Disjointness in Child Language

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STARTING POINT

Disjointness in verbal passives

(1a) The man is being washed

- Adult interpretation: Picture 2
- Interpretation 3-year-olds: Ambiguous between 1 and 2

IMPLICIT AGENT

An **implicit agent** triggers **disjointness** in adult verbal passives.

(2) The man is carefully being washed
(3) The man is being washed by Bart
(4) The man is being washed to impress the audience

Does this mean that an implicit agent is **missing** from children's passives? Possibly, but **not necessarily**.

(1b) λx . [∃y . y is washing x] - nothing semantically forces disjointness

(e.g., Roeper 1987, Reinhart 2000, Bhatt and Pancheva 2006, Bruening 2014)

- So how does disjointness of the implicit agent and Subject NP arise?

DISJOINTNESS INFERENCE

(5) Someone washed the man

Step 1: Defining *the man* as an alternative (a salient contextual alternative) (cf. Fox and Katzir 2011)
Step 2: Substituting *the man* for *someone*
(6) The man washed the man (stronger than (5))

Step 3: Negate (6) to derive (7), the implicature of (5)
(7) It is not the case that the man washed the man

Note: No memorized Horn scale involved.

Research Question:
Do 3-year-olds not require disjointness in verbal passives because they fail to compute the disjointness inference?

Let's look at disjointness inferences in different constructions.

EXPERIMENT

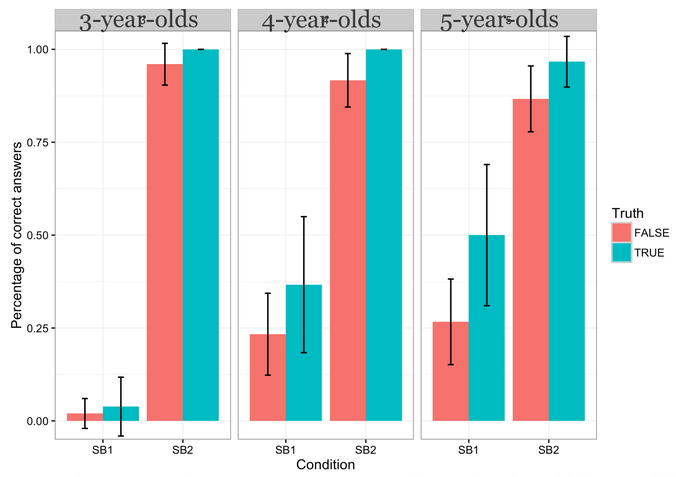
How do children perform on disjointness implicatures?

(8) Somebody has a car and somebody has a helicopter. **[SB 2]** – *disjointness inference*
(9) Somebody has a car and a helicopter. **[SB 1]**

Experimental set-up:

Step 1: Experimenter passes toys and props to Mr. Dog (child sees and names toys and props)
Step 2: Experimenter produces target sentence: "Mr. Dog, can you show us *somebody has a car and somebody has a helicopter?*"
Step 3: Mr. Dog puts toys on the stage behind the curtains (without the child seeing it)
Step 4: When Mr. Dog is ready, experimenter repeats target sentence and opens the curtains
Step 5: Child judges whether Mr. Dog's arrangement matches the target sentence or not

RESULTS AND DISCUSSION



- Children consistently computed adult-like **disjointness inferences** in **SB2**
- Different from quantity-based implicatures which pose difficulties for children (e.g. Chierchia et al. 2001, Noveck 2001)
- In line with studies showing no difficulties with inferences derived from contextually salient alternatives (e.g. Barnier 2011, Pagliarini et al. 2018)
- Three-year-olds' failure to enforce disjointness in **passives** not likely the result of a failure to compute disjointness
- Children up to 5 years old seem to interpret sentences like (9) with **AND taking scope** over SOMEBODY

SELECTED REFERENCES

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