Indefinite crossover

Preliminary results

June 2023

Introduction / Recap

The design

Negation

Referent		Order		Reading
quantifier	x	binding / anaphora	x	coconstrued
indefinite		crossover / cataphora		"someone else"
proper name				

Relative clauses

Referent		Order		Reading
quantifier	x	binding / anaphora	x	coconstrued
indefinite		crossover / cataphora		"someone else"
proper name				

In case of crossover, the paraphrases ensure that both readings have the referent scoping above negation / outside of the relative clause. (An additional reading exists where it scopes low and is not coconstrued with the pronoun.)

Changes from previous experiments

- No overt "distractor NP"

- A lot more contextual support (resulting in longer sentences)

- Plausibility of coconstrued vs. other reading not perfectly balanced (many scenarios slightly or significantly favour the coconstrued reading; previous experiments balanced them more carefully)

Overview of results

Overview of results: crossover

- **Quantifiers still show an effect of (weak) crossover** in this design, though absolute ratings are much higher

- **Proper names show no effect of crossover** once there is sufficient contextual support

- It's **unclear whether indefinites participate in crossover**
  - Indefinites have a significant effect of "crossover" with relative clauses, but this could also be explained by participants not taking the indefinite to have high scope outside the relative clause
  - Indefinites do not show an effect of crossover under negation; coconstrual appears to be available even when the pronoun c-commands the indefinite
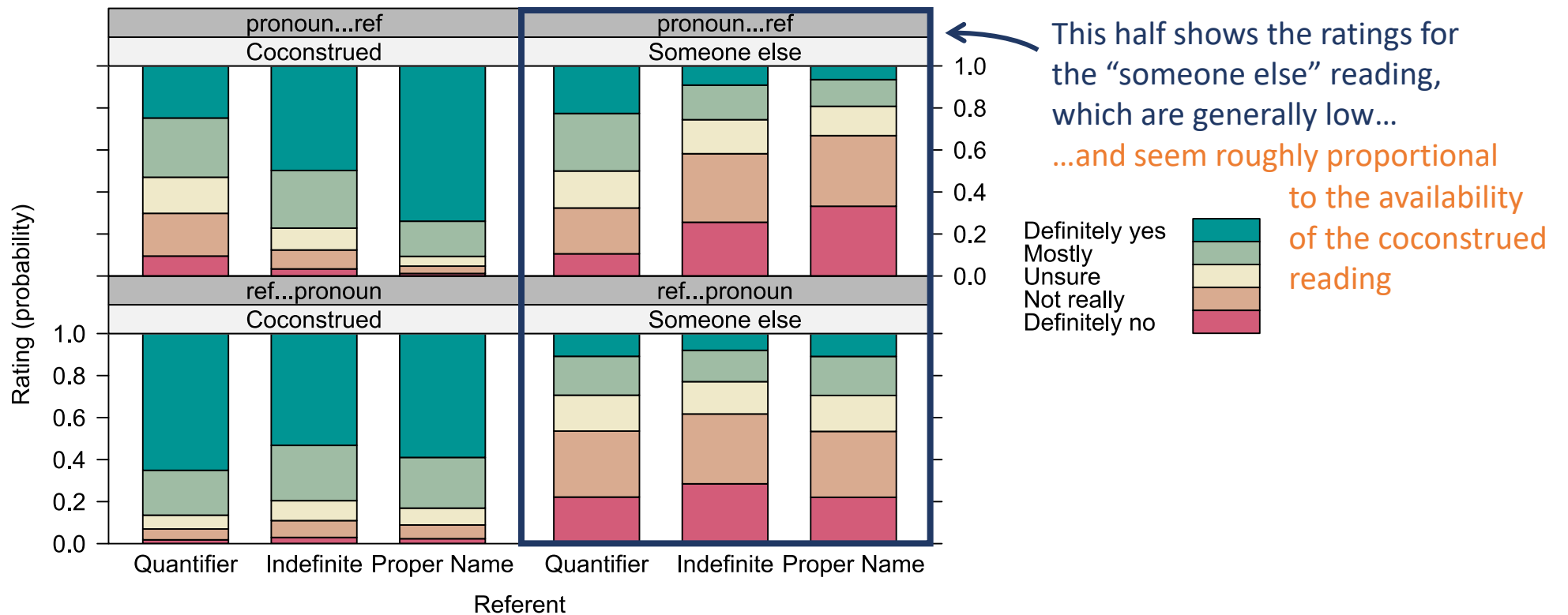
Overview of results: design

- It's important to **balance the plausibility** of the "someone else" reading with the coconstrued reading
  - Otherwise, the "someone else" ratings aren't useful / independent
  - It may be difficult to make them equally plausible without an overt distractor
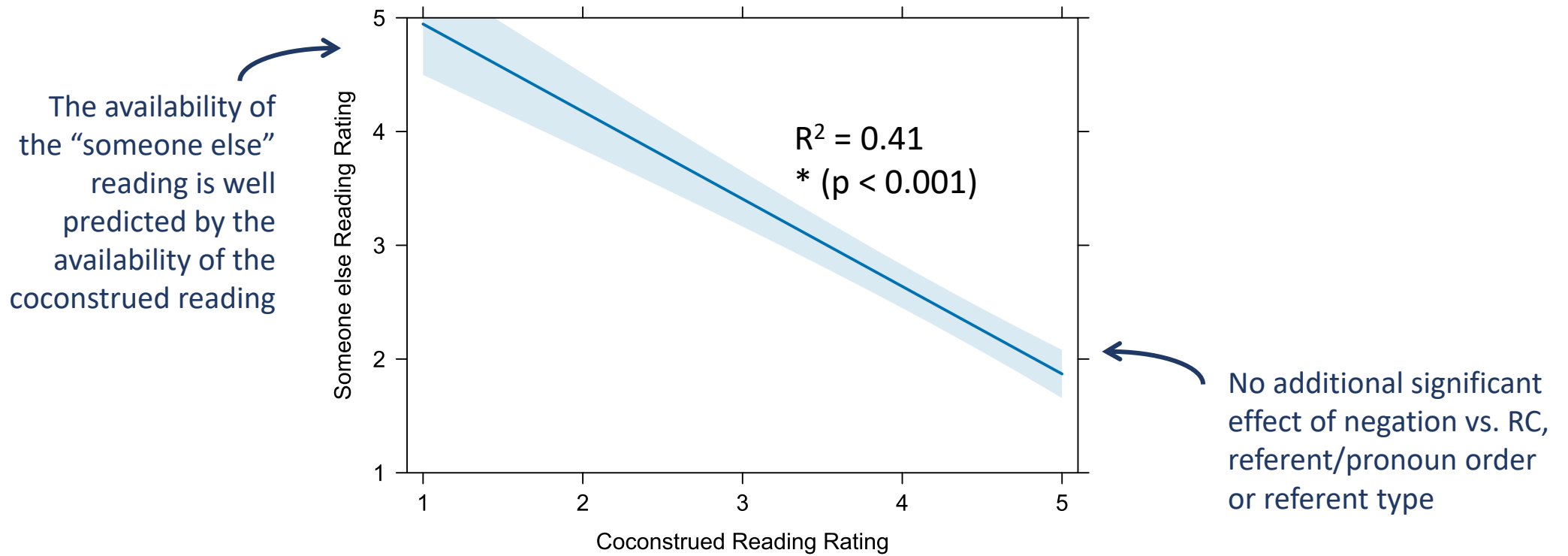
The "someone else" reading

Overall results & the "someone else" reading

**Effect of referent/pronoun order on reading (negation only)**

This half shows the ratings for the "someone else" reading, which are generally low…

…and seem roughly proportional to the availability of the coconstrued reading

"Someone else" reading

**Effect of coconstrued reading availability
on "someone else" reading (across all data)**

The availability of the "someone else" reading is well predicted by the availability of the coconstrued reading

$R^2 = 0.41$
* ($p < 0.001$)

No additional significant effect of negation vs. RC, referent/pronoun order or referent type

Someone else Reading Rating

Coconstrued Reading Rating

Breakdown by referent type

Quantifiers vs. indefinites vs. proper names

Quantifiers: effect of crossover vs. binding

Effect of quantifier/pronoun order on reading (negation only)
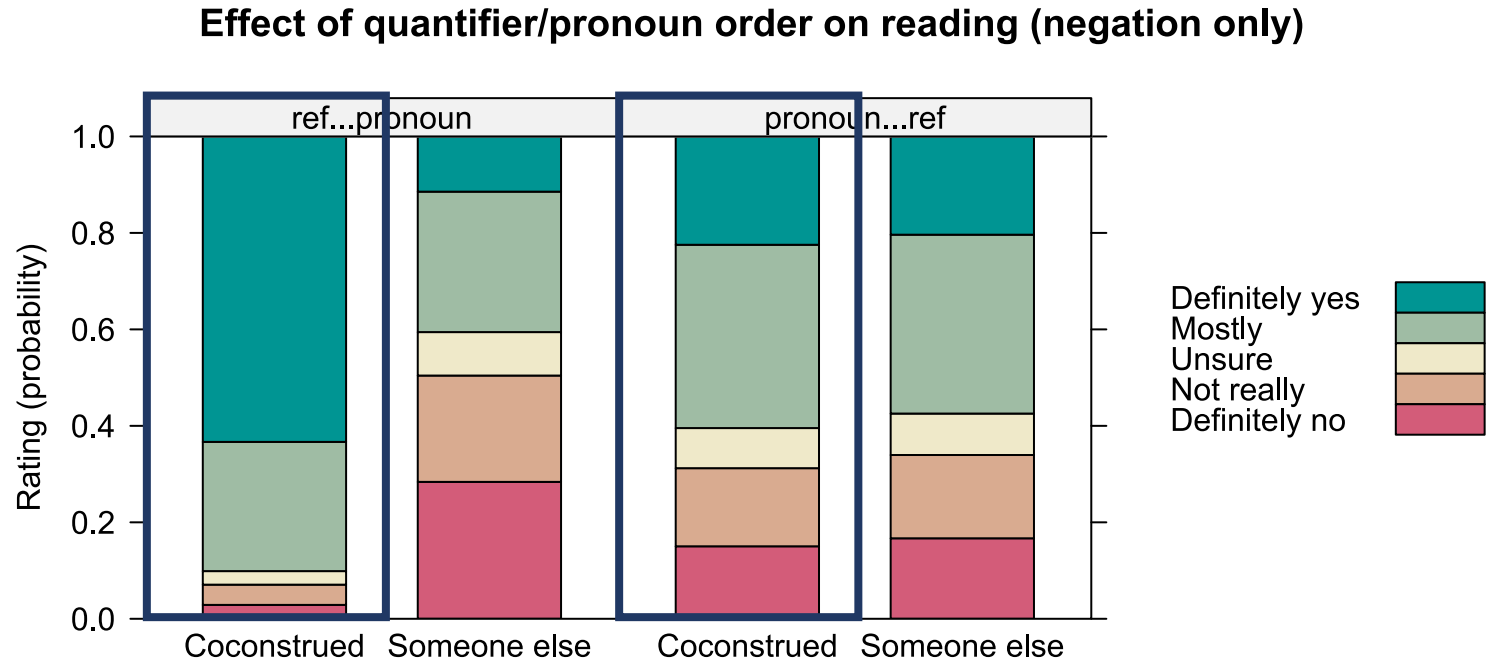
Significant effect of crossover on coconstrual
(p = 0.006)

Quantifiers: between experiments
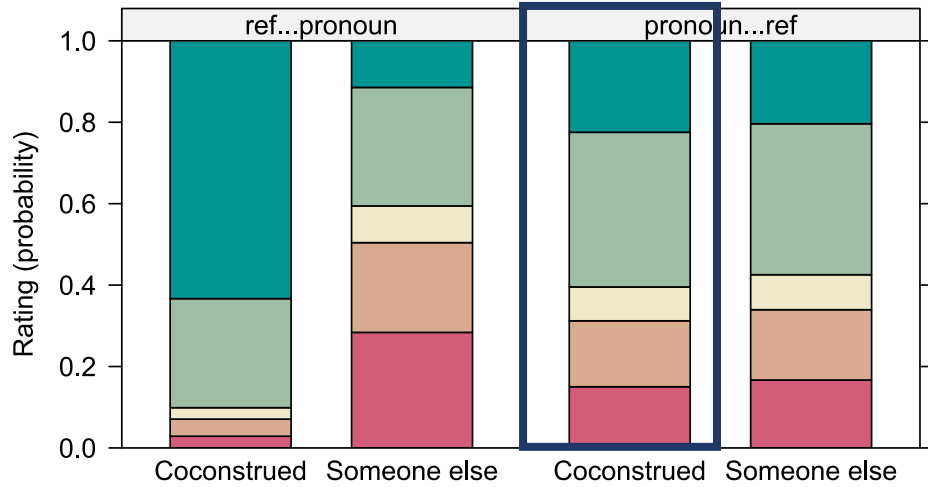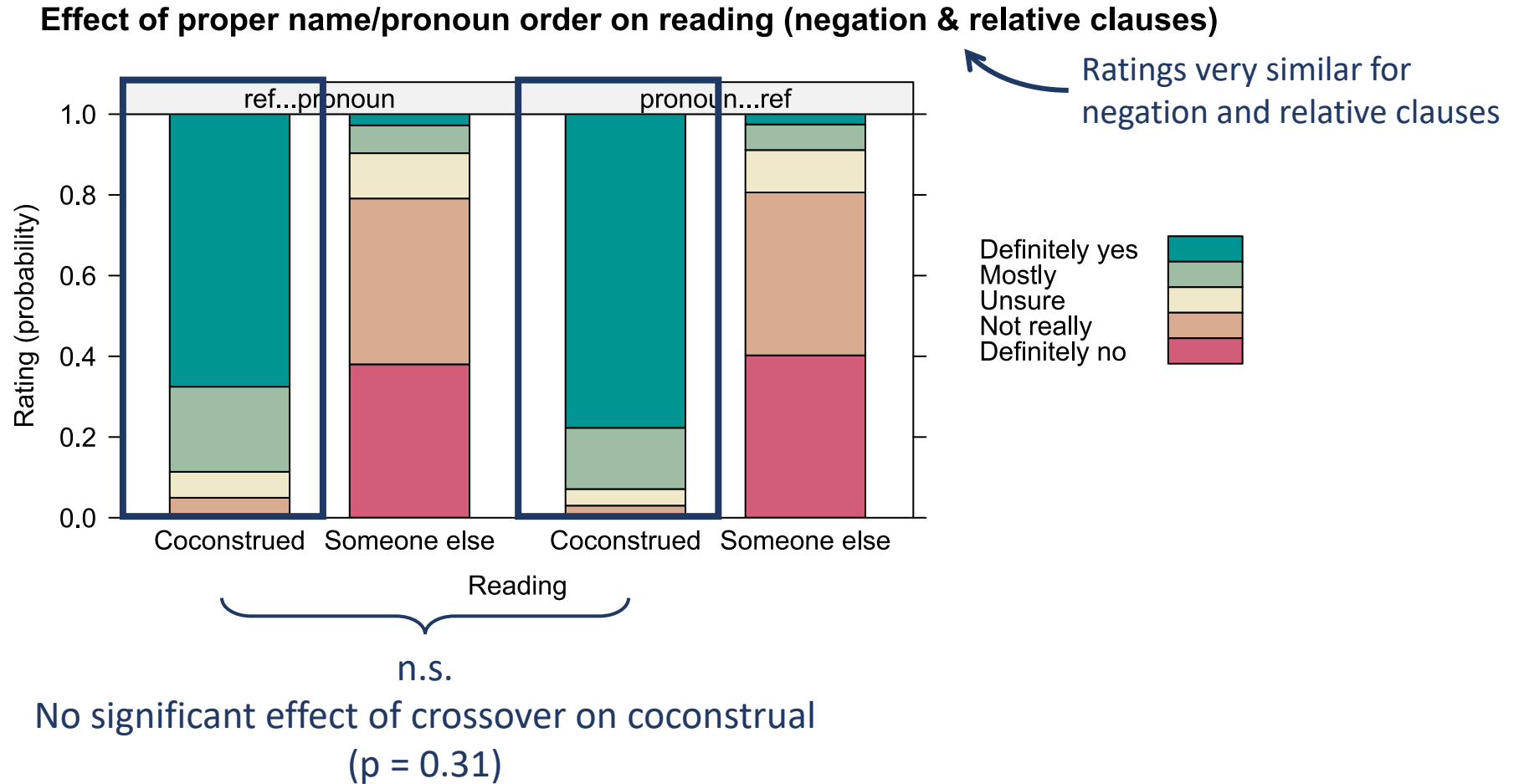
This study (with context & no distractor NP)

SuB study (showing weak crossover only)
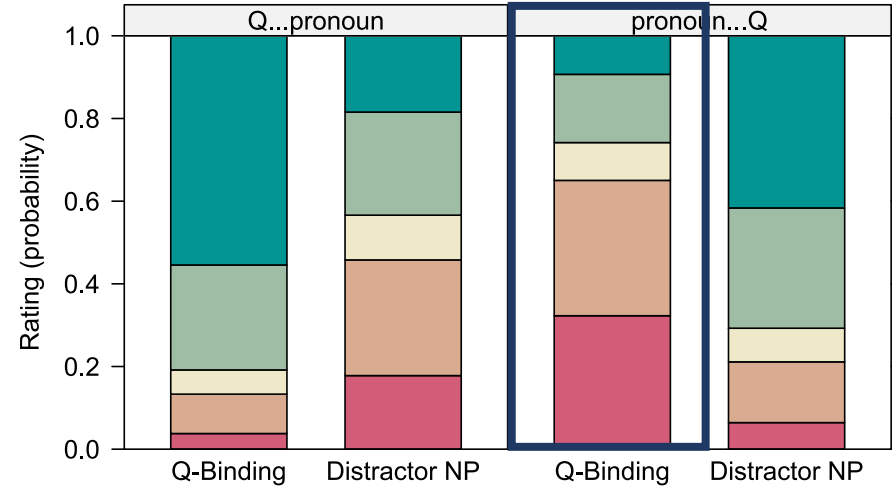
Ratings for (weak) crossover are noticeably higher in the new setting
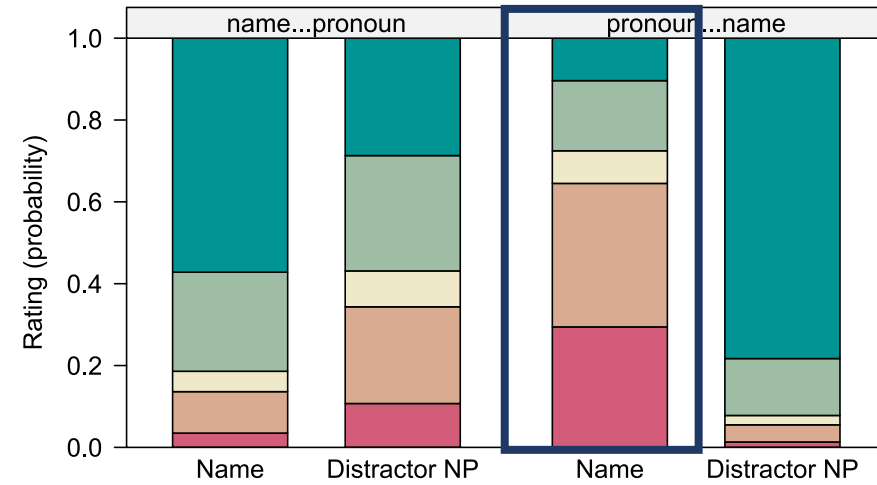
Proper names: effect of crossover vs. anaphora

Effect of proper name/pronoun order on reading (negation & relative clauses)

Ratings very similar for negation and relative clauses

n.s.
No significant effect of crossover on coconstrual
(p = 0.31)

Proper names: between experiments

This study (with context & no distractor NP)
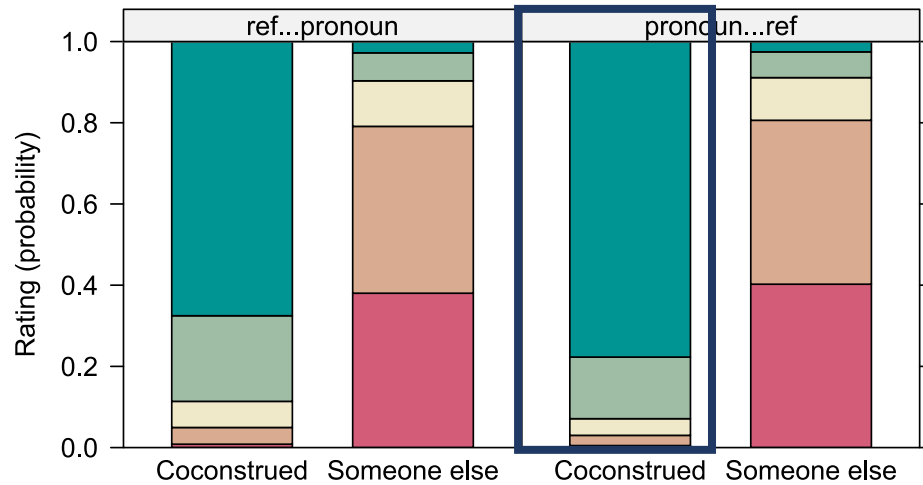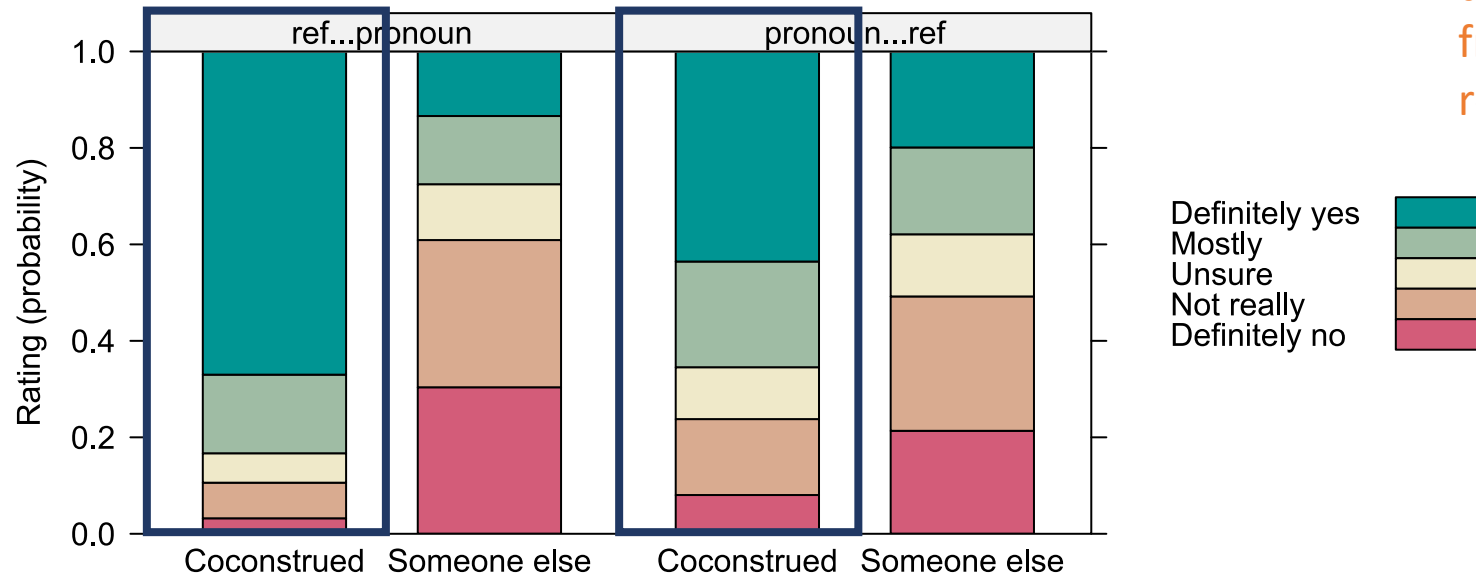
SuB study (showing weak crossover only)

With contextual support and no overt distractor, weak crossover for proper names is rated highly acceptable, but it is deemed relatively unacceptable without this support

Indefinites: effect of crossover vs. anaphora

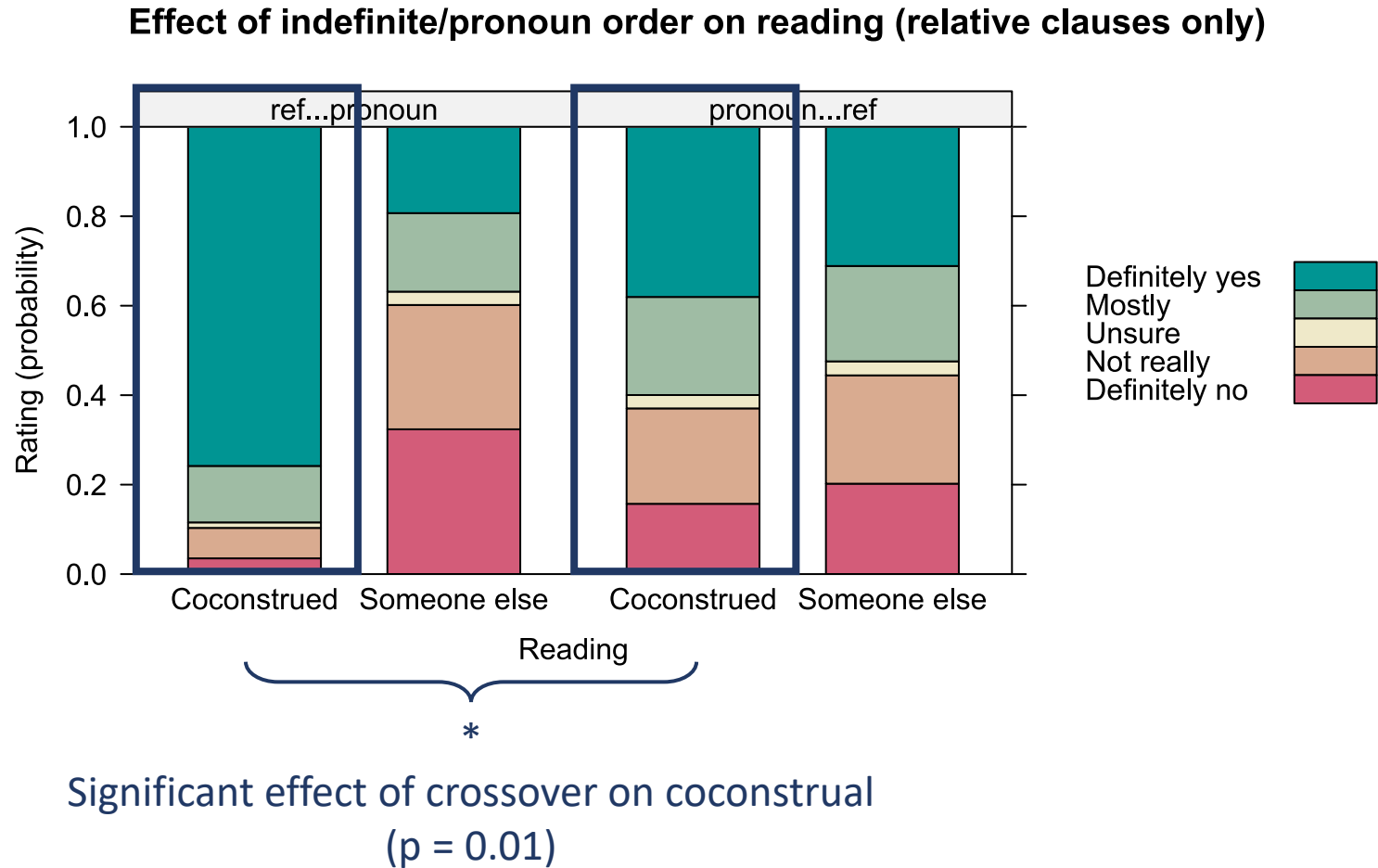**Effect of indefinite/pronoun order on reading (negation & relative clauses)**

But! This is masking what's actually very different behaviour from negation and relative clauses

Significant effect of crossover on coconstrual
(p = 0.03)

Indefinites: relative clauses & crossover

Effect of indefinite/pronoun order on reading (relative clauses only)

Significant effect of crossover on coconstrual
(p = 0.01)

Indefinites: negation & crossover

Effect of indefinite/pronoun order on reading (negation only)

All these reading paraphrases have the indefinite scoping over negation

n.s.
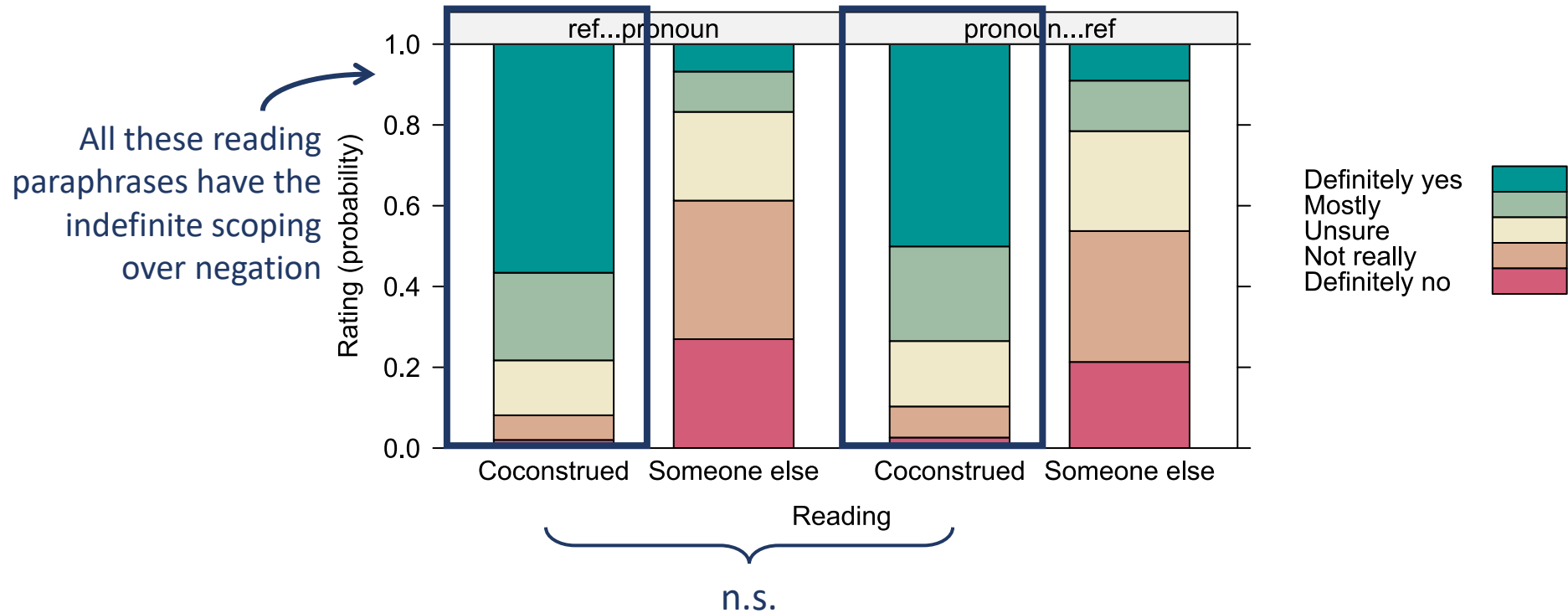
!!! No significant effect of crossover on coconstrual
(p = 0.67)

Indefinites: relative clauses & crossover

Why would relative clauses show crossover, but negation wouldn't?

Effect of indefinite/pronoun order on reading (relative clauses only)
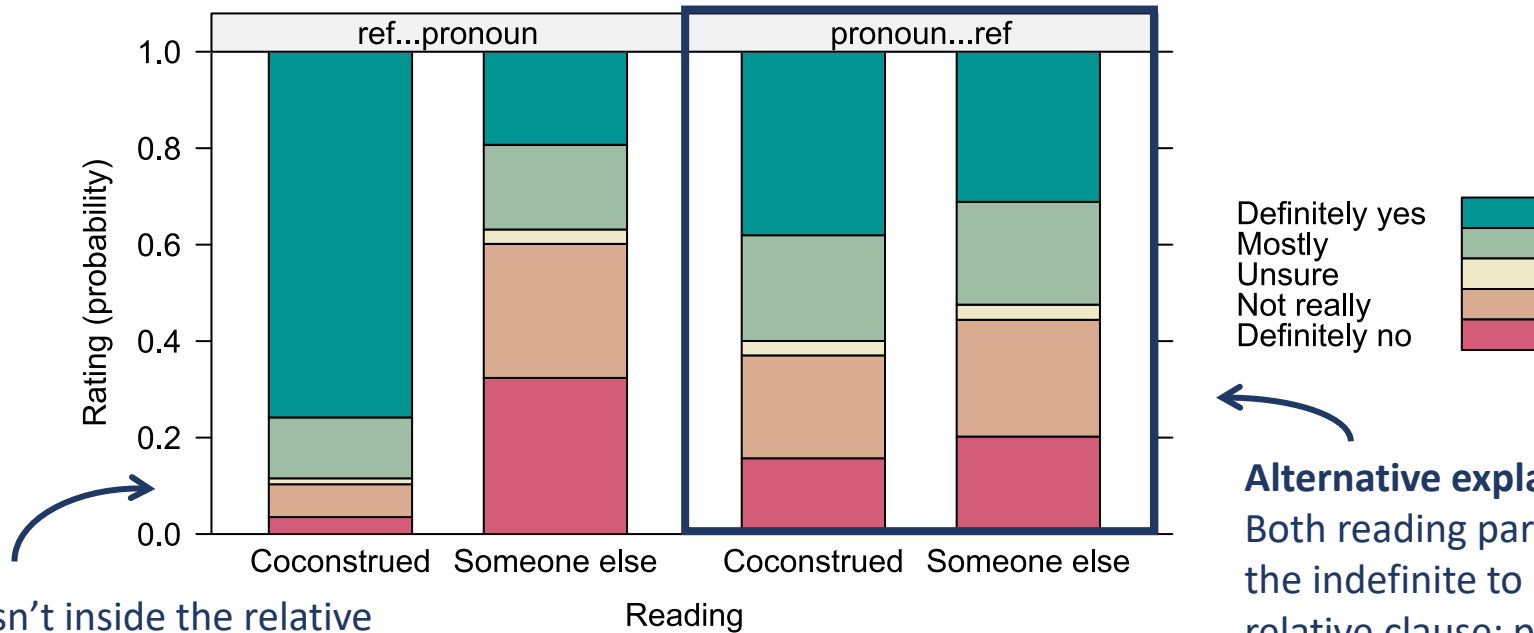
The indefinite isn't inside the relative clause in this configuration, so it doesn't matter if it can scope out
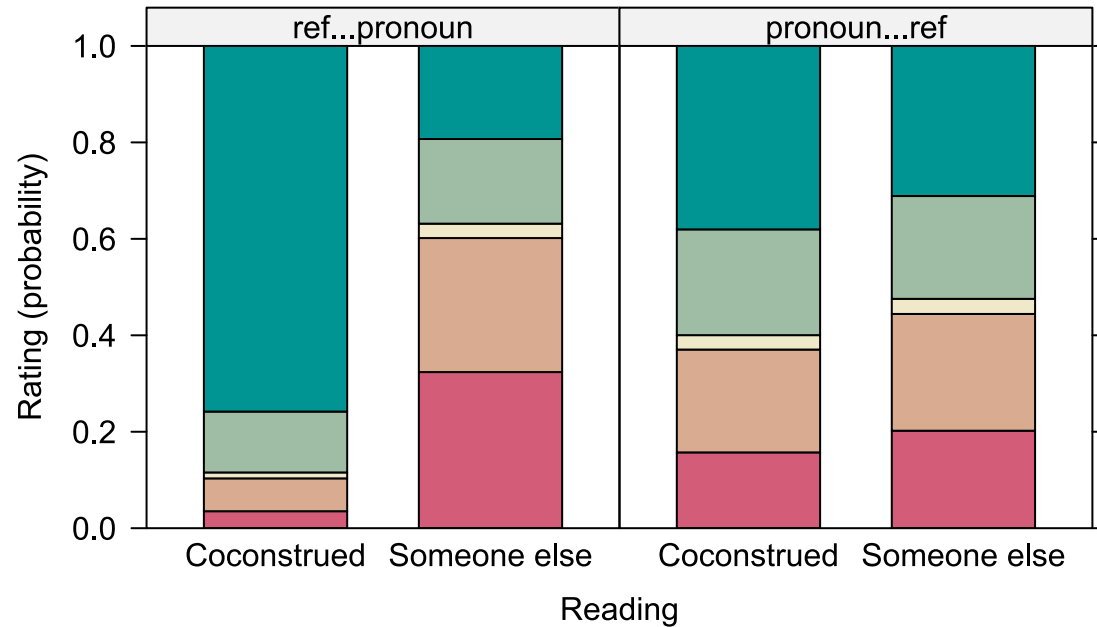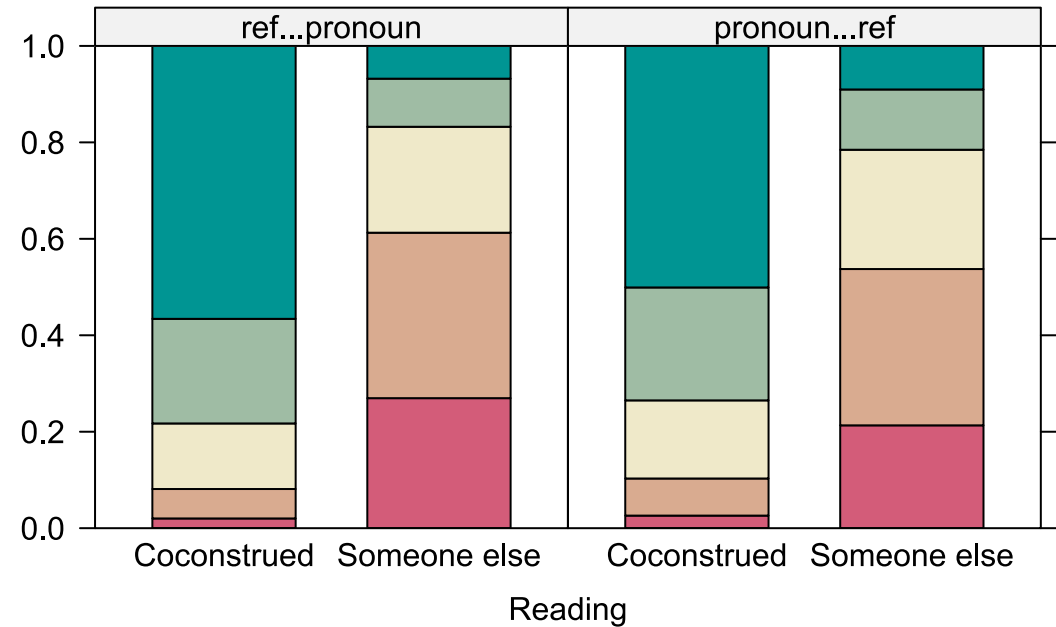
Alternative explanation:
Both reading paraphrases required the indefinite to scope out of the relative clause; perhaps this was only sometimes available to participants **i.e. any crossover effect is masked by the lack of high scope**

Indefinites: crossover comparison

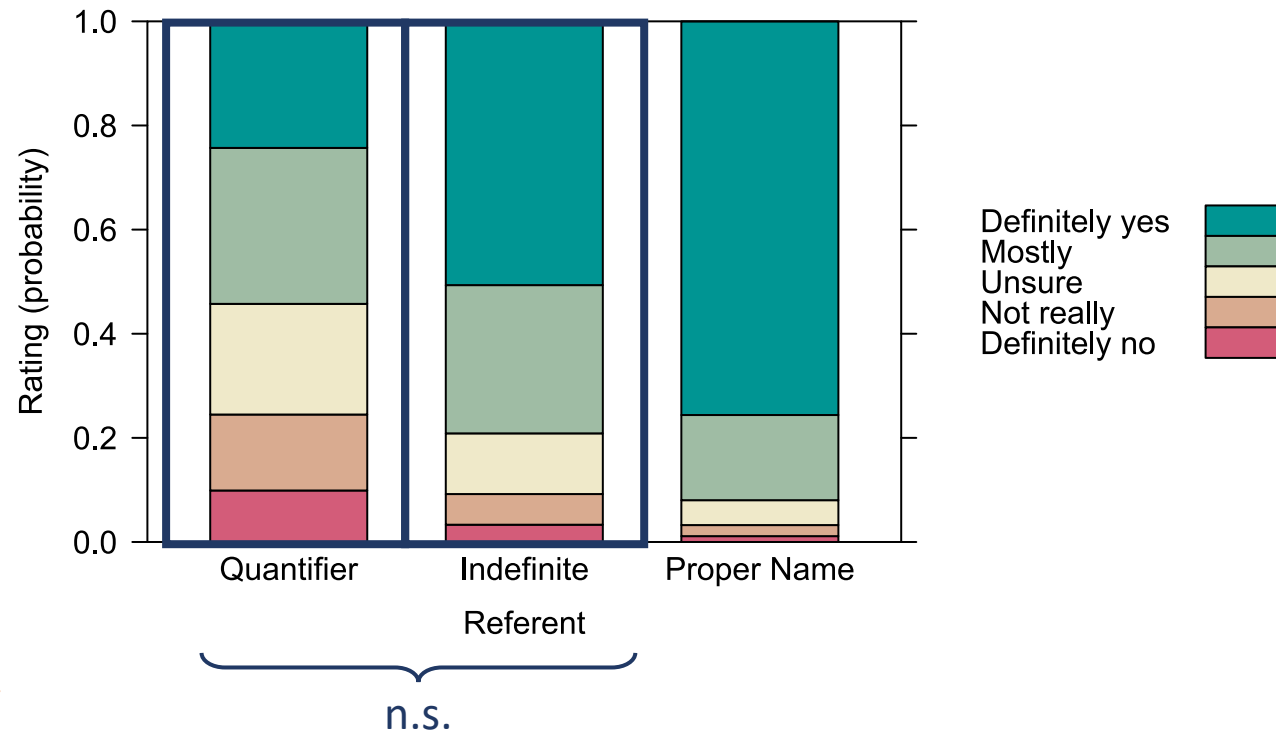# Effect of referent on crossover reading (I)

Effect of referent on coconstrued reading for crossover (negation only)

Legend:
- Definitely yes
- Mostly
- Unsure
- Not really
- Definitely no

X-axis: Referent — Quantifier, Indefinite, Proper Name
Y-axis: Rating (probability)

n.s.

Remember: indefinites don't show a significant effect of crossover with negation

Indefinite crossover is "less bad" than quantifier crossover, but not significantly so (p = 0.06)

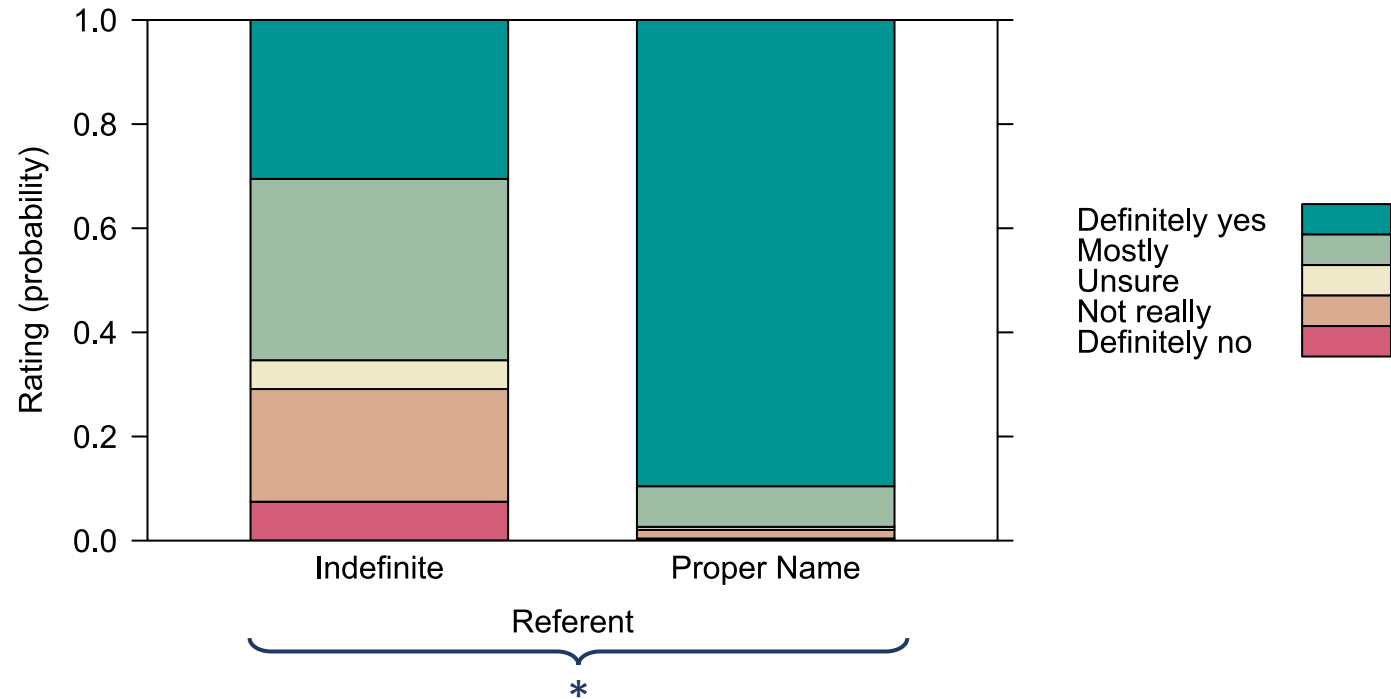# Effect of referent on crossover reading (I)

Effect of referent on coconstrued reading for crossover (negation only)
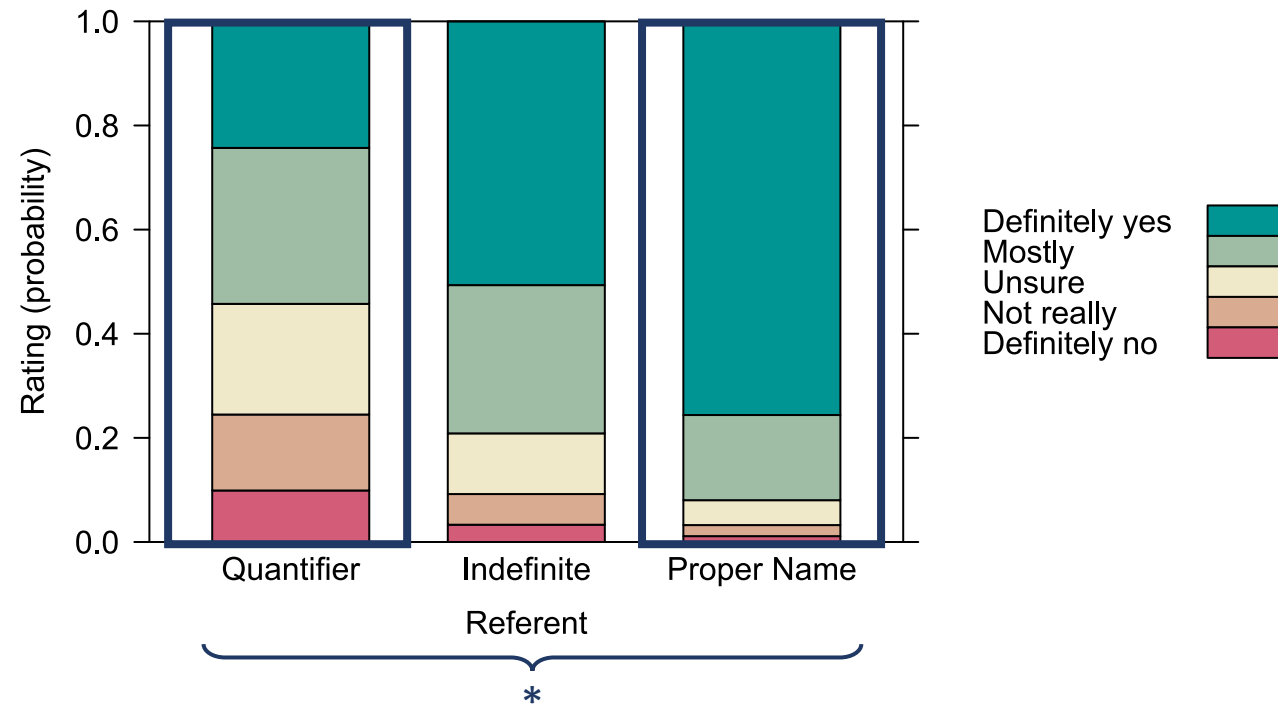
Proper name crossover is significantly different from quantifier crossover
(in fact, proper names show no crossover effect)
(p = 0.002)

Effect of referent on crossover reading (II)

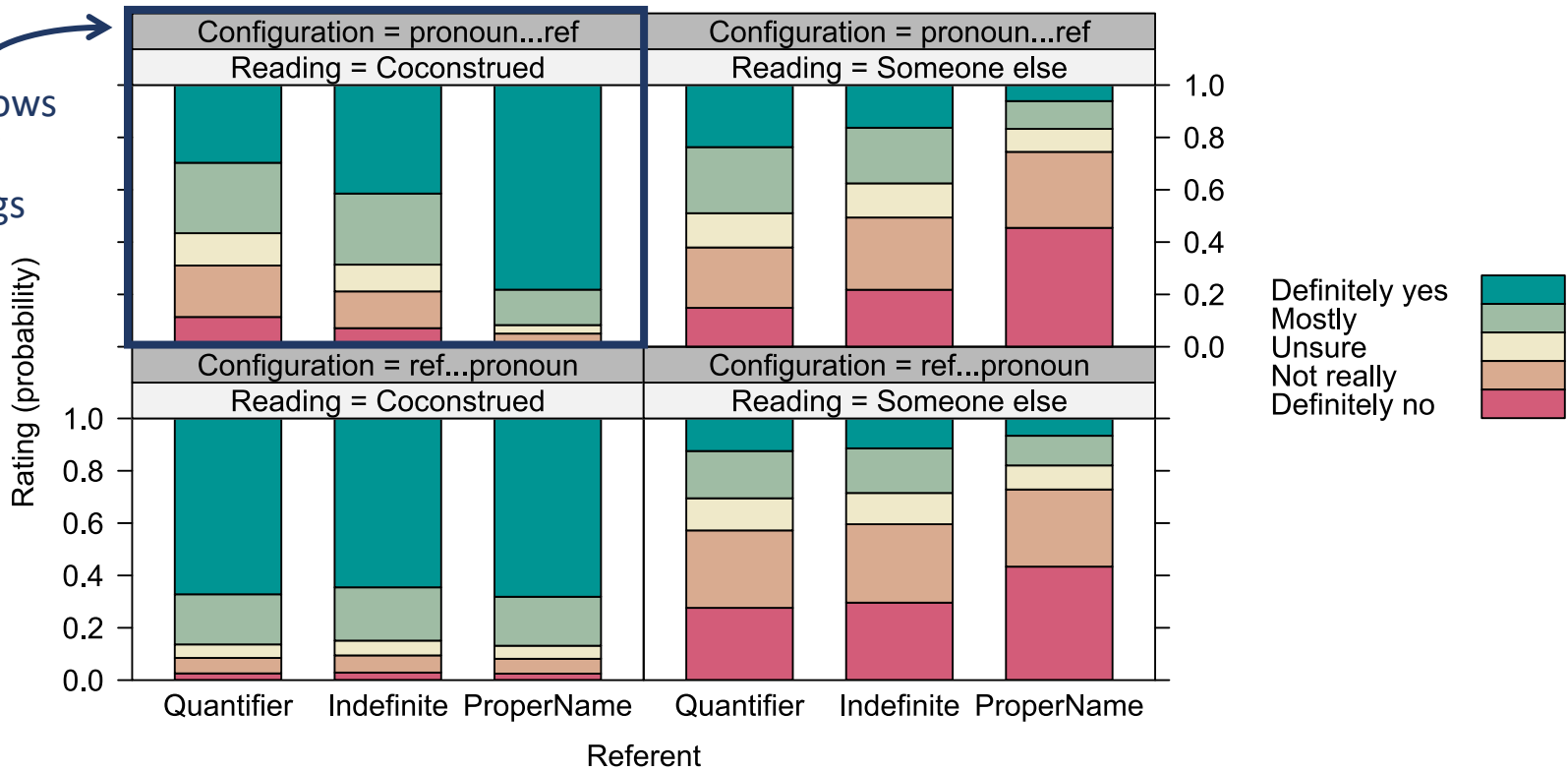Effect of referent on coconstrued reading for crossover (relative clause only)

Proper name crossover is significantly different from (relative clause) indefinite crossover
(in fact, proper names show no crossover effect)
(p = 0.008)

Appendix

Overall results

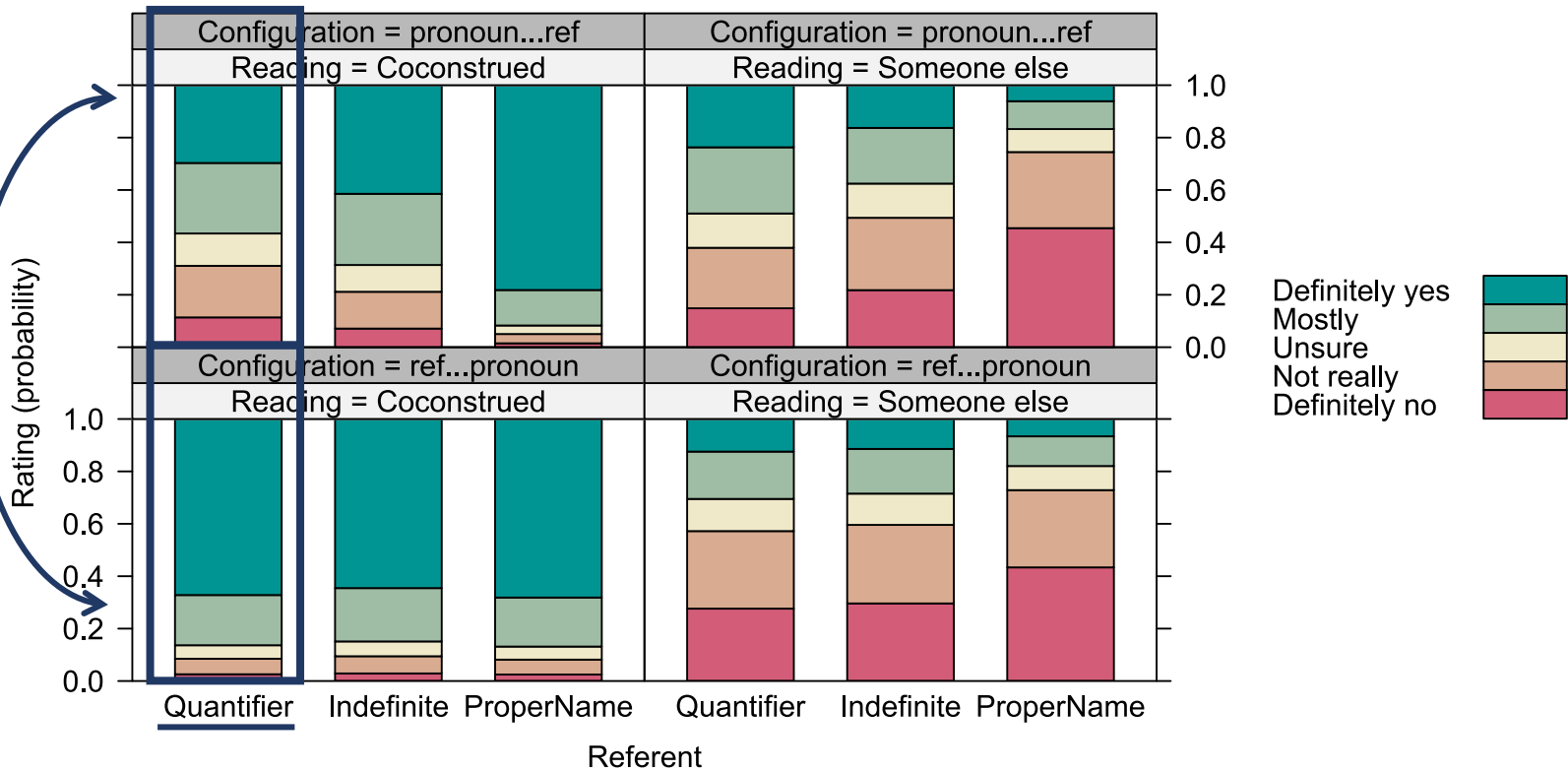Effect of referent/pronoun order on reading (negation & relative clauses)

This quadrant shows the availability of crossover readings
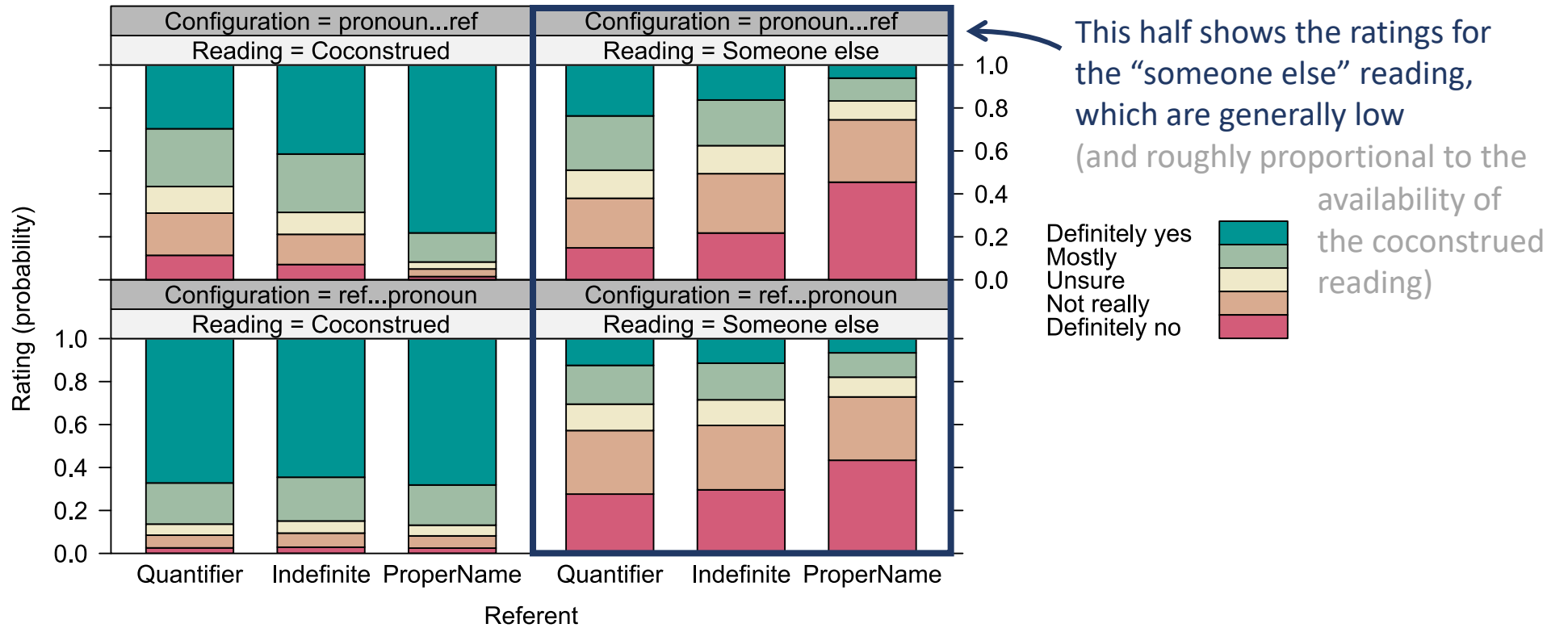
Overall results

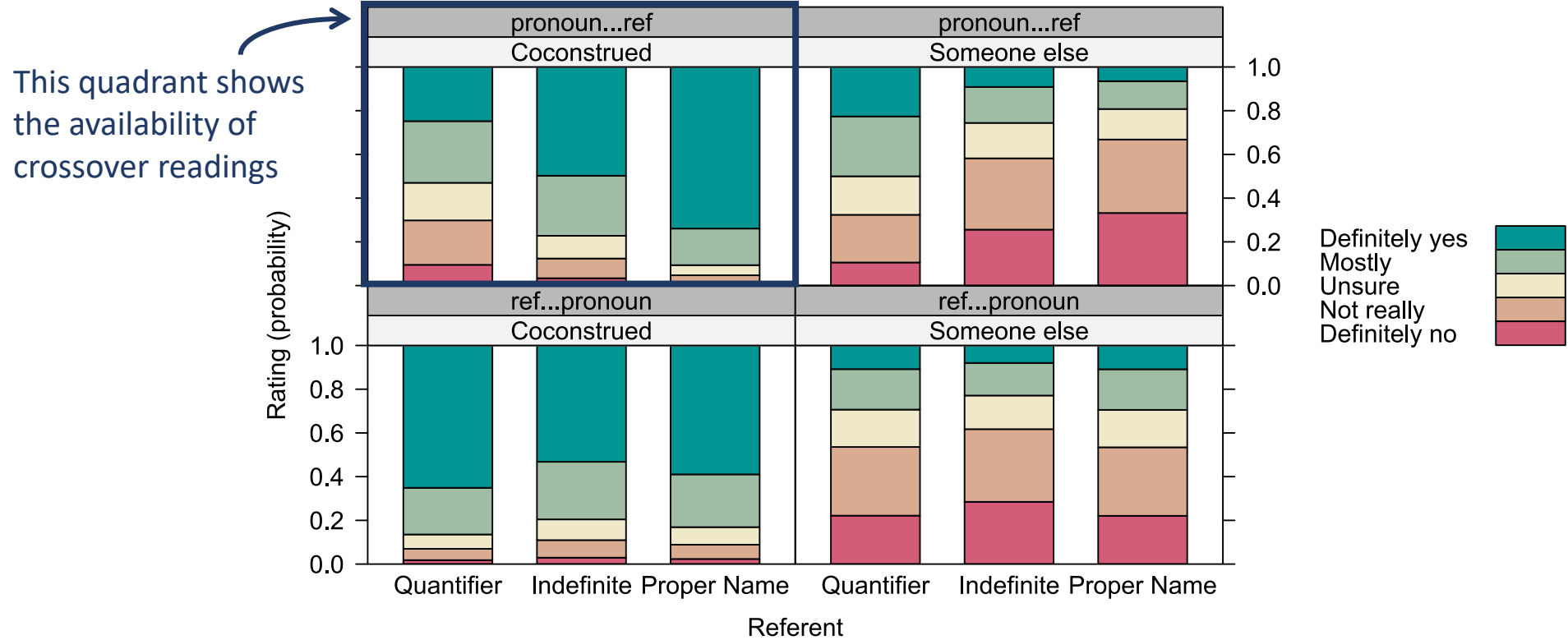This comparison shows **crossover** (pronoun...referent) **vs. binding** (referent...pronoun) for quantifiers

Effect of referent/pronoun order on reading (negation & relative clauses)

Overall results

Effect of referent/pronoun order on reading (negation & relative clauses)

This half shows the ratings for the "someone else" reading, which are generally low *(and roughly proportional to the availability of the coconstrued reading)*

Overall results: negation

Effect of referent/pronoun order on reading (negation only)

This quadrant shows the availability of crossover readings

Overall results: negation

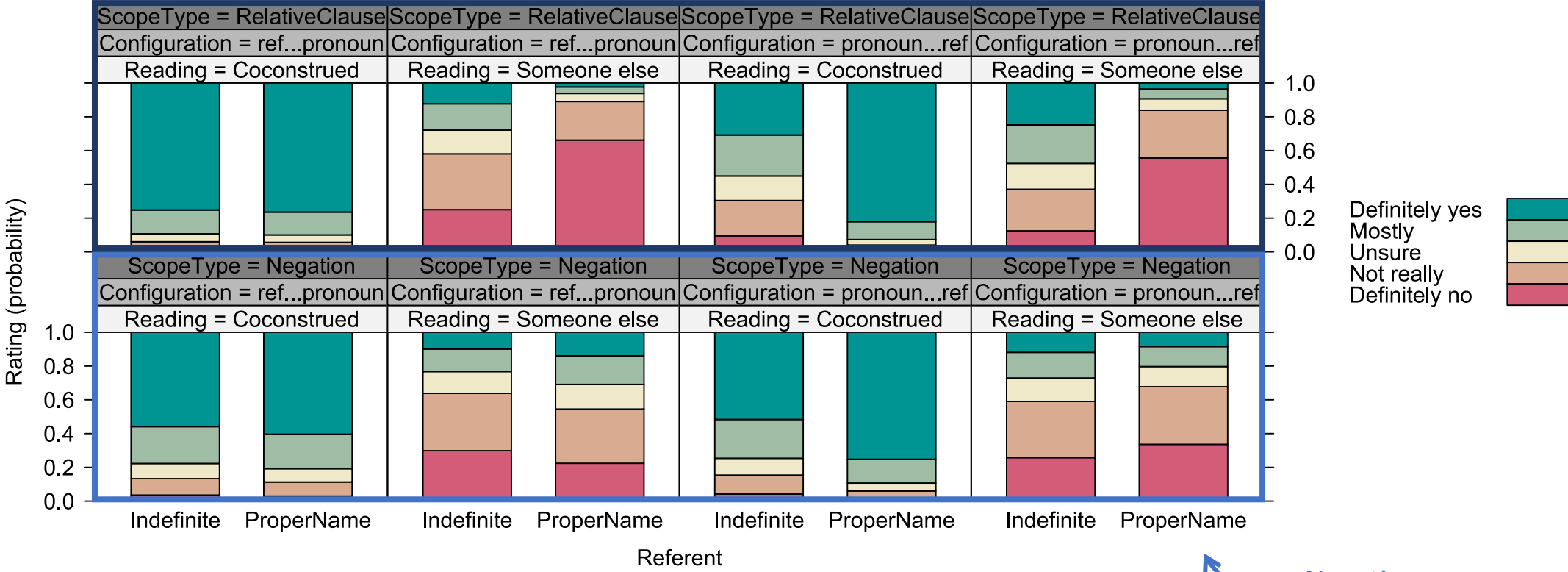Effect of referent/pronoun order on reading (negation only)

This comparison shows **crossover** (pronoun...referent) **vs. binding** (referent...pronoun) for quantifiers
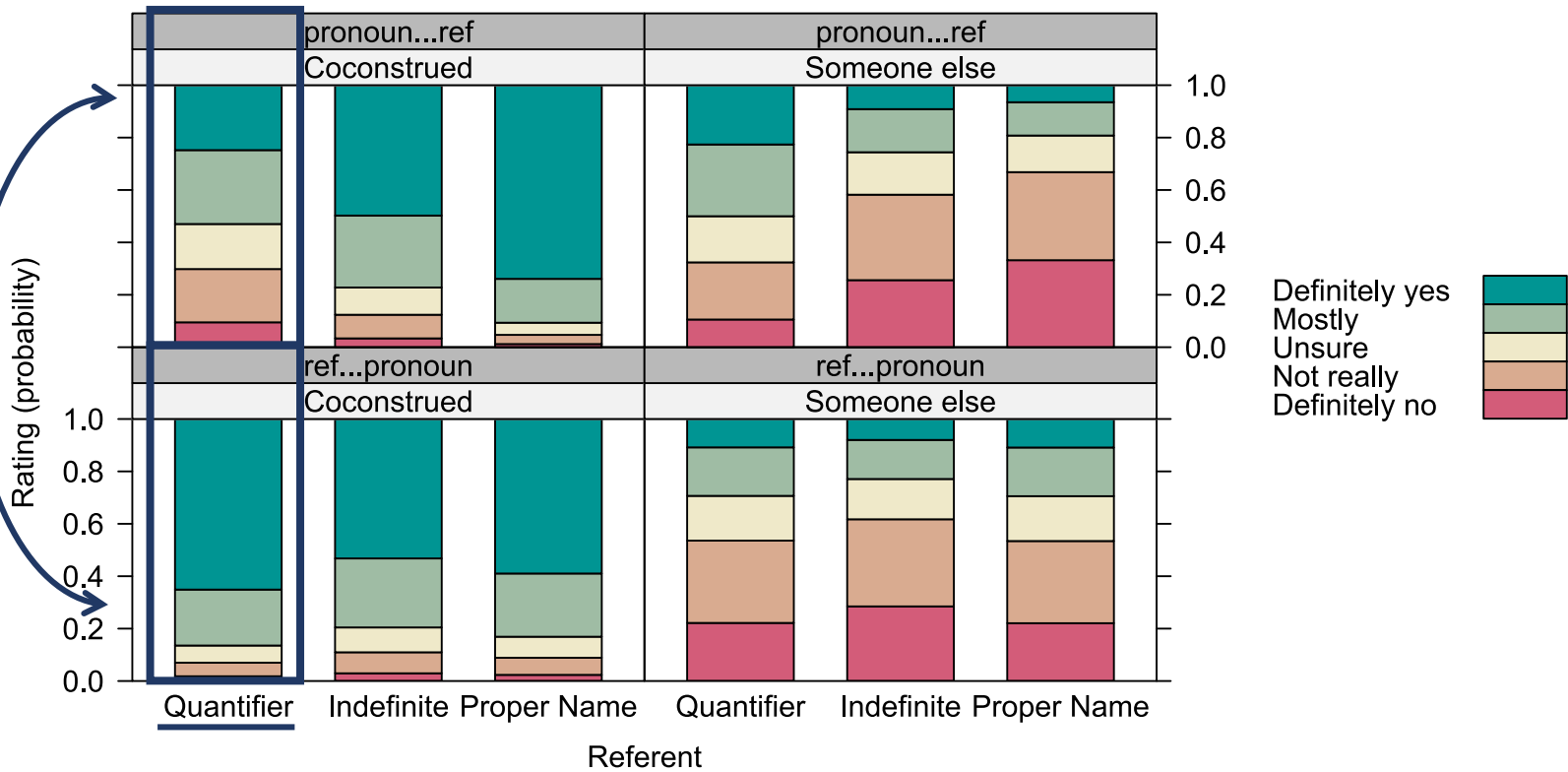
Negation vs. relative clauses
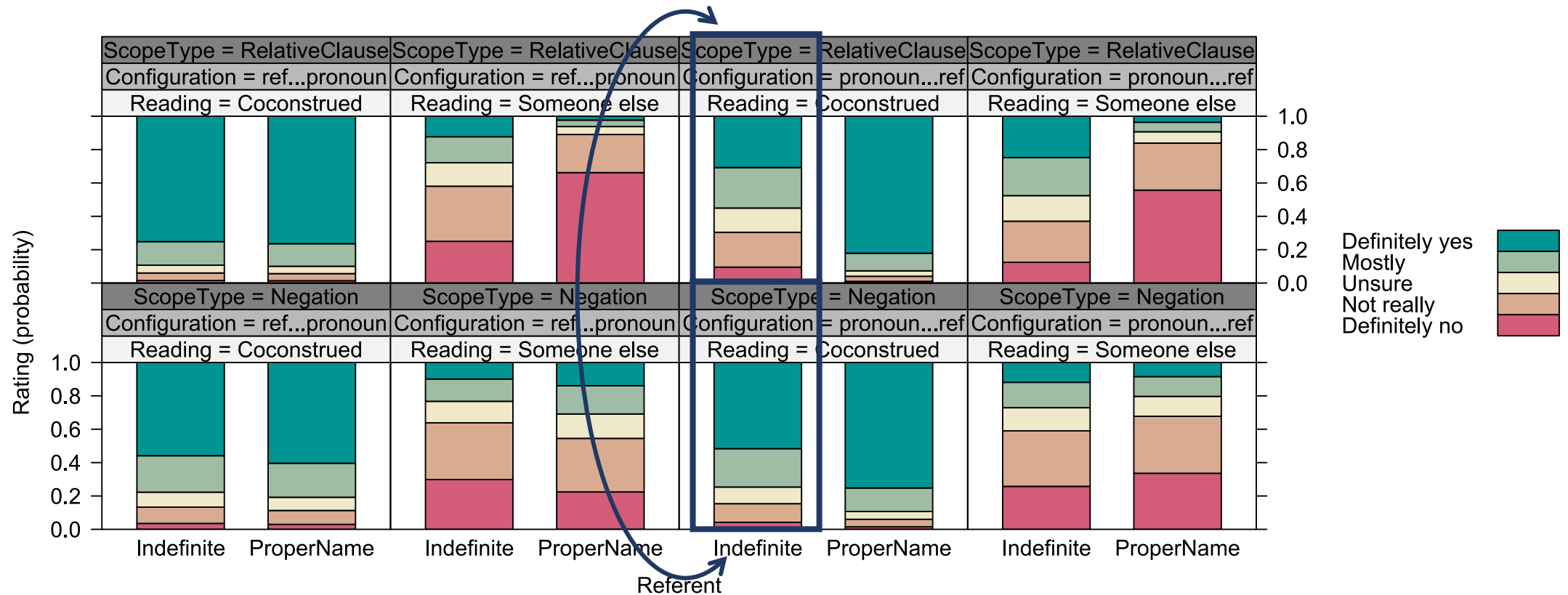

Relative clauses (top half)

Negation (bottom half)

Effect of referent/pronoun order on reading (negation vs. relative clauses)

Negation vs. relative clauses

Effect of referent/pronoun order on reading (negation vs. relative clauses)

This comparison shows that the coconstrued reading is more available for indefinite crossover with negation than with relative clauses, but this is not significant (p = 0.24)

Negation vs. relative clauses (flipped)

Effect of referent/pronoun order on reading (negation vs. relative clauses)