

## **Empirical evidence for context-dependent enrichment of the conjunction *und* An acquisition study**

In formal semantics the conjunction *and* simply conjoins two conjuncts. In natural language however the conjunction *and* is much more influential than its logical counterpart and seems to contribute to the establishment of discourse coherence via pragmatic enrichment. The events in the statement *Marc did his homework and played football* seem to have occurred in a certain order although no explicit time reference is given.

To investigate this phenomenon, I examined in a developmental study how children and adults interpret the German conjunction *und* ('and') in different contexts. My special interest was whether and how the order of events introduced in a context contributes to the temporal reading of the conjunction *und*. In a series of auditory experiments, I was able to prove empirically that the conjunction *und* does not have a meaning component such as *and then* and has exactly the same meaning as the logical operator in formal logic. The pragmatic enrichment of *und* is context-dependent: It is enriched in contexts that describe events that typically, conventionally or logically occur in a certain order (1), while it is not enriched in more neutral contexts, such as in (2).

*(1a) Sven crept into his sleeping bag and fell asleep. (1b) Sven fell asleep and crept into his sleeping bag.*

*(2a) Tiger built a snowman and threw snowballs.*

Another interesting finding is that 5-year-olds enrich the conjunction *und* as often as adults if *und* conjoins two events that logically or typically occur in a certain order, while a developmental effect was found when *und* is used in a neutral context (2).

Experiments were conducted as follows:

In each experiment at least 18 monolingual participants for each of 4 age-groups (5-, 7-, 9-year-olds and adults) were tested. For each experiment 24 short-stories such as in (3) (experiment I) or (4) (experiment II) and one follow-up statement about the content of the story was presented. The stories consisted of an introductory statement followed by three events.

*(3) Sven went camping. He set up his tent. Then he crept in his sleeping bag. After that he fell asleep.*

*(4) Today it has finally snowed. Tiger went sledging. Then he built a snowman. Afterwards he threw snowballs.*

The subsequent statement, which the participants had to evaluate as *right* or *wrong* included two of these events, either in the sequential order given in the previous story (e.g. (1a)) or in inverted order (see 1b). All possible event-combinations were tested, yielding 6 different conditions. The task of the participants was to evaluate how well the statement represented the short-story. If participants rejected inverted order statements, they have most likely enriched the conjunction *und* temporarily. Another possible explanation would be that the participants were not able to remember the order of the events correctly. However this interpretation of the data could be excluded based on additional control experiments. ANOVA calculations with the factors age, order and event were performed to check the significance of the results.