The lexical and grammatical sources of neg-raising inferences Hannah Youngeun An & Aaron Steven White

University of Rochester | data available at megaattitude.io

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.

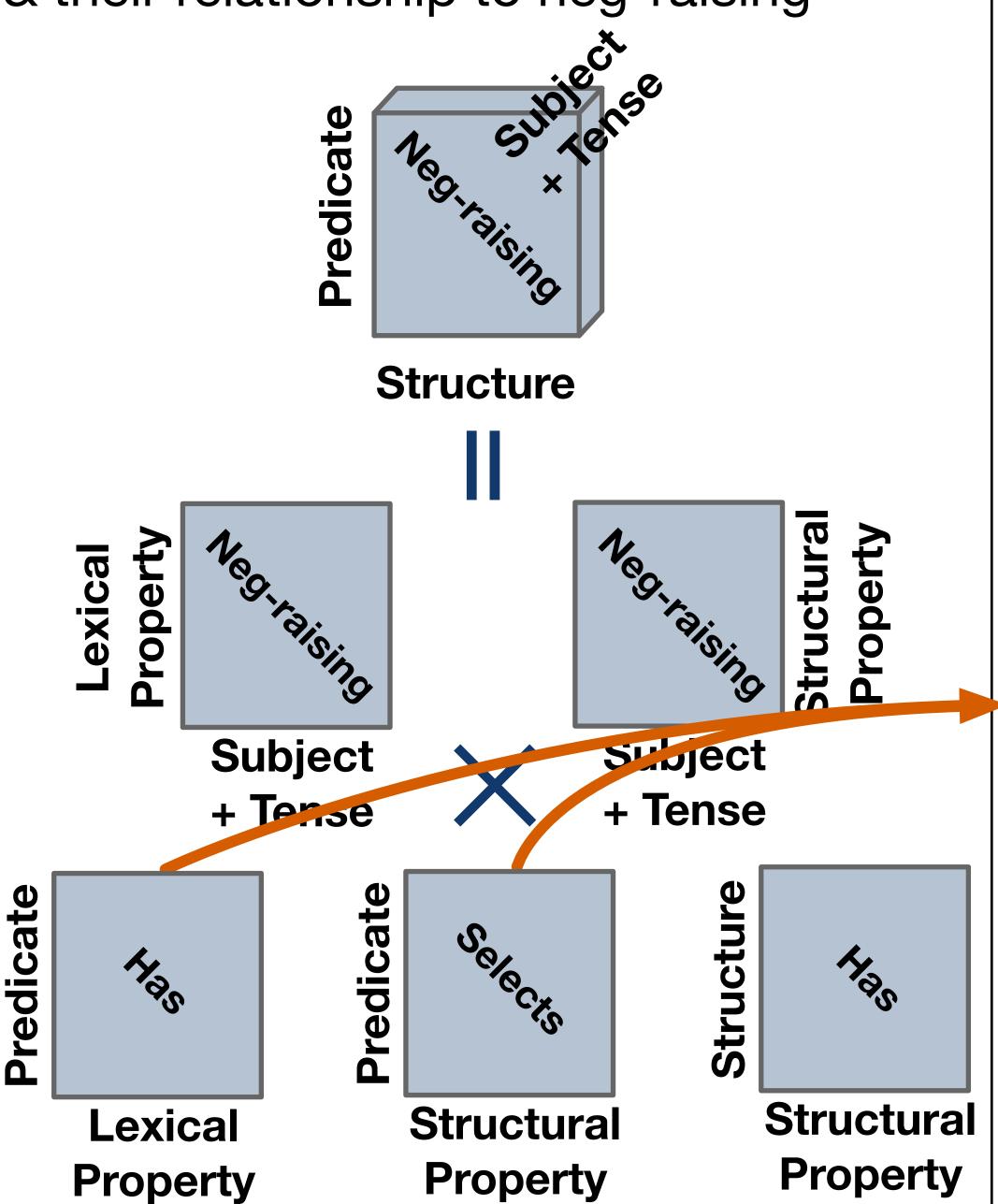
+ Tense X I didn't know that Jo left.

Complement structure

- √ Jo wasn't known to be intelligent.
- X Jo didn't think to get groceries.

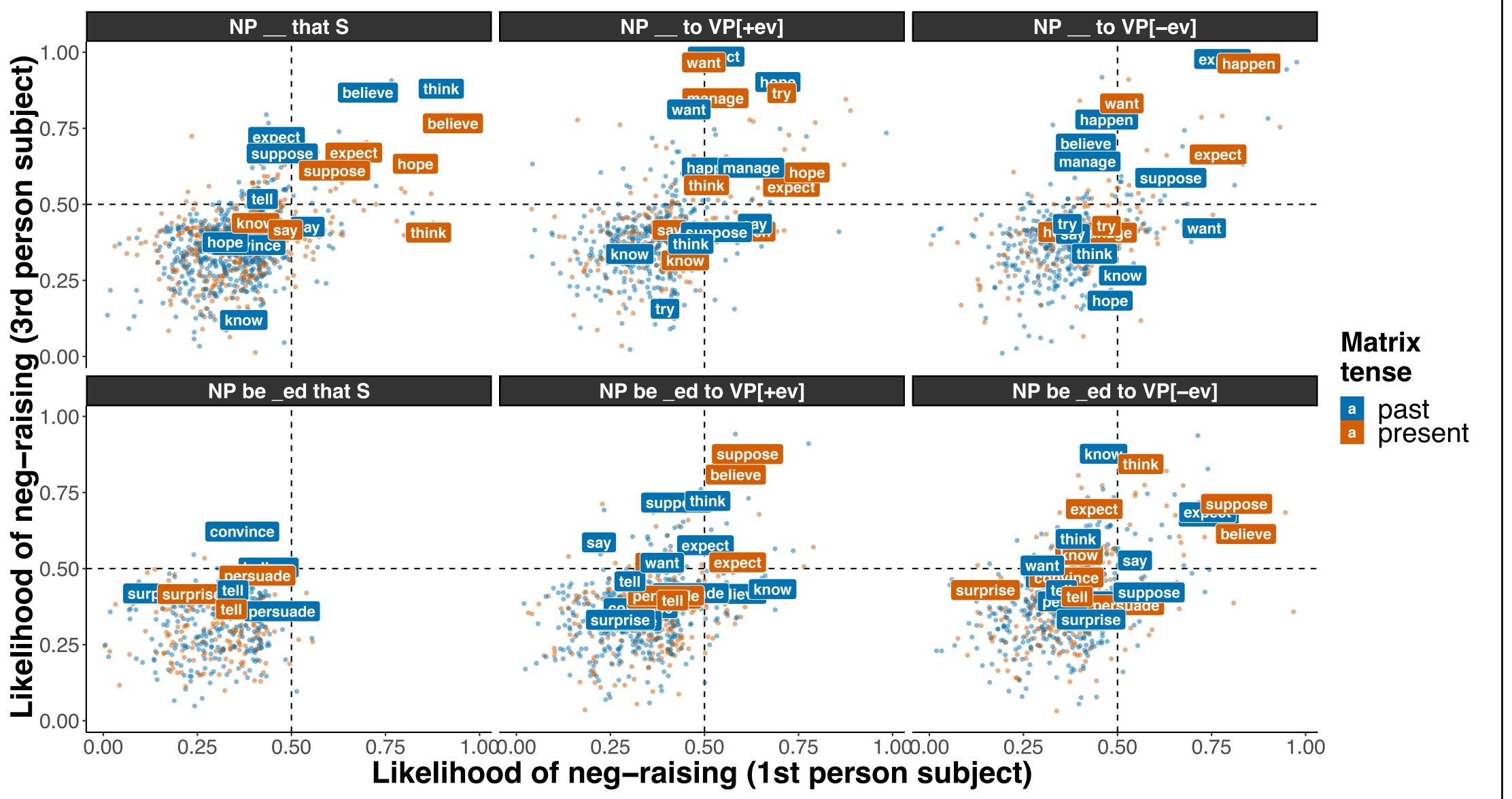
Model

Fuzzy logic tensor factorization for inducing lexical + structural properties & their relationship to neg-raising



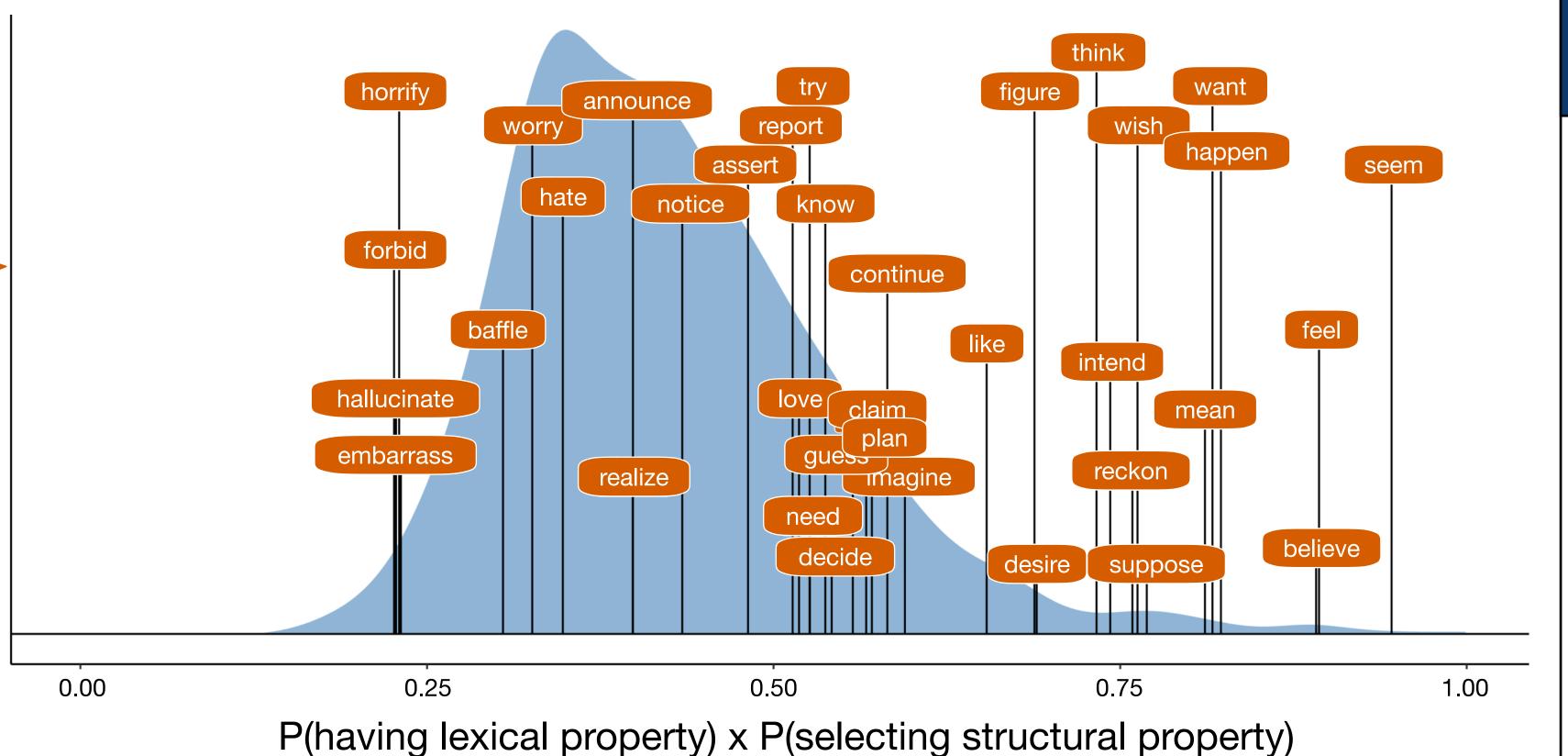
Question

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



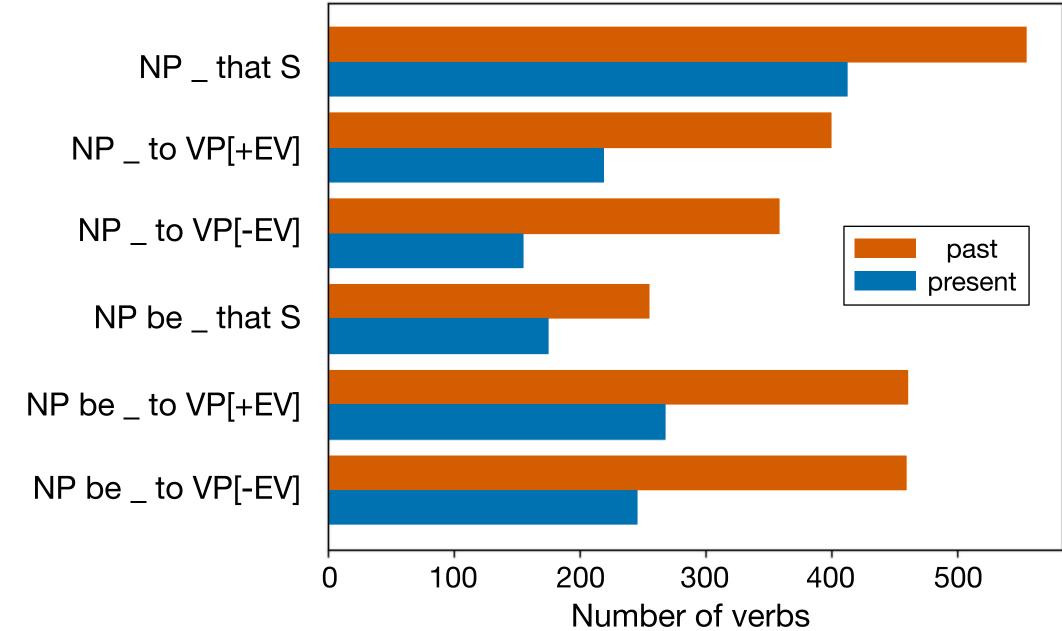
Finding

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? extremely unlikely 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

operties 3 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 # lexical properties across subject and tense