

## Objectives

Experimentally test how the exclusives *just*, *only*, *merely* vary in:

- Strength: how robustly they exclude alternatives
- Scale structure: rank-order vs. complement-exclusion
- Sensitivity to QUD

## Exclusives

- (1) Mary **only/just/merely** ate the cookies.
- Mary ate the cookies prejacent
  - Mary ate nothing other than the cookies alternatives
- (2) The student is **only** intelligent.
- The student is not brilliant rank-order
  - The student is not curious, not charming, etc. complement-exclusion

Exclusives vary along different parameters:

- **scale structure**: different exclusives prefer either complement-exclusion or rank-order readings (Coppock & Beaver, 2014)
- **strength of exclusion**: “strong” exclusives like *only*: exclude false alternatives vs. “weak” exclusives like *just*: exclude pragmatically unassertable alternatives (Warstadt, 2020)

Motivation: noncanonical ‘weak’ readings of *just* (also Wiegand, 2018; Beltrama, 2022):

- (3) a. The lights in this place **just** turn off and on. → for no reason  
b. The pumpkin bisque is **just** delicious. → that’s all we need to say

## Scalar diversity

Scalar expressions vary in how likely they are to lead to scalar implicature (SI):  
(i.a., van Tiel et al. 2016)

- (4) Mary ate some of the cookies. → SI: some, but not all  
(5) The student is intelligent. → SI: intelligent, but not brilliant

Ronai & Xiang (2022) (henceforth R&X):

variation still remains with *only*, even though alternative exclusion is semantic.

Mary: *The student is only intelligent.*

Would you conclude from this that Mary thinks the student is not brilliant?

Yes.  No.

Hypothesis: interpretations split between rank-order and complement-exclusion.  
Complement-exclusion compatible with a “No” response.

## Experiments 1-2: *just* and *only*

Experiment 1: Mary: *The student is just intelligent.*

Experiment 2: Mary: *The student is merely intelligent.*

### Predictions:

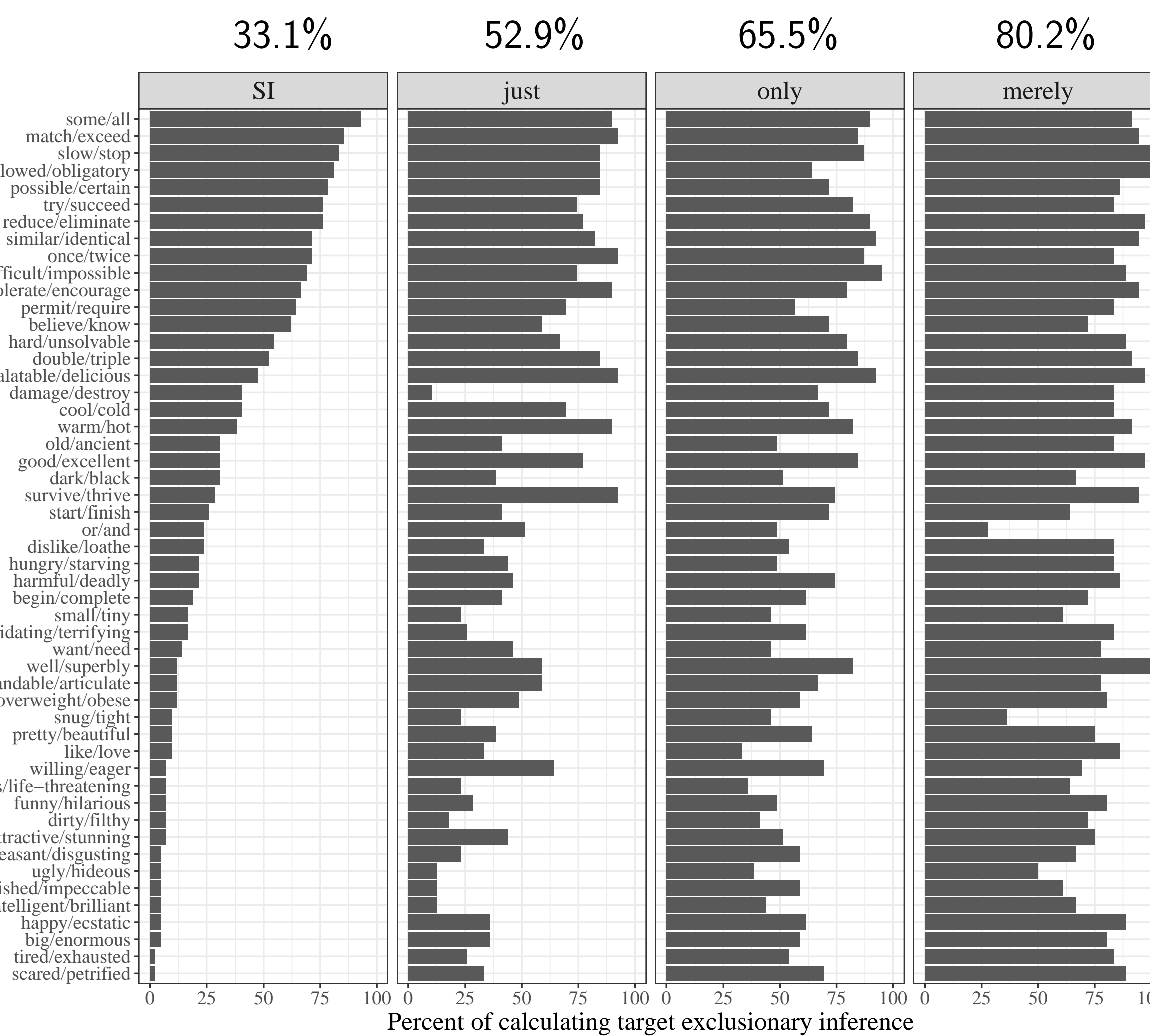
Warstadt (2020): *just* is a weak exclusive, *only* is a strong exclusive

→ lower rates of inference calculation for Exp. 1 than was found for *only* (by R&X)

Coppock & Beaver (2014): *only* allows both complement-exclusion and rank-order, *merely* prefers rank-order readings. All our items test rank-order alternatives.

→ higher rates of inference calculation for Exp. 2 than was found for *only*

## Results of Experiments 1-2



Results of Exp. 1 (*just*), Exp. 2 (*merely*), and R&X’s Exp. 1 (SI) and Exp. 3 (*only*).

- lower rates with *just* than *only* (Estimate=-0.7, SE=0.28,  $z=-2.5$ ,  $p < 0.05$ )
- higher rates with *merely* than *only* (Estimate=0.96, SE=0.28,  $z=3.38$ ,  $p < 0.001$ )
- *just* higher than SI (Estimate=1.32, SE=0.25,  $z=5.35$ ,  $p < 0.001$ )

## Discussion

Both predictions confirmed:

- *merely* prefers rank-order scales
- *just* is “weaker” than *only* —But in what sense?

## Experiment 3: *just* + QUD

How should we interpret the Experiment 1 results?

- *Just* excludes via weaker semantic operation than *only*?
- *Just* excludes wider range of possible alternatives?
- Warstadt (2020): *just* can answer “potential” questions in addition to the QUD: *just* in (6-a) signals that the hypothetical followup (6-b) is unanswerable.
 

(6) a. The lights in this place just turn off and on.  
b. Why do the lights turn off and on?
- If *just* were excluding potential questions in Experiment 1, the stronger scalar term would have been an alternative less frequently.
- *Just* is lexically ambiguous between exclusive and nonexclusive readings?

Sue: *Is the student brilliant?*  
Mary: *She is just intelligent.*

Would you conclude from this that Mary thinks the student is not brilliant?

Yes.  No.

### Predictions:

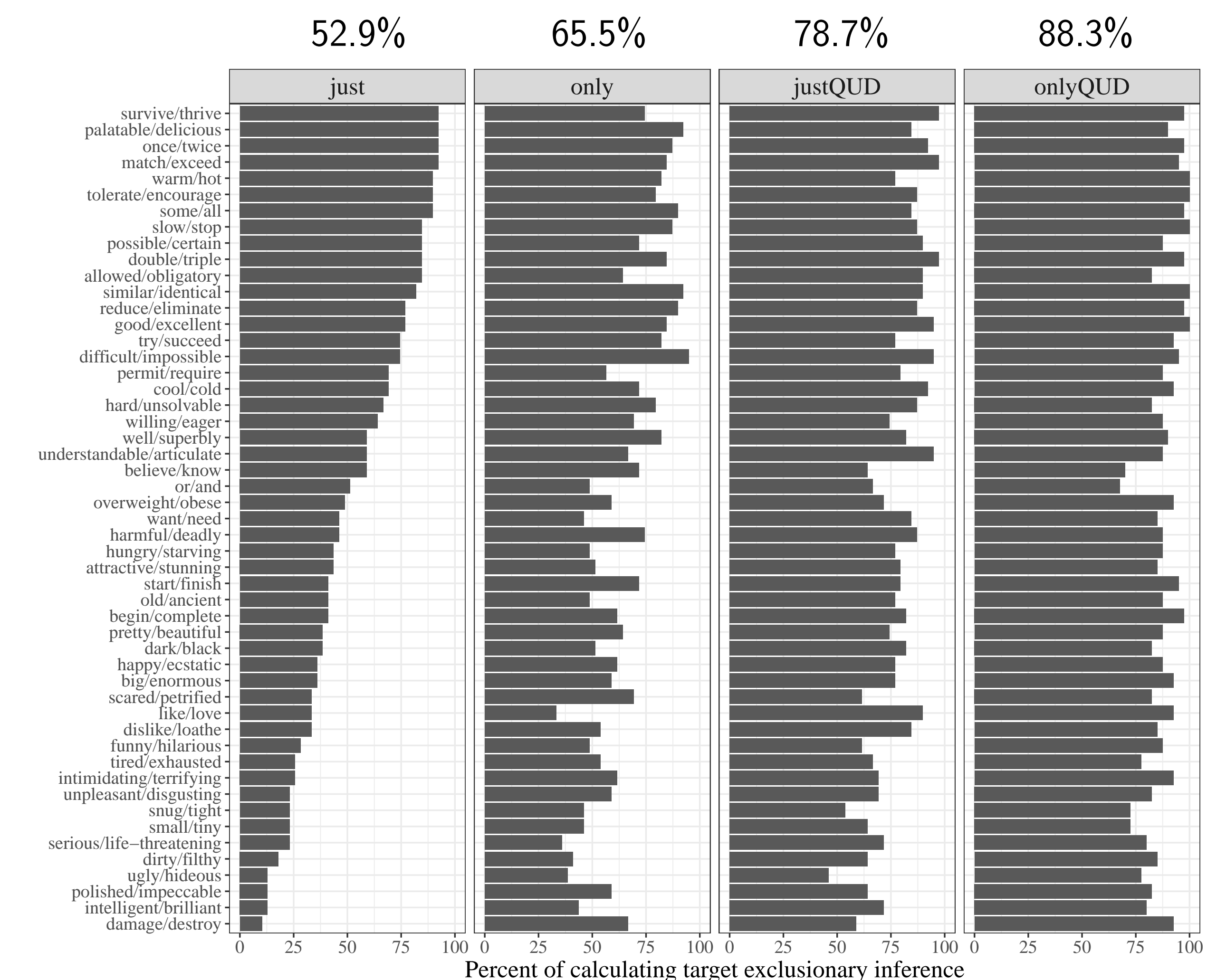
→ higher rates for QUD than null context (i.a., Degen 2013; Zondervan et al. 2008; R&X)

Warstadt (2020): *just* can exclude answers to questions other than the QUD

→ interaction of exclusive and context:

adding the QUD has less of an effect on *just* than on *only*

## Results of Experiment 3



Results of Exp. 1 (*just*), Exp. 3 (*just* + QUD), and R&X’s Exp. 3 (*only*) and Exp. 4 (*only* + QUD).

- higher rates with QUD than null context (Estimate=1.84, SE=0.25,  $z=7.39$ ,  $p < 0.001$ )
- higher rates with *only* than *just* (Estimate=0.86, SE=0.25,  $z=3.47$ ,  $p < 0.001$ )
- interaction not significant (Estimate=0.18, SE=0.46,  $z=0.39$ ,  $p = 0.7$ )

## Discussion

*just* and *only* shown to be equally QUD-sensitive.

→ against a unified, potential question-answering theory of *just*

Lexical ambiguity proposal:

- Exclusive *just* answers the QUD, other entries do not (as in (3))
- Participants in Exp. 3 assumed the QUD was relevant, leading to an increase in exclusive *just* interpretations (as compared to Exp. 1)

## Conclusions

- Strength: *just* excludes less robustly than *only*
- Scale structure: *merely*, unlike *only*, strongly prefers rank-order scales
- QUD-sensitivity: *just* and *only* pattern the same

## References

Beltrama (2022). Just perfect, simply the best: an analysis of emphatic exclusion. *Linguistics and Philosophy*. | Coppock & Beaver (2014). Principles of the exclusive muddle. *Journal of Semantics*. | Degen (2013). Alternatives in Pragmatic Reasoning. PhD thesis. | Klinedinst (2005). Scales and only. MA thesis. | Ronai & Xiang (2022). Quantifying semantic and pragmatic effects on scalar diversity. *Proceedings of the Linguistic Society of America*. | van Tiel, et al. (2016). Scalar diversity. *Journal of Semantics*. | Warstadt (2020). “Just” don’t ask: exclusives and potential questions. *Proceedings of Sinn und Bedeutung*. | Wiegand (2018). Exclusive morphosemantics: just and covert quantification. *Proceedings of the West Coast Conference on Formal Linguistics*. | Zondervan et al. (2008). Experiments on the Role of the Question Under Discussion for Ambiguity Resolution and Implicature Computation in Adults. *Proceedings of Semantics and Linguistic Theory*.