

Study 2: Reinforcement-Punishment Analysis

Debbie Yee

3/18/2018

Study 2: Within-Subjects Reinforcement and Punishment Effects of Liquids

This is an analysis of the subject performance of study 2 of reinforcement and punishment effects of liquid feedback with monetary gains and losses. In the study, subjects perform the cued task-switching paradigm, where they have to classify a letter (vowel/consonant) or digit (odd/even). During the baseline runs, they don't receive any feedback and are told to respond "as quickly and accurately as possible." During the incentive runs, they receive a drop of liquid (1 or 2 mL) to indicate successful attainment of monetary reward in a single trial. Each subject performs 6 incentive runs: 3 reinforcement (all liquids and monetary gains) and 3 punishment avoidance (all liquids and avoidance of monetary losses). Liquids are blocked. Criterion RT is calculated on subject performance during the baseline run (30%), and is the same for both reinforcement and punishment conditions.

Loading relevant packages

```
library(ggplot2)
library(gridExtra)
library(dplyr)
library(tidyr)
library(lme4)
library(lmerTest)
library(sjPlot)
source("/Users/debbieyee/Dropbox/CCPLabProjects/Liquid_Feedback/OAYA_Combined/Analysis/Yee/summarySEwith")
```