What does it mean to say a discourse relation is 'implicit'?

The term 'implicit (discourse) relation' was created to contrast with 'explicit discourse relation'. The latter was defined as a relation containing an explicit discourse connective drawn from well-defined syntactic classes. (For English, these were coordinating or subordinating conjunctions, or discourse adverbials). Explicit connectives were taken to signal (1) that a relation holds between two text spans (usually sentences or clauses) interpretable as abstract objects [Asher, 1993]) and (2) that the relation has one or more particular senses. In contrast, if adjacent sentences were not related by an explicit connective, then an 'implicit discourse relation' was taken to hold if a relation could be inferred between them, that could be made explicit by inserting a connective. The connective so inserted was referred to as an 'implicit connective'.

Implicit discourse relations were defined in terms of adjacent sentences because of limited resources available for annotation [Prasad et al, 2008]. In time, some 624 of these implicit discourse relations were seen to have some other word or phrase conveying the sense of the relation and were renamed 'AltLex' relations [Prasad et al, 2010]. Similarly, in around 5100 of these relations, the right-hand span was seen to convey information about an entity mentioned in the left-hand span, and were renamed 'Entity' relations or 'EntRels'. In all these cases, the LOCUS of the relation was clear (i.e, in between the two spans) and one or more SENSES could be inferred to hold between them.

The 2008 release of the Penn Discourse TreeBank allowed researchers to experiment with inducing 'shallow parsers' for both explicit and implicit relations, culminating in Shared Tasks at both the 2015 and 2016 Conferences on Natural Language Learning (CoNLL).

At the same time, work on the Penn TreeBank began to move from annotating discourse

relations primarily between SENTENCES to annotating relations between CLAUSES within a single sentence [Prasad et al, 2018]. This forced us to confront two issues:

- There was no longer a specific LOCUS for implicit relations. Now one needed to decide what signals the LOCUS of an implicit relation, when that locus was no longer the position between adjacent sentences, and when, unlike in the RST-DT corpus [Carlson et al, 2001]), it was not assumed that a text could first be partitioned into a sequence of elementary discourse units (EDUs).
- what should be taken to signal the SENSE(S) of an implicit relation specified with respect to a given LOCUS?

How these questions are answered has implicatioms for the design of future discourse parsers, as well as informing our understanding of discourse relations.

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