**Participants and procedure:**

40 native monolingual speakers of American English.

- Participants saw SI and EXH target sentences paired with pictures, and were told that the sentences were Bob’s answers to Anne’s questions.
- Anne?
- Bob: Some of the... It is the...
- Picture (Good Control or Target, between-participants)
- Task: guess what Anne’s questions were.

**Results:**

**Dominant SI questions:**

- what: What color are the shapes?
- any: Are any of the shapes black?
- all: Are all of the shapes yellow?
- some: Are some of the shapes yellow?

**Dominant EXH questions:**

- which: Which shape is blue?
- one: Which one of them is blue?
- any: Are any of the shapes yellow?
- what: What color are the shapes? What color is the square?

### Design

**Story:** Anne is asking questions from Bob, about pictures that only Bob can see.

- Control: Bob’s answers unambiguously good/bad descriptions of the picture.
- Target: descriptions either good (on literal reading) or bad (inference-enriched).

**SI:**

- Some of the shapes are blue.
- It is the square that is blue.
- Are any of the shapes yellow?
- Are there any black shapes?
- Are all of the shapes yellow?
- What color are the shapes?

**EXH:**

- Which shape is blue?
- Which one of them is blue?
- Are there any blue shapes?
- Are any shapes blue?

**Results:**

- SI: % of Good responses
- EXH: % of Good responses

**“Good” responses to Target:** higher % indicate a lower rate of implicature calculation.

Fitting a generalized linear model; levels within the QUD variable treatment-coded:

- SI: any QUDs resulted in fewer implicatures than all ($p < 0.001$) or what ($p < 0.05$).
- EXH: both resulted in more implicatures than any ($p < 0.001$) or which ($p < 0.001$).

→ Some implicature calculation is effortless and default (Grodner, et al., 2010).

→ Semantic information is privileged.

→ Dominant EXH questions resulted in more implicatures than any.

→ QUDs modulate implicature calculation rates and processing cost.

- QUDs that bias against implicature derivation make that derivation incur a reaction time cost.
- Under QUDs that bias towards implicature derivation, there is no cost.
- No uniform cost or lack of cost for implicature derivation

→ Open question whether this is a side-effect of the picture stimuli.