are indicative of what relations), which also triggered low inter-rater agreement. We conclude with some suggestions on how to define this group.

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