

The lexical and grammatical sources of neg-raising inferences

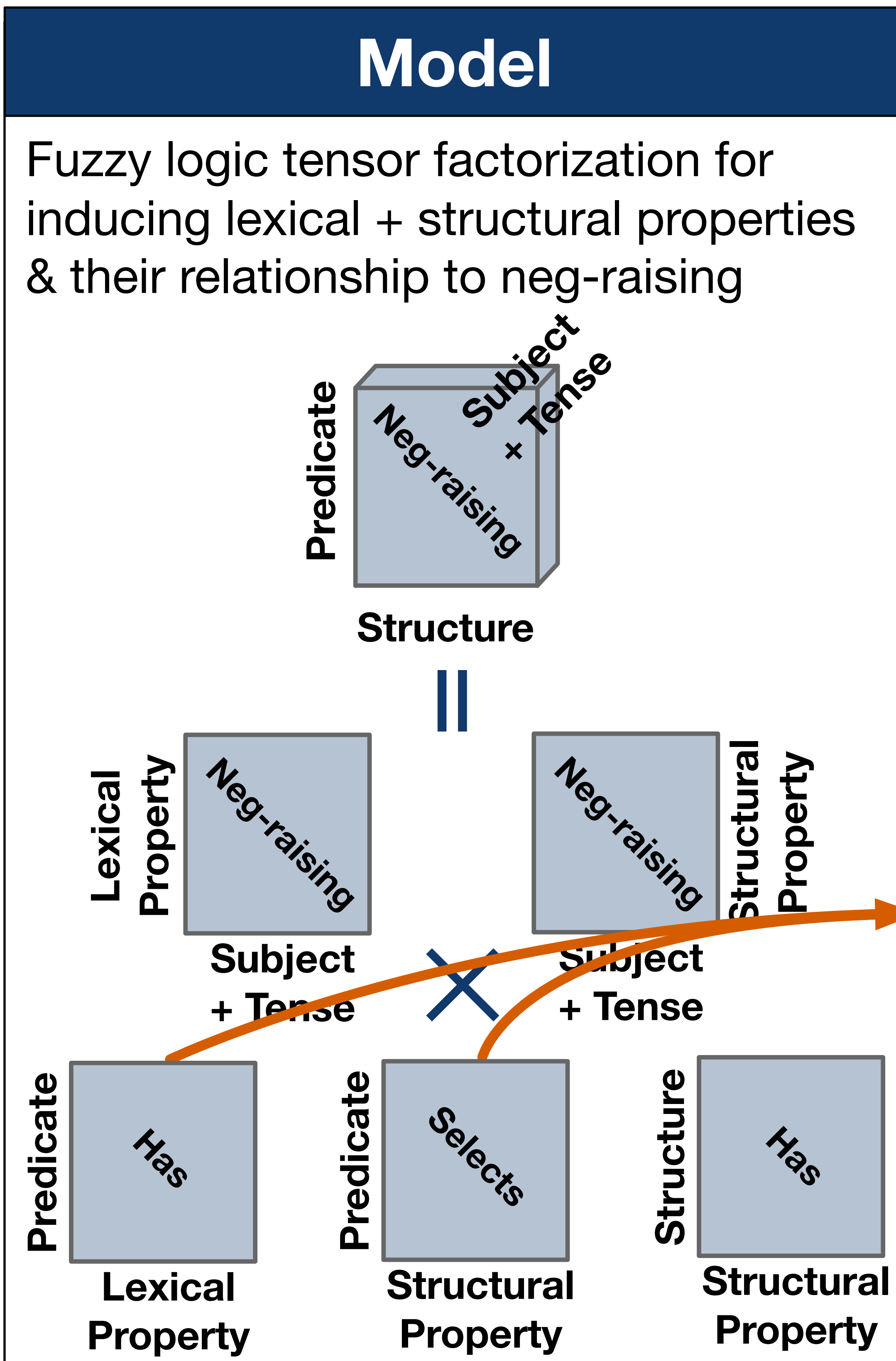
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Neg(ation)-raising

Jo doesn't think that Bo left.
 Jo thinks that Bo didn't leave.
 Jo doesn't know that Bo left.
 Jo knows that Bo didn't leave.

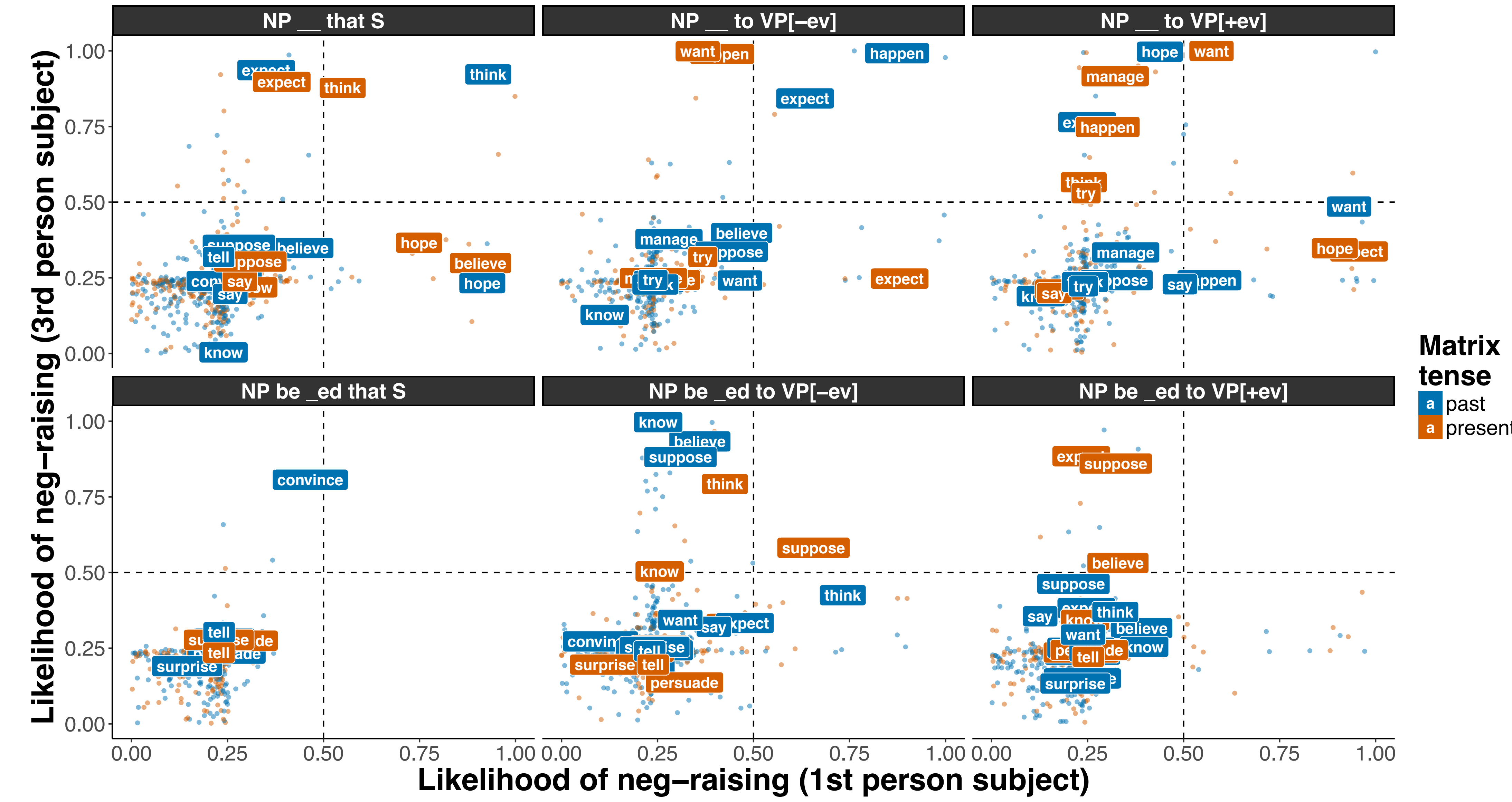
Conditioning Factors

Subject ? I don't know that Jo left.
 + **Tense** X I didn't know that Jo left.
Complement structure
 ✓ Jo wasn't known to be intelligent.
 X Jo didn't think to get groceries.



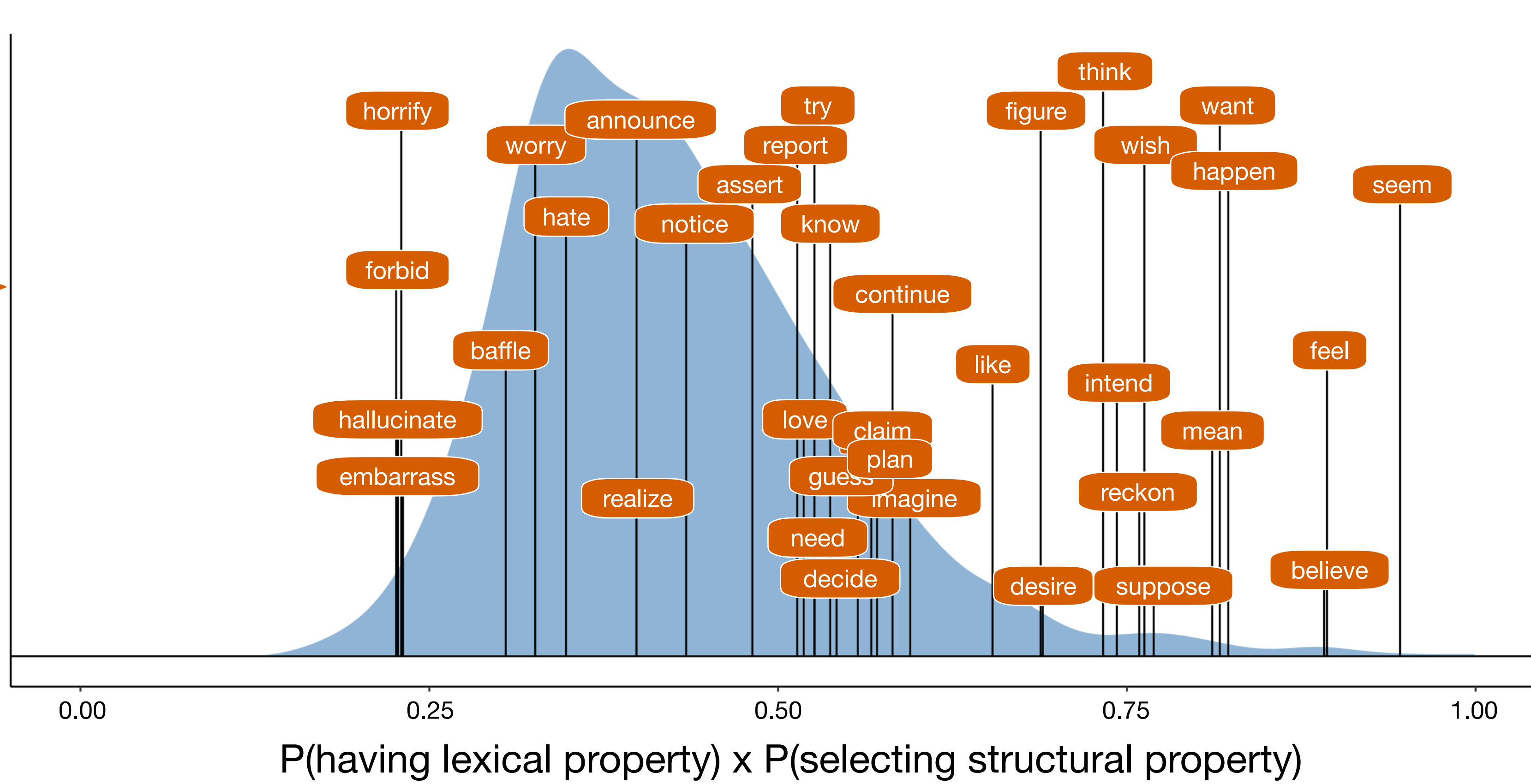
Question

Are neg-raising inferences triggered by: (i) **lexical** properties; (ii) **structural** properties; or (iii) an **interaction**?



Finding

Neg-raising is triggered by an **interaction of lexical and structural factors** independent of subject and tense.



Data Collection

If I were to say
 I don't think that a particular thing happened.
 How likely is it that I mean
 I think that that thing didn't happen?
 0.98

extremely unlikely | extremely likely

Factors: Subject (1st v. 3rd) x
 Matrix tense (present v. past) x
 Passivized direct object x
 Complement tense x
 Complement lexical aspect

925 unique verbs in 7,936 sentences
 filtered using MegaAcceptability
 10 participants rating each sentence

Experiment

Vary number of lexical and structural properties assumed
 KL divergence loss + stratified 5-fold cross-validation
 Best held-out KL + overall fit

Result: consistent effect of lexical and structural properties across subject and tense