

Study 1: Reinforcement-Punishment Analysis

Debbie Yee

3/18/2018

Study 1: Punishment Effects of Monetary and Liquid Incentives

This is an analysis of the subject performance of study 1 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 3 incentive runs in which they must respond accurately and faster than a criterion RT to earn monetary reward. Liquid feedback (blocked) signaled failure to attain monetary reward (opportunity cost). Criterion RT is calculated on subject performance during the baseline run (25%) (CHECK THIS), and is the same for both reinforcement and punishment conditions.

R Markdown

This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents. For more details on using R Markdown see <http://rmarkdown.rstudio.com>.

When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:

```
summary(cars)
```

```
##      speed      dist
##  Min.   : 4.0    Min.   :  2.00
##  1st Qu.:12.0    1st Qu.: 26.00
##  Median :15.0    Median : 36.00
##  Mean   :15.4    Mean   : 42.98
##  3rd Qu.:19.0    3rd Qu.: 56.00
##  Max.   :25.0    Max.   :120.00
```

Including Plots

You can also embed plots, for example:



Note that the `echo = FALSE` parameter was added to the code chunk to prevent printing of the R code that generated the plot.