Goal of the Study: Investigate whether children's interpretation of ambiguous sentences can be primed by producing sentences with a particular meaning. Children's interpretation is evaluated using a picture selection task.

Priming

- Like adults, 3- to 6-year-olds are more likely to match the structure of their sentence to the structure of a sentence that they just heard/produced, i.e., they can be primed (e.g., [1,2]).
- Focus on structural alternatives with similar meanings → active vs. passive, double object vs. prepositional dative.

Globally Ambiguous Sentences

(1) The elephant blows on the monkey with the fan. Interpretation 1: The elephant uses the fan to blow on the monkey. Interpretation 2: The elephant blows on a monkey that is holding a fan.

Main Questions: Can 4- to 6-year-olds be primed toward a particular interpretation of a globally ambiguous sentence? Is the strength of this priming affected by whether or not the prime sentence itself is ambiguous?

Picture Selection Task

Prime Trial

Target Trial

The cow blows on the horse with the straw.

The elephant blows on the monkey with the fan.

Part 1: Priming Study

Participants: 51 children, mean age = 5.7, range 4.5 – 6.7

Prime Sentences (between subjects, n = 8)

- Ambiguous: The elephant blows on the monkey with the fan.
- Unambiguous – Instrument: The elephant blows on the monkey by using the fan.
- Unambiguous – Modifier: The elephant blows on the monkey that has the fan.

Equi-Biased Verbs (from [3]) scratch / throw / pinch / feel / drag / turn over / blow / point at

Interpretation Groups (between subjects)

Instrument: [em] blows on [the monkey][with the fan]

Modifier: [em] blows on [the monkey with the fan]

Part 2: Control Study

Participants: 13 children, mean age = 5.3, range 4.1 – 5.11

Target Sentences (n = 8) Ambiguous target trials from Part 1 without the preceding prime sentence

Filler Sentences (n = 16) Sentences with a different structure & verbs than the targets (e.g., The rabbit and the frog eat the bread)

Discussion & Conclusion

Main Findings: Children's interpretation can be primed even when the structure of the prime is ambiguous. Priming occurs in both directions when the prime is ambiguous, but only modifier interpretations are primed when the prime is unambiguous.

Baseline Preferences: Children have consistently higher rates of instrument preferences compared to adults in [3].

Individual Verbs: Exploratory analyses, but overall effects may be driven by 2 verbs (throw / drag).

Remaining Questions:

- Why was priming is stronger for the instrument interpretation group when the primes were ambiguous?
- Why did the effects reverse for some verbs after unambiguous primes (turn over / point at)?