**Transition time differences based on transition type (constant choices or switches)**

**SAL**

salTimes=read.csv('Expt1\_TimeDataWithoutOutliers.csv', header=TRUE)

wilcox.test(subset(salTimes$choiceDur,salTimes$choice=="Constant"),subset(salTimes$choiceDur,salTimes$choice=="Switch"))

 Wilcoxon rank sum test with continuity correction

data: subset(salTimes$choiceDur, salTimes$choice == "Constant") and subset(salTimes$choiceDur, salTimes$choice == "Switch")

W = 13036, p-value = 0.1394

alternative hypothesis: true location shift is not equal to 0

aggregate(salTimes$choiceDur,list(choice=salTimes$choice),mean)

 choice x

1 Constant 7.529412

2 Switch 9.029586

aggregate(salTimes$choiceDur,list(choice=salTimes$choice),sd)

 choice x

1 Constant 4.928094

2 Switch 7.053728

**VAL**

valTimes=read.csv('Expt2\_TimeDataWithoutOutliers.csv', header=TRUE)

wilcox.test(subset(valTimes$choiceDur,valTimes$choice=="Constant"),subset(valTimes$choiceDur,valTimes$choice=="Switch"))

 Wilcoxon rank sum test with continuity correction

data: subset(valTimes$choiceDur, valTimes$choice == "Constant") and subset(valTimes$choiceDur, valTimes$choice == "Switch")

W = 2661.5, p-value = 0.0138

alternative hypothesis: true location shift is not equal to 0

aggregate(valTimes$choiceDur,list(choice=valTimes$choice),mean)

 choice x

1 Constant 6.487603

2 Switch 8.473684

aggregate(valTimes$choiceDur,list(choice=valTimes$choice),sd)

 choice x

1 Constant 3.633446

2 Switch 4.877445

**SALVAL**

svTimes=read.csv('Expt3\_TimeDataWithoutOutliers.csv', header=TRUE)

wilcox.test(subset(svTimes$choiceDur,svTimes$choice=="Constant"),subset(svTimes$choiceDur,svTimes$choice=="Switch"))

 Wilcoxon rank sum test with continuity correction

data: subset(svTimes$choiceDur, svTimes$choice == "Constant") and subset(svTimes$choiceDur, svTimes$choice == "Switch")

W = 3184, p-value = 0.0005276

alternative hypothesis: true location shift is not equal to 0

aggregate(svTimes$choiceDur,list(choice=svTimes$choice),mean)

 choice x

1 Constant 7.135714

2 Switch 10.507692

aggregate(svTimes$choiceDur,list(choice=svTimes$choice),sd)

 choice x

1 Constant 5.356648

2 Switch 7.778422

**Transition time differences based on value and saliency**

svTimes$choiceTypeShort=factor(svTimes$choiceTypeShort,levels=c("HV","LV","Dist"))

aggregate(svTimes$choiceDur,list(choice=svTimes$choiceTypeShort),mean)

 choice x

1 HV 7.067227

2 LV 9.507692

3 Dist 10.619048

aggregate(svTimes$choiceDur,list(choice=svTimes$choiceTypeShort),sd)

 choice x

1 HV 5.153132

2 LV 7.329570

3 Dist 8.387349

m=glm(choiceDur~choiceTypeShort,data=svTimes,family=inverse.gaussian(link = "1/mu^2"))

summary(m)

Call:

glm(formula = choiceDur ~ choiceTypeShort, family = inverse.gaussian(link = "1/mu^2"),

 data = svTimes)

Deviance Residuals:

 Min 1Q Median 3Q Max

-0.8948 -0.2896 -0.1288 0.1312 0.4701

Coefficients:

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

(Intercept) 0.020022 0.002574 7.779 3.7e-13 \*\*\*

choiceTypeShortLV -0.008959 0.003407 -2.630 0.00920 \*\*

choiceTypeShortD -0.011154 0.004206 -2.652 0.00863 \*\*

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Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

(Dispersion parameter for inverse.gaussian family taken to be 0.06958306)

 Null deviance: 20.041 on 204 degrees of freedom

Residual deviance: 19.374 on 202 degrees of freedom

AIC: 1223.7

Number of Fisher Scoring iterations: 6

**Training Time Analysis**

ttime=read.csv("trainingTimeDataWithoutOutliers.csv", header=TRUE)

sal=subset(ttime,expt=="SAL")

val=subset(ttime,expt=="VAL")

sv=subset(ttime,expt=="SALVAL")

**Difference in time between end of first bout and start of test based on first training condition (high saliency/value or low saliency/value)**

aggregate(ttime$timeSec,list(TimeType=ttime$timeType,Expt=ttime$expt),mean)

 TimeType Expt x

1 first SAL 2080.7000

2 firstToTest SAL 2567.6500

3 second SAL 971.8889

4 test SAL 252.3158

5 first SALVAL 1884.5333

6 firstToTest SALVAL 3267.3333

7 second SALVAL 1681.0667

8 test SALVAL 302.3846

9 first VAL 1033.8333

10 firstToTest VAL 2140.4286

11 second VAL 958.7143

12 test VAL 255.7143

aggregate(ttime$timeSec,list(TimeType=ttime$timeType,Expt=ttime$expt),sd)

 TimeType Expt x

1 first SAL 1417.97239

2 firstToTest SAL 729.29774

3 second SAL 366.37074

4 test SAL 81.37161

5 first SALVAL 993.03452

6 firstToTest SALVAL 728.79006

7 second SALVAL 815.33915

8 test SALVAL 44.76148

9 first VAL 439.75300

10 firstToTest VAL 730.28959

11 second VAL 493.36185

12 test VAL 87.93479

**SAL**

wilcox.test(subset(sal,timeType=="firstToTest"&firstTrain=="highsal")$timeSec,subset(sal,timeType=="firstToTest"&firstTrain=="lowsal")$timeSec)

 Wilcoxon rank sum test

data: subset(sal, timeType == "firstToTest" & firstTrain == "highsal")$timeSec and subset(sal, timeType == "firstToTest" & firstTrain == "lowsal")$timeSec

W = 55, p-value = 0.7394

alternative hypothesis: true location shift is not equal to 0

**VAL**

wilcox.test(subset(val,timeType=="firstToTest"&firstTrain=="highval")$timeSec,subset(val,timeType=="firstToTest"&firstTrain=="lowval")$timeSec)

 Wilcoxon rank sum test

data: subset(val, timeType == "firstToTest" & firstTrain == "highval")$timeSec and subset(val, timeType == "firstToTest" & firstTrain == "lowval")$timeSec

W = 29, p-value = 0.5728

alternative hypothesis: true location shift is not equal to 0

**SALVAL**

wilcox.test(subset(sv,timeType=="firstToTest"&firstTrain=="highval")$timeSec,subset(sv,timeType=="firstToTest"&firstTrain=="lowval")$timeSec)

 Wilcoxon rank sum test

data: subset(sv, timeType == "firstToTest" & firstTrain == "highval")$timeSec and subset(sv, timeType == "firstToTest" & firstTrain == "lowval")$timeSec

W = 31, p-value = 0.7789

alternative hypothesis: true location shift is not equal to 0