

Default Expectations and Priming in the Processing of Complex Sentences in English and Norwegian.

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I will report on a couple of studies that I have conducted in the transitivity alternation project together with the members Gillian Ramchand, Mai Tungeth, Antonella Sorace and Martin Corley. During the last couple of years we have conducted a series of experiments in parallel in English and Norwegian that target possible cross-linguistic differences in the processing of the verb and its arguments. Although the experiments have not targeted island extractions specifically, our results may reveal factors that are relevant for a better understanding of the processing of different types of complex sentence quite generally. In one set of cases, English and Norwegian behave the same, but in another they are interestingly different.

In the first set of experiments, we were interested in the processing of filler-gap relations in transitive and intransitive sentences. In reading experiments in English, we replicated the so-called filled-gap effect (e.g. Stowe 1986, Omaki 2015), i.e., we found longer looks at the direct object in a wh-sentence compared to a non-wh sentence ("John wonder what Bill had eaten THE STEAK with (gap) at the restaurant" vs. "John wondered if Bill had eaten THE STEAK with chips at the restaurant"). This effect has been taken as evidence that a direct object gap is expected when a (non-subject) wh-word is encountered, which further has taken as support that a monotransitive structure is somehow a default structure. In Norwegian however, we have not found any filled-gap effect, nor any other experimental support that mono-transitivity is the unmarked choice. We speculate that that the difference in processing patterns is due both to the overall lower frequencies of direct objects in Norwegian compared to English, and the higher likelihood for a verb and its direct object to be non-adjacent in Norwegian (due to both V2 and a higher frequency of direct object topicalisation). I will present converging evidence from processing and corpus studies that English and Norwegian differ in certain "default" values. The finding is potentially relevant for extraction studies, since it shows that A-bar dependencies are more strongly linked to (local) primary syntactic functions (i.e., Subject and Object) in English than Norwegian.

The second series of experiments to be discussed targets priming of intransitive structures, and the role of prosody in reading (see Fodor 2002, Bader 1998). We have managed to prime intransitive structures in reading experiments, both within (in Norwegian) and across sentences (in English). The paradigm we have used is novel, and very simple. It is based on the idea that priming can affect the strength of a garden path effect in a target sentence. In the within-sentence condition, participants read sentences like 1 or 2:

1. Intransitive prime: The woman who knitted gave the man who ate a flower bouquet for his birthday.
2. Transitive prime: The woman who knitted a sweater gave the man who ate a flower bouquet for his birthday.

We find a significant increase in reading time in the main clause direct object + PP, "a flower bouquet for his birthday" in the transitive condition. Our interpretation of this result is that the main clause direct object is more likely to be interpreted as an argument of the embedded verb when a preceding clause contains a direct object. We find the same effect across sentences. We suspect that the priming effect is actually prosodic in nature: if the verb carries phrasal stress in the first relative clause, the verb in the second relative clause is expected to carry stress as well. This will be investigated in a series of follow-up experiments. Again, these results are potentially relevant to reading studies of island extractions, since sentences with island extractions will contain several verb phrases, where the prosodic properties of the first verb potentially could influence the prosody and reading time of subsequent verbs.