

**Categories of Coherence relations and Connectives**  
**Converging evidence from language use and language acquisition**  
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This paper is about the cognition of coherence relations, that is, relations like *Cause-Consequence*, *Contrast* and *Enumeration*. Inferring coherence relations between the segments of a discourse is a prerequisite for understanding the discourse: If a reader has not inferred the coherence relation, (s)he has not understood the text fully.

Several theories have been proposed that make an inventory of the kind of relations that can be found in different types of discourse. Rhetorical Structure Theory (Mann & Thompson, 1988; Taboada & Mann 2006) is among the most influential ones. It generated a host of publications. Sanders, Spooren and Noordman (1992) have raised the issue as to what extent such inventories (that can consist of large or even infinite numbers of relations) are more than just an analytic tool for text analysts. If coherence relations are part of the cognitive representation that a reader makes of a text, they should have a cognitive status.

In this talk, we will argue that all possible relations that connect discourse segments share certain conceptual properties. For example, we can distinguish between positive relations like List (*and*) and Cause-Consequence (*so*) and negative relations like Exception (*unless*) and Concession (*but*). The hypothesis is that we can come up with a limited set of such properties, and that it is this set that is cognitively basic: Humans use them while interpreting and producing discourse. This hypothesis constitutes the heart of the Cognitive approach to Coherence Relations (Sanders & Spooren, 2009).

In this paper we will review recent evidence from corpus studies of connectives in language use and language acquisition. We focus is on positive causal relations, expressed by connectives like *because*, *so* and *therefore*. We will show how the acquisition of connectives (*and*, *then*, *because*) can be accounted for by a cumulative complexity approach (Evers-Vermeul & Sanders, 2009). In addition, we investigate whether this approach can be refined by distinguishing between several types of causal relations, such as Sweetser's (1990) content, epistemic and speech-act use of causal connectives (Evers-Vermeul & Sanders, 2011).

We used converging methodologies to investigate when Dutch children discover these three domains in the use of causal connectives: 1) experiments in which children had to describe causally related events, argue with or instruct a hand puppet; 2) longitudinal corpus studies; 3) eye-tracking experiments (Van Veen, Mak, Evers-Vermeul & Sanders, submitted). Our approach of using converging methodologies proves fruitful: corpus-based data show us children's earliest spontaneous use and enable us to track longitudinal developments; experiments enable us to control for context effects.

### **References**

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