

## On the role of perspective markers and connectives during reading

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### *Background & research questions*

Language users frequently express their attitudes, judgements and (un)certainly. Various linguistic cues are employed to differentiate such subjective expressions from mere descriptions of objective real-world facts. For instance, adverbials can be used to express attitudes towards certain propositional elements, and perspective markers such as *perhaps* and *may* mark the content of the clause as the hesitant judgement of the author. Other cues attribute the content to another person instead of the author, such as *John said*.

In linguistic theories, the involvement of a speaker whose opinion is conveyed is called subjectivity (Finegan, 1995; Langacker, 1990; Lyons, 1977). In terms of coherence relations in discourse, a basic distinction is drawn between subjective and objective relations (Sanders, Sanders, & Sweetser, 2009). For instance, (1) has a higher degree of subjectivity compared to example (2), because it expresses a claim-argument relation instead of a consequence-cause relation.

- (1) The passenger capacity of this ferry must be large, *because* it needs one hour for boarding.  
(2) Passengers of this ferry arrived early at the gate, *because* it needs one hour for boarding.

Connectives such as *because* and *so* are considered processing instructors in discourse: they provide information on the type of coherence relation involved (e.g. temporal, adversative or causal), and in several languages they also code information on subjectivity. For example, the Dutch connectives *want* ‘because’ and *dus* ‘so’ and Mandarin Chinese *kejian* ‘so’ prototypically express subjective relations. Previous reading experiments have shown that the reading time for subjective relations is longer than that of objective relations. Moreover, readers make use of linguistic cues such as connectives while processing the relation’s degree of subjectivity. On-line processing studies on claim-argument relations also suggest that the processing effects of connectives are interfered by the presence of perspective markers such as *John thinks*, *perhaps* and *according to Peter* (Canestrelli et al., 2013). These perspective markers all relate to the epistemic stance of the utterance, indicating – just like subjective connectives – that someone’s mind is involved in the construction of the coherence relation.

However, perspective marking is not restricted to epistemic stance; two other dimensions can be distinguished: attitudinal stance and style stance (Conrad & Biber, 2000). How do different types of perspective/stance markers affect the processing of relations expressed by connectives? Moreover, what are the exact points when different markers have effects on the processing of subjectivity?

### *Method*

An eye-tracking reading experiment was designed with manipulations on the choice of connective (Chinese *kejian* ‘so’ vs *suoyi* ‘so/that’s why’) and the type of stance marking in the previous context (no stance marking, epistemic stance marker and attitudinal stance marker). Chinese *kejian* indicates that the relation is subjective, while *suoyi* is underspecified for subjectivity and can be used in both subjective and objective argument-claim relations. A modal verb *keneng* ‘may’ or *yiding* ‘must’ was present in the second clause of the relation. At the modal verb, readers were expected to realize that the relation was a subjective one. An example of the translation of an experimental item is provided in (3).

- (3) **Ø/It is said (that)/Surprisingly** Liu Yishan has one whole month vacation with salary ever year, **suoyi/kejian** her company **must** provide welfare for its employees. She usually spends the vacation with her family.

The experiment was conducted with an EyeLink-1000 eye tracker. Four critical regions were measured: connective region, subject region, modal verb region and final region of the target sentence.

### **Results**

The subjective connective *kejian* leads to a processing delay at the connective region itself compared to the underspecified connective *suoyi*, and a facilitation at the subject region. Both the epistemic and attitudinal types of stance markers facilitate the processing at the modal verb. No interaction effect of connective type and stance marking type was observed in the abovementioned regions. The type of stance marking interacts with the effect of connectives only at the final region: a facilitation effect of *kejian* compared to *suoyi* at the final region was found when the stance marker was attitudinal, but not when the stance marker was epistemic.

### **Conclusion**

We conclude that at the early stage, the effects of connectives prevail in terms of processing subjectivity. Stance markers, both attitudinal and epistemic, only influence the later stage processing after the modal verb. Different types of stance markers affect the processing differently in interaction with the connective types at the final region. We will discuss implications about the nature of the situation model that readers construct, and relate the findings to findings from a collocation study and an eye-tracking study in the Visual World Paradigm on the same connectives (Wei, 2018).

### **Selected references**

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