# Supplementary Materials

# Contents

# 1 General approach

We used R (R Core Team, 2012) and lme4 (Bates, Maechler & Bolker, 2012) to perform a linear mixed effects analysis of the relationship between rivalry and consciousness phases. As fixed effects, we entered rivalry and phases (with interaction term) into the model. As random effects, we had intercepts for subjects. Visual inspection of residual plots did not reveal any obvious deviations from homoscedasticity or normality. P-values were obtained by anova of the full models for gender blocks and emotion blocks:

```
fit <- lmer(mean ~ rivalry*phase + (1|subject)
```

## 1.1 model selection

The logic of the model selection is to compare the likelihood of different models. First, the model without any factor (the null model), then each model add a factor that we are interested in.

```
model1<-lmer(speed ~ 1 + (1|subject), dat) # null model

model2<-lmer(speed ~ phase + (1|subject), dat) # add consciousness phases: formation vs dissolution

model3<-lmer(speed ~ phase + rivalry + (1|subject), dat) # add rivalry: emotion(happy vs neutral) OR ge

model4<-lmer(speed ~ rivalry*phase + (1|subject), dat) # add interaction


anova(model1,model2,model3,model4)

# Stabilisation

model1<-lmer(STB ~ 1 + (1|subject), dat) # null model

model2<-lmer(STB ~ rivalry + (1|subject), dat) # add consciousness rivalry: emotion(happy vs neutral) O

anova(model1,model2)
```

### 1.1.1 Model selection : Emotion rivalry (Speed)

| term | npar | AIC | BIC | logLik | deviance | statistic | df | p.value |
|---|---|---|---|---|---|---|---|---|
| model1 | 3.000 | -24,875.386 | -24,854.800 | 12,440.693 | -24,881.386 | | | |
| model2 | 4.000 | -25,014.287 | -24,986.839 | 12,511.144 | -25,022.287 | 140.901 | 1.000 | 0.000 |
| model3 | 5.000 | -25,073.504 | -25,039.193 | 12,541.752 | -25,083.504 | 61.216 | 1.000 | 0.000 |
| model4 | 6.000 | -25,076.132 | -25,034.959 | 12,544.066 | -25,088.132 | 4.628 | 1.000 | 0.031 |

### 1.1.2 Model selection : Gender rivalry (Speed)

| term | npar | AIC | BIC | logLik | deviance | statistic | df | p.value |
|---|---|---|---|---|---|---|---|---|
| model1 | 3.000 | -28,239.352 | -28,218.735 | 14,122.676 | -28,245.352 | | | |
| model2 | 4.000 | -28,259.495 | -28,232.004 | 14,133.747 | -28,267.495 | 22.142 | 1.000 | 0.000 |
| model3 | 5.000 | -28,257.918 | -28,223.555 | 14,133.959 | -28,267.918 | 0.424 | 1.000 | 0.515 |
| model4 | 6.000 | -28,258.001 | -28,216.765 | 14,135.000 | -28,270.001 | 2.083 | 1.000 | 0.149 |

#### 1.1.3 Model selection : Emotion stability (Cumulative time)

| term | npar | AIC | BIC | logLik | deviance | statistic | df | p.value |
|---|---|---|---|---|---|---|---|---|
| model1 | 3.000 | 12,729.181 | 12,742.657 | -6,361.590 | 12,723.181 | | | |
| model2 | 4.000 | 12,414.950 | 12,432.919 | -6,203.475 | 12,406.950 | 316.230 | 1.000 | 0.000 |

#### 1.1.4 Model selection : gender stability (cumulative time)

| term | npar | AIC | BIC | logLik | deviance | statistic | df | p.value |
|---|---|---|---|---|---|---|---|---|
| model1 | 3.000 | 14,051.589 | 14,065.441 | -7,022.794 | 14,045.589 | | | |
| model2 | 4.000 | 14,050.534 | 14,069.003 | -7,021.267 | 14,042.534 | 3.055 | 1.000 | 0.080 |

# 2 Correlations tables

Correlation are not corrected for multiple comparison. Code is available here: https://osf.io/2pzmg/

### 2.0.1 Valence, Arousal and BR measures

DS = Dissolution (Speed out)
FR = Formation (Speed in)
PSP = Period of stable perception
AR = Arousal
VL = Valence

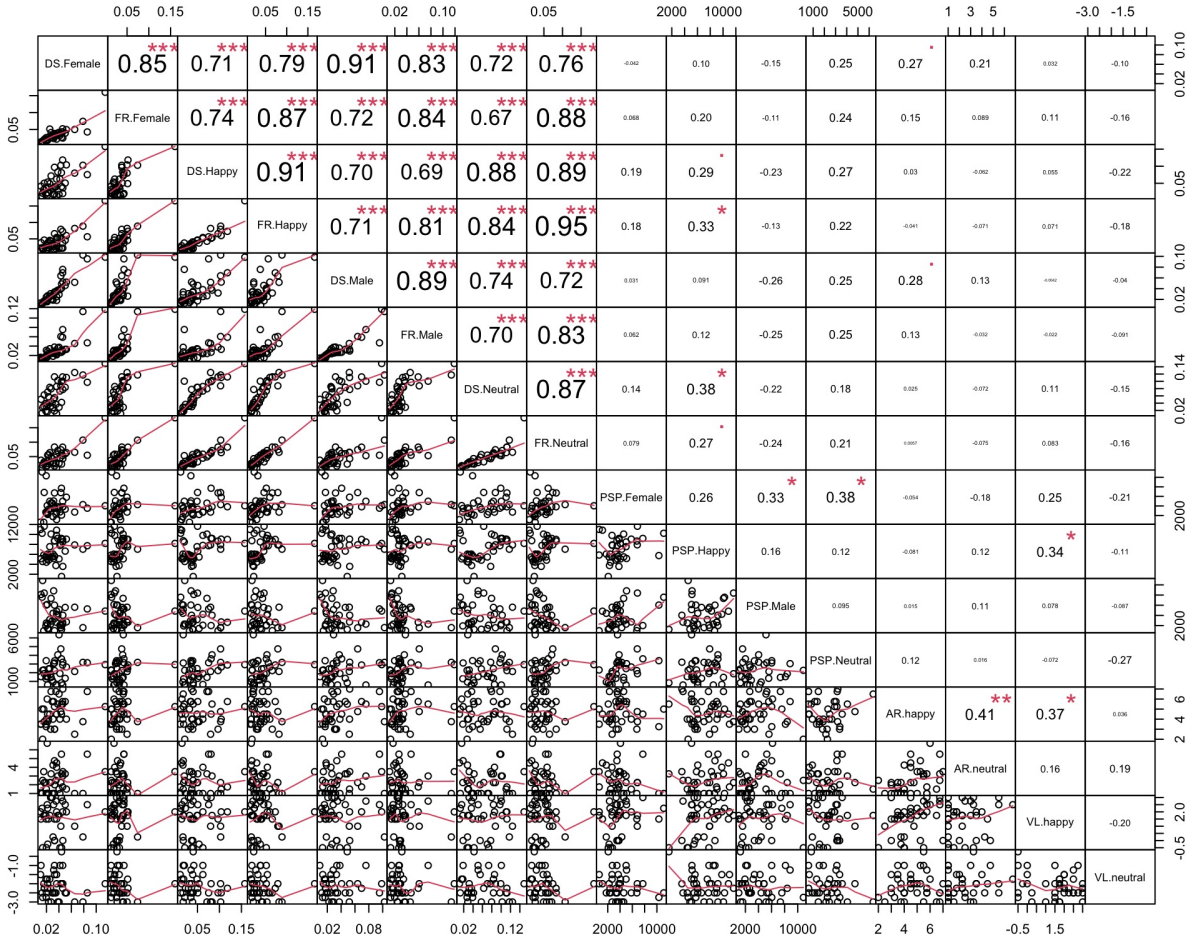


Figure S1: Pearson, two-sided correlations between Valence, Arousal and BR measures. . = p < .1 * = p < .05 ** = p < .01 *** = p <.001

# 3 Medians

here we report the predominance median, that is similar to predominance mean (PM) measure but with median insted of mean.

**References**

Bates, Douglas, Martin Mächler, Ben Bolker, and Steve Walker. 2014. "Fitting Linear Mixed-Effects Models Using lme4." arXiv [stat.CO]. arXiv. http://arxiv.org/abs/1406.5823.