The role of information structure in children’s comprehension of complex sentences – testing two hypotheses

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English allows two different clause-orders for complex sentences with adverbal clauses, e.g. (1) She checked her emails before she went home. vs. (2) Before she went home she checked her emails. Children have difficulty correctly interpreting isolated sentences like these up to the age of 6 or 7 (e.g., Blything, Davies, & Cain, 2015). However, in spoken discourse, sentences occur in context, and contain both new information and given information, which allows the listener to link it to the previous discourse (e.g., Sue went home. Before she went home, she checked her emails). We identified two hypotheses about how information structure affects the processing of complex sentences:

1) Sentences are easier to process, if given information precedes new information (Haviland & Clark, 1974). 2) Sentences are easier to process, if the information presupposed in the subordinate clause is given (Gorrell, Crain, & Fodor, 1989).

We tested which of the two hypotheses better predicted 4- and 5-year-olds’ (N=80) understanding of 4 different types of adverbial sentences (after, before, because, if), using a forced-choice picture story selection task. We systematically manipulated clause-order (main-subordinate, subordinate-main), and whether a context sentence provided information about the main or the subordinate clause (given main, given sub). We also took measures of working memory (WM), inhibition, vocabulary, and general language ability.

Our results support a combination of the two hypotheses: Children performed better when the initial clause was given, but only when this was the subordinate clause (Fig.1). We will present the complete data set, including effects of different sentence types, age, and individual differences in children’s processing, and discuss the theoretical implications of the results.

Figure 1: Mean proportion of correct responses. Error bars indicate standard errors.

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