
Notes:

- In a model with only main effects (and indiv as random), none of the stance predictors are significant.
- There is a big interaction with matrix subject and investment: low investment + "I" favours zero (more than "I" alone), but low investment + other favours overt.
- There are several minor/marginal interactions with investment and hierarchy with matrix verb, e.g. same-level hierarchy + 'know' favours zero, but these are less robust and don't show up when other interactions are included.
- When the stance predictors are included in the model, the event type predictor becomes only marginally significant (p ~= 0.07).
- Our current interpretation:
    -> Stance has complex, multidirectional effects and depends crucially on the context, both lexical and grammatical
- But unsure about how or if to report, further investigate the less robust effects.

In this document I've given a base model with no interactions and a model with some investment interactions, as well as a random forest conditional variable importance plot which indicates investment is the most important stance predictor.

(But it also selects matrix tense as important and I haven't been able to find any effect of tense in the data, so I'm not sure exactly what's going on there.)

Base model:

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Generalized linear mixed model fit by maximum likelihood (Laplace
  Approximation) [glmerMod]
 Family: binomial  ( logit )
Formula: dep.var ~ affect + alignment + intervening.elsewhere + hierarchy +
    investment + event.type.generic + intervening.verbal + matrix.verb +
    matrix.subj.simp + (1 | speaker)
   Data: df
Control: glmerControl(optimizer = "bobyqa", optCtrl = list(maxfun = 1e+08))

     AIC      BIC   logLik deviance df.resid
   703.5    781.7   -334.7    669.5      717

Scaled residuals:
    Min      1Q  Median      3Q     Max
-2.5075 -0.5180 -0.2225  0.5794  6.1139

Random effects:
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 Groups  Name        Variance Std.Dev.
 speaker (Intercept) 0.5821   0.7629
Number of obs: 734, groups:  speaker, 8

Fixed effects:
                             Estimate Std. Error z value Pr(>|z|)
(Intercept)                   0.60190    0.56776   1.060 0.289081
affectneutral                -0.14986    0.27651  -0.542 0.587837
affectpositive                0.02335    0.32274   0.072 0.942313
alignmentalign               -0.07736    0.34690  -0.223 0.823522
alignmentneutral              0.03750    0.36761   0.102 0.918749
intervening.elsewherepresent  0.92676    0.26864   3.450 0.000561 ***
hierarchyexpert               0.27201    0.22254   1.222 0.221589
investmentsome               -0.08328    0.28605  -0.291 0.770936
event.type.genericformal      0.53301    0.29668   1.797 0.072401 .
event.type.genericmedium     -0.16077    0.25421  -0.632 0.527120
intervening.verbalpresent     1.07764    0.50479   2.135 0.032776 *
matrix.verbknow              -0.37199    0.34834  -1.068 0.285565
matrix.verbmake-sure         -0.50002    0.45436  -1.100 0.271118
matrix.verbsay               -1.37753    0.30390  -4.533 5.82e-06 ***
matrix.verbthink             -1.93569    0.28700  -6.745 1.53e-11 ***
matrix.subj.simpI            -1.45471    0.24437  -5.953 2.63e-09 ***

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Model with all interactions:

Generalized linear mixed model fit by maximum likelihood (Laplace
  Approximation) [glmerMod]
 Family: binomial  ( logit )
Formula: dep.var ~ affect + alignment + intervening.elsewhere + hierarchy +
    investment + event.type.generic + intervening.verbal + matrix.verb +
    matrix.subj.simp + investment:matrix.subj.simp + investment:matrix.verb
+
    (1 | speaker)
   Data: df
Control: glmerControl(optimizer = "bobyqa", optCtrl = list(maxfun = 1e+08))

     AIC      BIC   logLik deviance df.resid
   693.4    790.0   -325.7    651.4      713

Scaled residuals:
    Min      1Q  Median      3Q     Max
-2.6235 -0.5202 -0.2213  0.5508 11.7118

Random effects:
 Groups  Name        Variance Std.Dev.
 speaker (Intercept) 0.5733   0.7572
Number of obs: 734, groups:  speaker, 8

Fixed effects:
```

```
                                Estimate Std. Error z value Pr(>|z|)
(Intercept)                      1.15910    0.73242   1.583 0.113519
affectneutral                   -0.20019    0.27916  -0.717 0.473302
affectpositive                  -0.08328    0.32800  -0.254 0.799561
alignmentalign                  -0.08108    0.35312  -0.230 0.818394
alignmentneutral                 0.07467    0.37051   0.202 0.840282
intervening.elsewherepresent     1.05482    0.27758   3.800 0.000145 ***
hierarchyexpert                  0.35371    0.22930   1.543 0.122932
investmentsome                  -0.74412    0.59969  -1.241 0.214666
event.type.genericformal         0.55699    0.30473   1.828 0.067574 .
event.type.genericmedium        -0.18341    0.25742  -0.712 0.476157
intervening.verbalpresent        1.19714    0.50908   2.352 0.018693 *
matrix.verbknow                  0.62140    1.01086   0.615 0.538737
matrix.verbmake-sure            -0.48875    0.45466  -1.075 0.282378
matrix.verbsay                  -0.12077    0.87387  -0.138 0.890082
matrix.verbthink                -2.43284    0.62921  -3.867 0.000110 ***
matrix.subj.simpI               -2.67651    0.57946  -4.619 3.86e-06 ***
investmentsome:matrix.subj.simpI 1.44733    0.62233   2.326 0.020037 *
investmentsome:matrix.verbknow  -1.06351    1.06617  -0.998 0.318519
investmentsome:matrix.verbsay   -1.52115    0.93947  -1.619 0.105414
investmentsome:matrix.verbthink  0.71779    0.70818   1.014 0.310787
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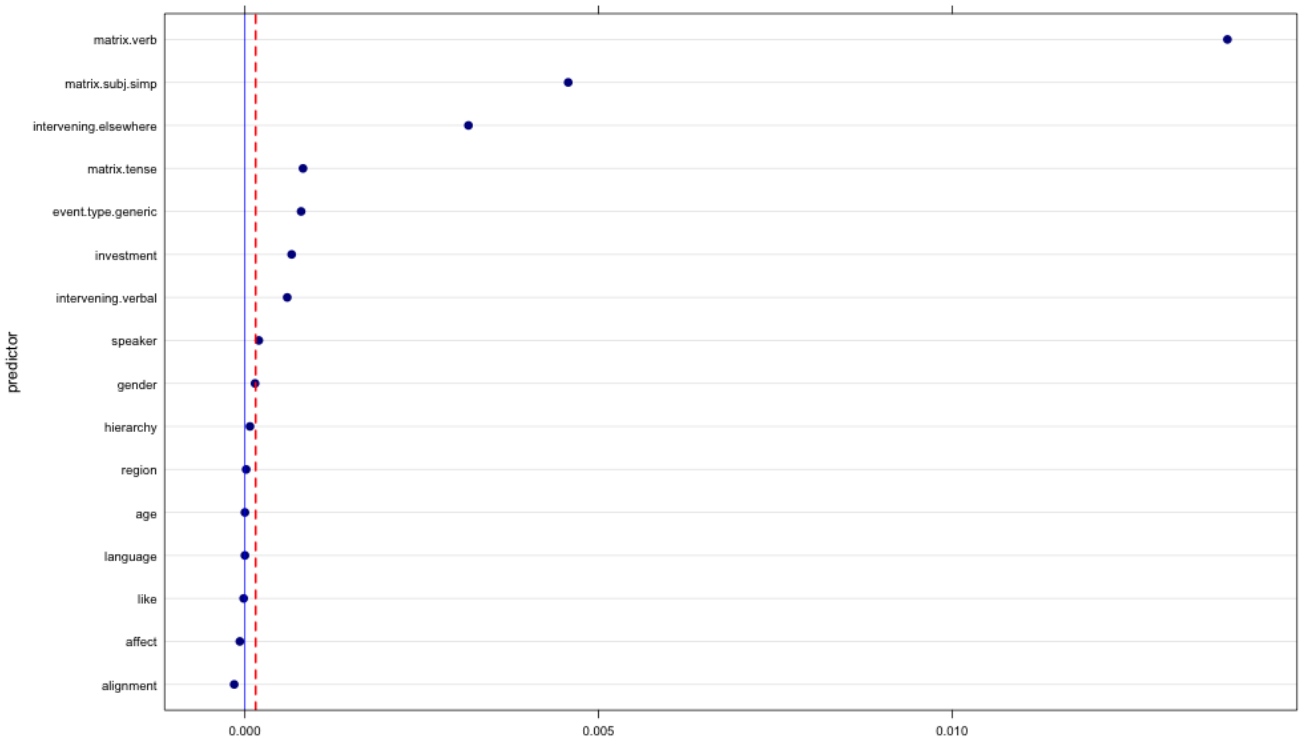
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Correlation matrix not shown by default, as p = 20 > 12.
Use print(x, correlation=TRUE)  or
         vcov(x)         if you need it
```

Random forest:


predictor
matrix.verb
matrix.subj.simp
intervening.elsewhere
matrix.tense
event.type.generic
investment
intervening.verbal
speaker
gender
hierarchy
region
age
language
like
affect
alignment
0.000
0.005
0.010