

Adverb position and information structure in processing English

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Many languages permit considerable flexibility of word order. However, when a phrase appears in a non-canonical position, typically there are information-structure constraints on its discourse status. For example, in Finnish, canonical order is SVO. When listeners encounter an OV sentence-beginning, they immediately predict that the (post-verbal) subject will refer to some discourse-new entity (Kaiser and Trueswell, 2004). In a language like German, a phrase may be scrambled to a position earlier than its canonical position. But typically the scrambled phrase must be already given in discourse and the clause will receive narrow focus (the focus will not include the scrambled constituent, see Bader and Meng, 1999 for experimental evidence).

In a language with scrambling, identifying the structural position of arguments may be difficult. However, when the sentence contains an adverb, the adverb may in effect identify a structural position allowing the position of the argument to be determined, e.g., scrambled if it precedes an adverb in its clause that is higher than the canonical position of the argument. In short, in scrambling languages, adverb position may help to identify structural positions which in turn indirectly convey information-structure constraints.

In German, a language that permits scrambling, it has been argued that an argument may be scrambled in front of a speaker-oriented adverb but only if the argument may serve as a topic (Frey, 2000), as illustrated in (1). Thus, in (1) the subject (Otto) has scrambled to a topic position in front of the speaker-oriented adverb (wahrscheinlich) in (1a), which is acceptable. In (1b), the subject remains in its canonical position, which is less acceptable in a context like that in (1), where Otto is a clear topic.

- (1) *Ich erzähl dir mal was von Otto.* ('I will tell you something about Otto.')
- a. *Nächstes Jahr wird Otto wahrscheinlich seine Kollegin heiraten.*
 Next year will Otto probably his colleague marry.
- b. *#Nächstes Jahr wird wahrscheinlich Otto seine Kollegin heiraten.*
 Next year will probably Otto his colleague marry.
 'Next year, Otto will probably marry his colleague.'

Bobaljik and Jonas (1996) argue that Germanic languages like German and Icelandic have two subject positions within the IP (SpecAgrSP and SpecTP) (see also Svenonius, 2002 for an alternative account). Meinunger (1995) explains the information structural difference of these two positions in German by linking the position to the left of speaker-oriented adverbials to topicality.

The question to be addressed here is what happens in a fixed word order language like English? Do adverbs convey information-structure constraints? It has been assumed that English, in contrast to languages like German, does not reveal a position for topics, but has only one subject position (Spec TP; see Bobaljik and Jonas, 1996; Svenonius, 2002).

Experimental data obtained from naive language users reading carefully controlled sentences might help clarify whether or not a fixed word order language uses adverb placement for information-structure purposes.

In a self-paced reading study, sentences like the examples in (2) were tested.

- (reading times)
- (2) a. *The envoy said that presumably the king defeated the knights.* (2208)
 b. *The envoy said that the king presumably defeated the knights.* (2178)
 c. *The envoy said that presumably no king defeated the knights.* (2277)
 d. *The envoy said that no king presumably defeated the knights.* (2555)

If English does not have a position for topics, no difference with regard to the information-structure status of the subject argument should be found for the processing of English. In contrast, if adverb placement in English is comparable to adverb placement in German with respect to conveying information-structure constraints, then even in an English sentence with a post-subject speaker-oriented adverb, topical properties might be attributed to the subject. If so, then in the subject-adverb order in (2d), a non-referential subject like *no king* which cannot serve as topic should be highly marked in comparison to a sentence with a referential subject in the same position as (2b) and sentences with a speaker-oriented adverb preceding the subject as in (2a) and (2c).

The results of the self-paced reading study revealed significantly longer reading times for the complement clause for sentences with a non-referential subject preceding the adverb like (2d) in comparison to the other conditions. The data suggest that even in a fixed word order language like English adverb placement can

influence assumptions about topichood in a manner similar to that proposed for scrambling languages.

References

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