Model selection for P2 analysis (using individual average data)

Number of subjects: 65

Electrodes in analysis: CZ, C3, C4, CPZ, CP3, CP4, PZ

**1. Intercept only model**

“2 P2\_Eval\_InterceptOnly\_IndivAvgDat.txt”

ICC for subject: .78

ICC for electrode: .027

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.

**2. Maximal model**

“2.2 P2\_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 (>.9), suggesting the model is too complex and estimates too many random effects to be supported. Variances of random effects were larger for subject then electrode.

**4. Model where effects vary by subject but not electrode**

“2.4 P2\_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 were acceptable (<.6).

BIC: 5374.829 (smaller than BIC for varying intercept model: 6207.824)

Therefore, this model will be used to examine fixed effects.

Fixed effects:

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

(Intercept) 1.9849 0.3383 69.1600 5.867 1.39e-07 \*\*\*

faceRaceWhite -0.8563 0.1480 64.0000 -5.787 2.34e-07 \*\*\*

FixAreafore -0.5012 0.1942 64.0000 -2.580 0.0122 \*

faceRaceWhite:FixAreafore 0.2599 0.1897 64.0000 1.370 0.1754