Model selection for N170 analysis (using individual average data)

Number of subjects: 65

Electrodes in analysis: P7/T5, TP7, P8/T6, TP8

**1. Intercept only model**

“3 N170\_Eval\_InterceptOnly\_IndivAvgDat.txt”

ICC for subject: .57

ICC for electrode: .16

Log likelihood comparisons testing contribution of both subject and electrode were significant. Therefore, both subject and electrode were kept as grouping variables for subsequent analyses. Because only four electrodes included, may have to consider used Electrode as fixed variable, but kept it as a grouping variable for these analyses.

**2. Maximal model**

“3.2 N170\_Eval\_MaximalModel\_IndivAvgDat.txt”

Effects of race and fixation (and their interaction) were allowed to be random for both grouping variables. Correlations between random effects were high (=1 or -1), suggesting the model is too complex and estimates too many random effects to be supported.

**3. Model where effects varying by subject but not electrode**

“3.3 N170\_Eval\_randomEffectsSubject\_IndivAvgDat.txt”

Variance estimates for intercept and slopes within subject were much larger than within electrode (see maximal model). Therefore, slopes and intercepts of race and fixation (and their interaction) were allowed to vary by subject. Only intercept was allowed to vary by electrode. Correlations between random effects was still high (>.85).

**4. Model where effects varied by subject (except interaction) but not electrode**

“3.4 N170\_Eval\_randomEffectSubjectWithoutInteraction\_IndivAvgDat.txt”

Correlations between random effects now at acceptable level (<.5). Therefore, this model will be used to examine fixed effects.

Fixed effects:

Estimate Std. Error df t value Pr(>|t|)

(Intercept) -3.8008 0.5433 7.2000 -6.996 0.000183 \*\*\*

faceRaceWhite 0.4201 0.1914 166.3000 2.195 0.029545 \*

FixAreafore 0.3218 0.1921 164.8000 1.675 0.095802 .

faceRaceWhite:FixAreafore -0.1953 0.2387 841.0000 -0.818 0.413621