

Annotating discourse relations in spoken language: A comparison of the PDTB and CCR frameworks.

Rehbein, Scholman, & Demberg (2016)

| | | | <div><div>Polarity</div><div>Basic operation</div><div>Source of Coherence</div><div>Order of the segments</div></div> | | | | | | | | | | | | | | | | | | | | pos temp | pos temp | pos temp | pos caus | pos caus | pos caus | pos caus | pos cond | pos cond | pos cond | pos cond | neg cond | neg cond | neg cond | neg cond | neg caus | neg caus | neg caus | neg caus | neg caus | neg caus | neg caus | neg add | neg add | pos add | pos add | raw count |
|------------------------------|----------------------|--------------------|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|-------|-----|-------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------------|------------|------------|------------|--------------|
| | | | NA | basic | non-b | basic | non-b | basic | non-b | basic | non-b | basic | non-b | basic | non-b | basic | non-b | NA* | basic | non-b | NA* | basic | non-b | NA | NA | NA | NA | | | | | | | | | | | | | | | | | | | | | | |
| Temporal | Synchronous | | 68 | 13 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 8 | 5 | 53 | | | | | | | | | | | | | | | | | | | | | |
| | Asynchronous | precedence | 2 | 77 | 3 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 8 | 4 | 87 | | | | | | | | | | | | | | | | | | | | | |
| | | succession | 6 | 17 | 39 | 6 | 0 | 0 | 5 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 11 | 0 | 0 | 18 | | | | | | | | | | | | | | | | | | | | | |
| Contingency | Purpose | Arg1-as-goal | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | |
| | | Arg2-as-goal | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | |
| | Cause | reason | 0 | 0 | 0 | 4 | 22 | 5 | 63 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 163 | | | | | | | | | | | | | | | | | | | | | |
| | | result | 0 | 4 | 0 | 33 | 1 | 48 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 6 | 137 | | | | | | | | | | | | | | | | | | | | | |
| | Cause_Belief | reason | 0 | 0 | 0 | 0 | 9 | 0 | 64 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 18 | 11 | | | | | | | | | | | | | | | | | | | | | |
| | | result | 0 | 0 | 0 | 9 | 0 | 82 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 11 | | | | | | | | | | | | | | | | | | | | | |
| | Cause_Speechact | reason | 0 | 0 | 0 | 0 | 0 | 36 | 64 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | | | | | | | | | | | | | | | | | | | | |
| | | result | 0 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | | | | | | | | | | | | | | | | | | | | | |
| | Condition | Arg1-as-cond | 3 | 1 | 1 | 0 | 0 | 0 | 1 | 22 | 7 | 33 | 24 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 79 | | | | | | | | | | | | | | | | | | | | |
| | | Arg2-as-cond | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | |
| | Condition_Speechact | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 60 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | | | | | | | | | |
| | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 6 | 15 | | | | | | | | | | | | | | | | | | | | | |
| | Negative_condition | Arg1-as-negcond | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | | | | | | | | | | | | | | | | | | | | |
| | | Arg2-as-negcond | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | |
| Negative_condition_Speechact | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | |
| Comparison | Concession | expectation | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 20 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 0 | 20 | 0 | 5 | | | | | | | | | | | | | | | | | | | | |
| | Concession+Speechact | contra-expectation | 0 | 2 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 4 | 4 | 18 | 20 | 33 | 0 | 4 | 54 | | | | | | | | | | | | | | | | | |
| | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | | | | | | | | | | | | | | | | | | | |
| | Contrast | | 0 | 1 | 1 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 5 | 0 | 4 | 33 | 43 | 2 | 3 | 206 | | | | | | | | | | | | | | | | |
| | Similarity | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 50 | 0 | 50 | 2 | | | | | | | | | | | | | | | | | |
| Expansion | Disjunction | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 55 | 0 | 20 | 20 | | | | | | | | | | | | | | | | | |
| | Exception | Arg1-as-exception | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 1 | | | | | | | | | | | | | | | | |
| | | Arg2-as-exception | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | | | | | | | | | | | | | | | | | |
| | Substitution | Arg1-as-subst | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 1 | | | | | | | | | | | | | | | | |
| | | Arg2-as-subst | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 64 | 7 | 0 | 14 | | | | | | | | | | | | | | | | |
| | Conjunction | | 1 | 16 | 1 | 2 | 0 | 6 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 6 | 31 | 31 | 538 | | | | | | | | | | | | | | | | | |
| | Specification | Arg2-as-detail | 0 | 0 | 1 | 1 | 6 | 2 | 25 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 4 | 27 | 28 | 3 | 4 | 27 | 28 | 112 | | | | | | | | | | | | | | | |
| | | Arg1-as-detail | 0 | 0 | 0 | 0 | 3 | 23 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 13 | 39 | 3 | 3 | 13 | 39 | 31 | | | | | | | | | | | | | | | |
| | Equivalence | | 0 | 0 | 0 | 0 | 2 | 4 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 2 | 14 | 42 | 4 | 2 | 14 | 42 | 45 | | | | | | | | | | | | | | | | |
| | Instantiation | | 0 | 0 | 2 | 0 | 0 | 0 | 24 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 16 | 50 | 3 | 3 | 16 | 50 | 38 | | | | | | | | | | | | | | | | |
| Manner | Arg1-as-manner | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | | | | | |
| | Arg2-as-manner | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | | | | | |

Figure 1: Distribution (%) of DRs annotated for the Disco-SPICE corpus. Only labels for which annotators agreed on segmentation are included in the table.

*Originally, negative causal relations do not have a NA order. However, in this study the coder annotated NA when she could not determine the order.