

Connectors and negation in German child language

The connector *aber* ‘but’ is typically associated with a negative DR (Knott and Sanders 1998). Negative DRs, in turn, are more likely to be expressed with negative sentences than positive DRs (Crible 2022). Based on this background knowledge, we can formulate the following hypotheses:

H1: A sentence with the connector *aber* is more likely to be negative than a sentence without *aber*.

This corpus study investigates whether this hypothesis can be confirmed for children between the age of 2 and 4 as well as for adults. Previous research has found that children at this age exhibit difficulties in the interpretation of negative sentences (Feiman et al. 2017). In a similar way, children at this age can typically not reliably interpret a connector like *but* correctly (Skarabela et al. 2023). Finding that children use the connector *aber* ‘but’ with negation in production already from a very young age might therefore show that children consider sentence polarity and connectors in their speech production before they can comprehend these phenomena correctly in isolation and that they already show a (perhaps somehow shallow) understanding of the pragmatics these two phenomena express.

To investigate this, I am conducting a corpus study based on data from CHILDES extracting utterances from 3 children and their adult interlocutors. For both groups, I extracted utterances containing *aber* ‘but’, *dann* ‘then’, *und* ‘and’ and *weil* ‘because’, as well as a baseline sample without these connectors. The current analysis is based on 6988 utterances from adults and 3950 utterances from children, coded as affirmative or negative.

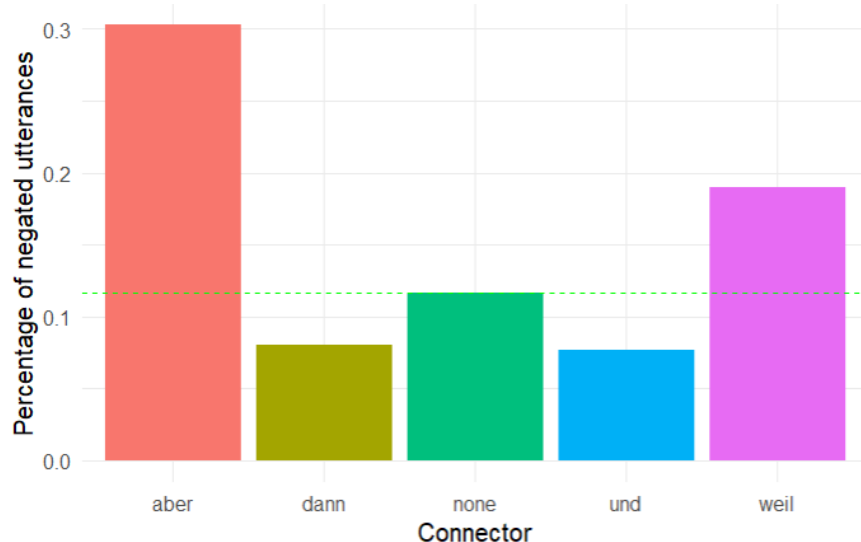


Figure 1: Connectors and negation in child data

For adults, it was found that an utterance containing *aber* is more likely to contain negation than an utterance in the baseline sample without any connector. This confirms the hypothesis for adult speakers. Figure 1 shows the results for the child data. It can be seen that children already show a very similar pattern to adults: The likelihood for an utterance to be negative increases if the sentence contains the connector *aber*. The proportion of negative utterances in the sample increases from 11.6% in the

baseline to 30.3% in the sample with *aber*. The connector *weil* shows a similar effect, though not as strong as *aber*. Interestingly, the data analyzed so far suggests that children show this pattern already in the earliest age span analyzed, between 2 and 2;6 years. When only data from this age span is considered, the proportion of negative sentences increases from 7.6% in the sample without a connector to 39.3% in the sample with *aber*. These results so far suggest that children are already sensitive to the interplay between sentence polarity and connectors at the age of 4 years, maybe even earlier. Even though they may not understand negation and more complex connectors like *aber* in isolation, children could benefit from the fact that these two difficult phenomena occur together frequently. We can hypothesize that the frequent co-occurrence of negation and *aber* provides first cues to the functions of negation and *aber* respectively, and that acquiring this co-occurrence is therefore an important step in acquiring negation and connectors.

References:

- Crible, Ludivine (2022): The syntax and semantics of coherence relations - From relative configurations to predictive signals. In *International Journal of Corpus Linguistics*.
- Feiman, Roman; Mody, Shilpa; Sanborn, Sophia; Carey, Susan (2017): What Do You Mean, No? Toddlers' Comprehension of Logical "No" and "Not". In *Language Learning and Development* 13 (4), pp. 430–450. DOI: 10.1080/15475441.2017.1317253.
- Knott, Alistair; Sanders, Ted J. M. (1998): The Classification of Coherence Relations and their Linguistic Markers: An Exploration of Two Languages. In *Journal of Pragmatics* (30), pp. 135–175.
- Skarabela, Barbara; Cuthbert, Nora; Rees, Alice; Rohde, Hannah; Rabagliati, Hugh (2023): Learning dimensions of meaning: Children's acquisition of but. In *Cognitive psychology* 147, p. 101597. DOI: 10.1016/j.cogpsych.2023.101597.