

Contradiction as a window to noun meanings

Allison Grothman, Mathieu Paillé, Elizabeth Ritter & Dimitrios Skordos
University of Calgary — School of Languages, Linguistics, Literatures and Cultures



Background

Words in sentences often have intuited meanings different from the concepts they represent.

- Conceptually, *fork* and *spoon* refer to utensils with certain properties. However, in sentences, *fork* and *spoon* are often considered mutually exclusive.

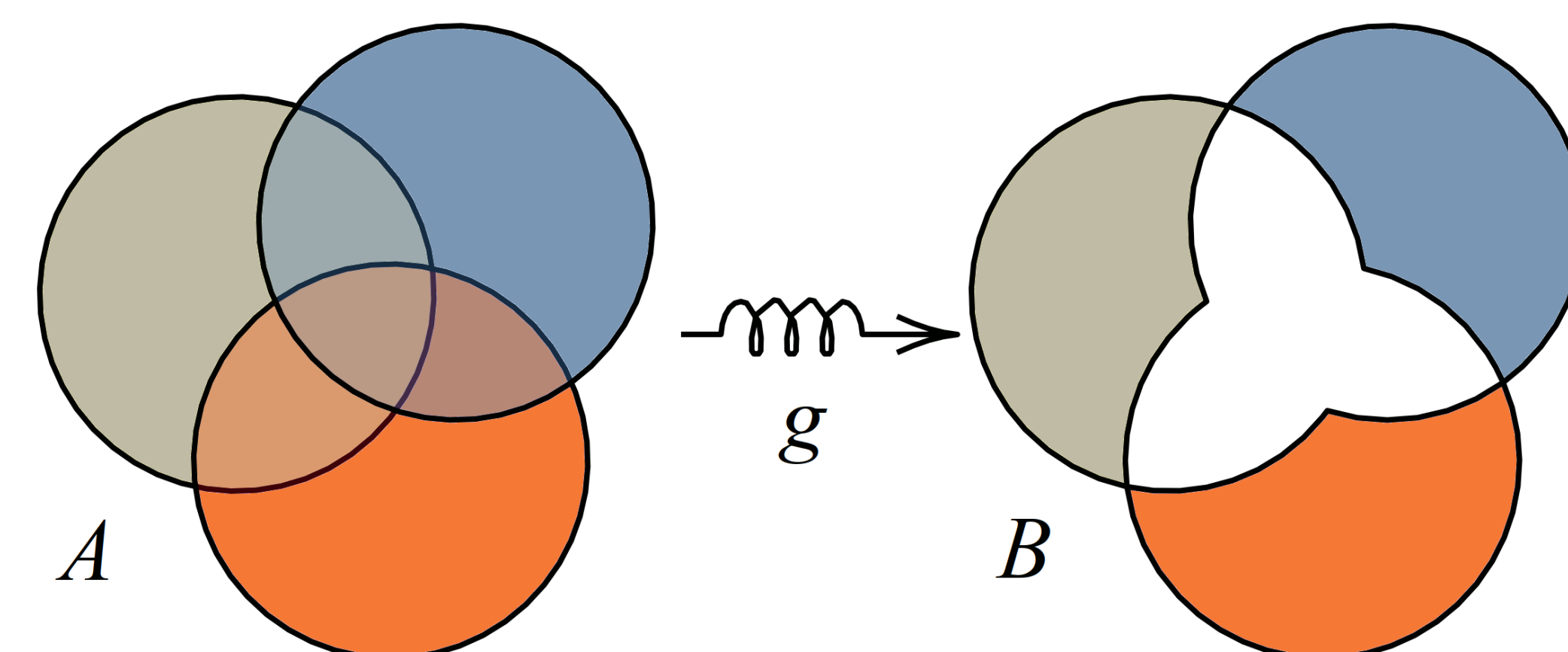
1) #This fork is a spoon.

- This contradiction disappears when certain logical vocabulary items like *also* are added.

2) This fork is *also* a spoon.

This makes sense intuitively, but no work prior to Paillé (2022) has proposed that logical vocabulary can affect word meanings.

- According to Paillé (2022), words like *fork* and *spoon* are not underlyingly mutually exclusive (A).



- In sentences without *also* or similar words, Paillé (2022) proposes that a process (*g*) narrows the meaning of words.
- This removes conceptual overlap, leading to a mutually exclusive interpretation (B).

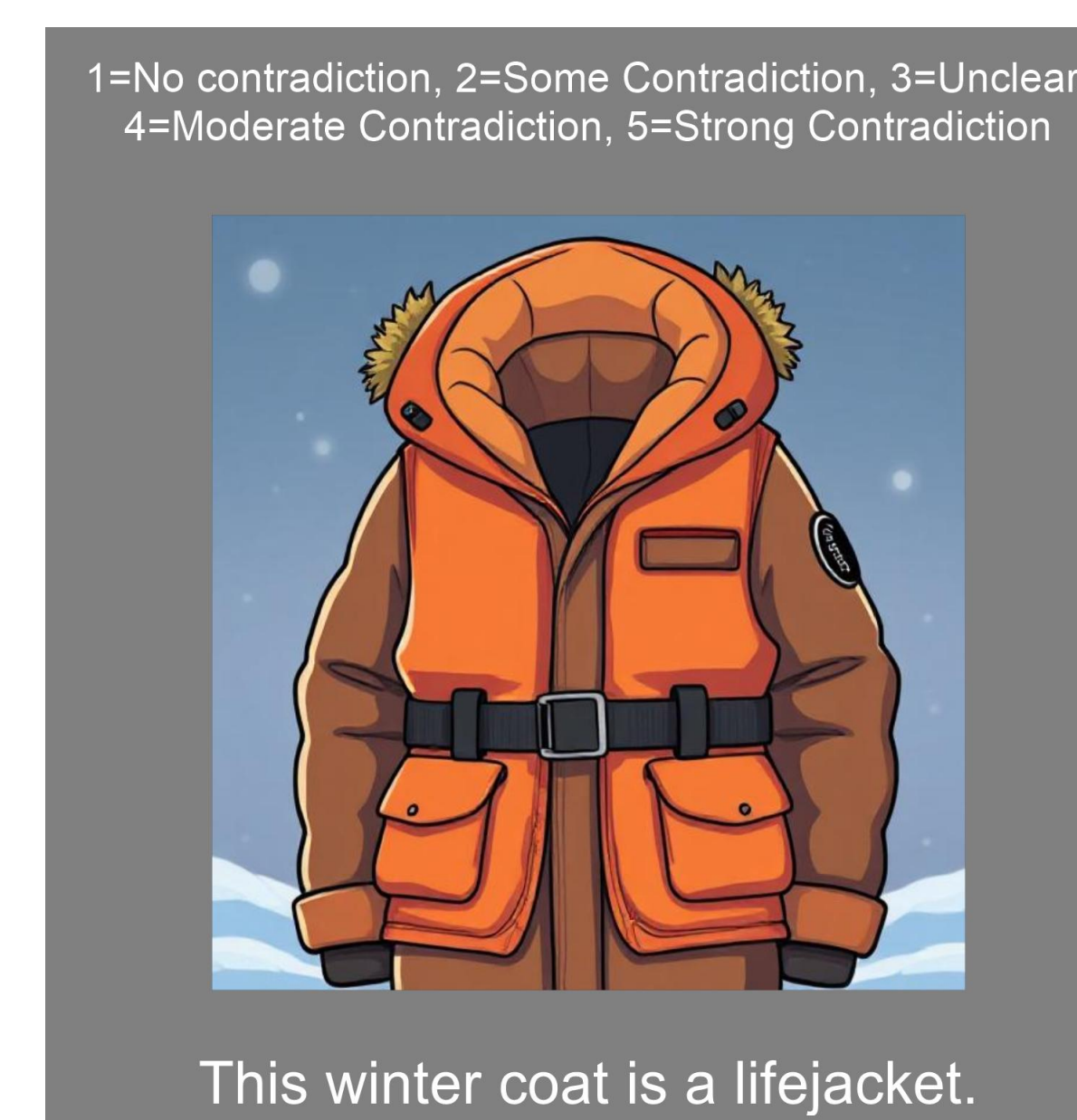
The goal of this study is to test the proposal of Paillé (2022).

Research questions

- What types of noun pairs do adults consistently judge as contradictory without *also*?
- What effect does *also* have on adults' judgments of how contradictory a sentence is?

Predictions:

- Mutually exclusive words should be judged as more contradictory without *also* than when *also* is present, while the opposite result is expected for mutually inclusive words.



Mutually exclusive word pair



Mutually inclusive word pair

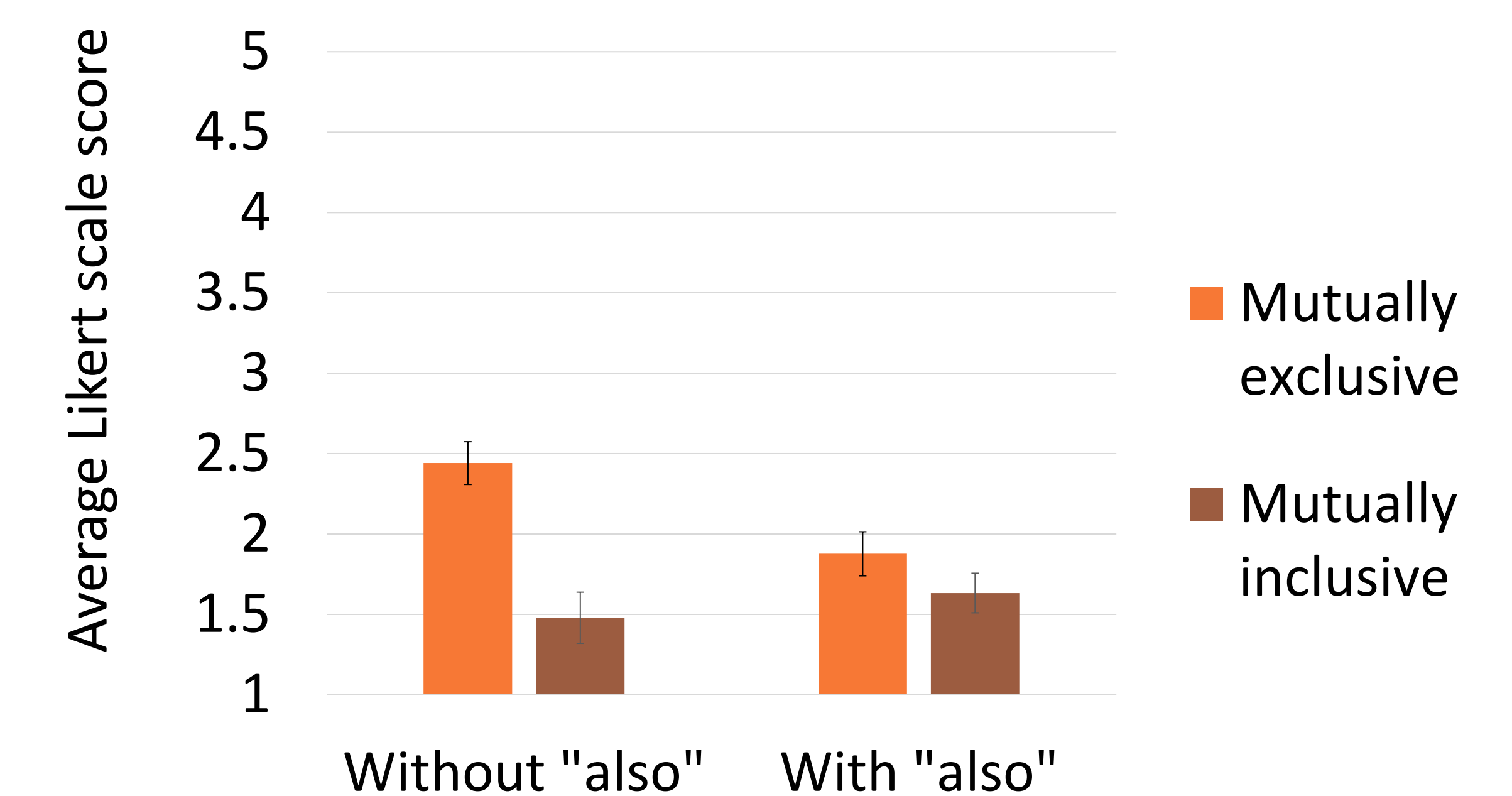
Methods

Participants: 22 native-English-speaking university students

Task:

- Participants saw 30 images, each described with a sentence.
- Each image/sentence pair was shown twice: once using *also* and once without.
- Participants rated whether the sentence contained a contradiction on a 5-point Likert scale.

Participant responses according to trial type and condition



1 = No contradiction; 5 = Strong contradiction

Results

We performed a repeated measures ANOVA.

Main effects

- Condition: ($F(1,22)=11.10$, $p = 0.03$)
- Trial type: ($F(1,22)=18.97$, $p < 0.001$)
- Interaction: ($F(1,22)=12.55$, $p = 0.002$)

The addition of *also* reduced the perceived contradiction of the sentences that we had predicted would require it, and not of those that we had predicted not to require it.

Discussion

Next step: Perform a similar study looking at children's judgments.

Working hypotheses:

- Before a certain age, logical vocabulary like *also* will not affect children's judgements. That is, they will always interpret a given word pair as either mutually exclusive or not.
- Children acquire adult-like noun meanings at the same time that they acquire adult-like understandings of purely logical words like *or* and *most*.

References

Paillé, M. (2022). Strengthening Predicates [Doctoral dissertation]. McGill University.

Contact: allison.grothman@ucalgary.ca