

# Binary Choice Analysis

Data shown for:

date

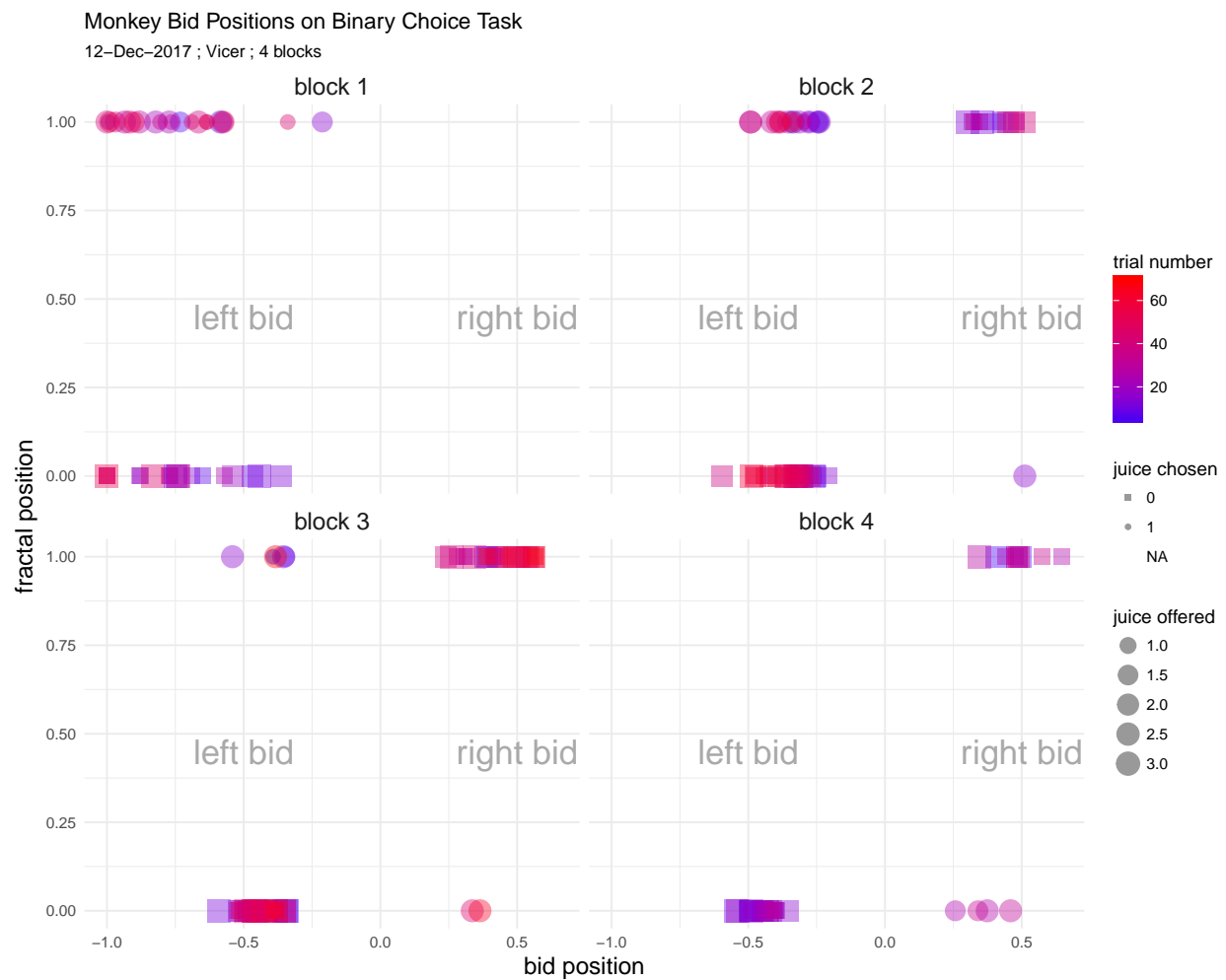
## [1] "12-Dec-2017"

monkey

## [1] "Vicer"

*#plot p1*

p1

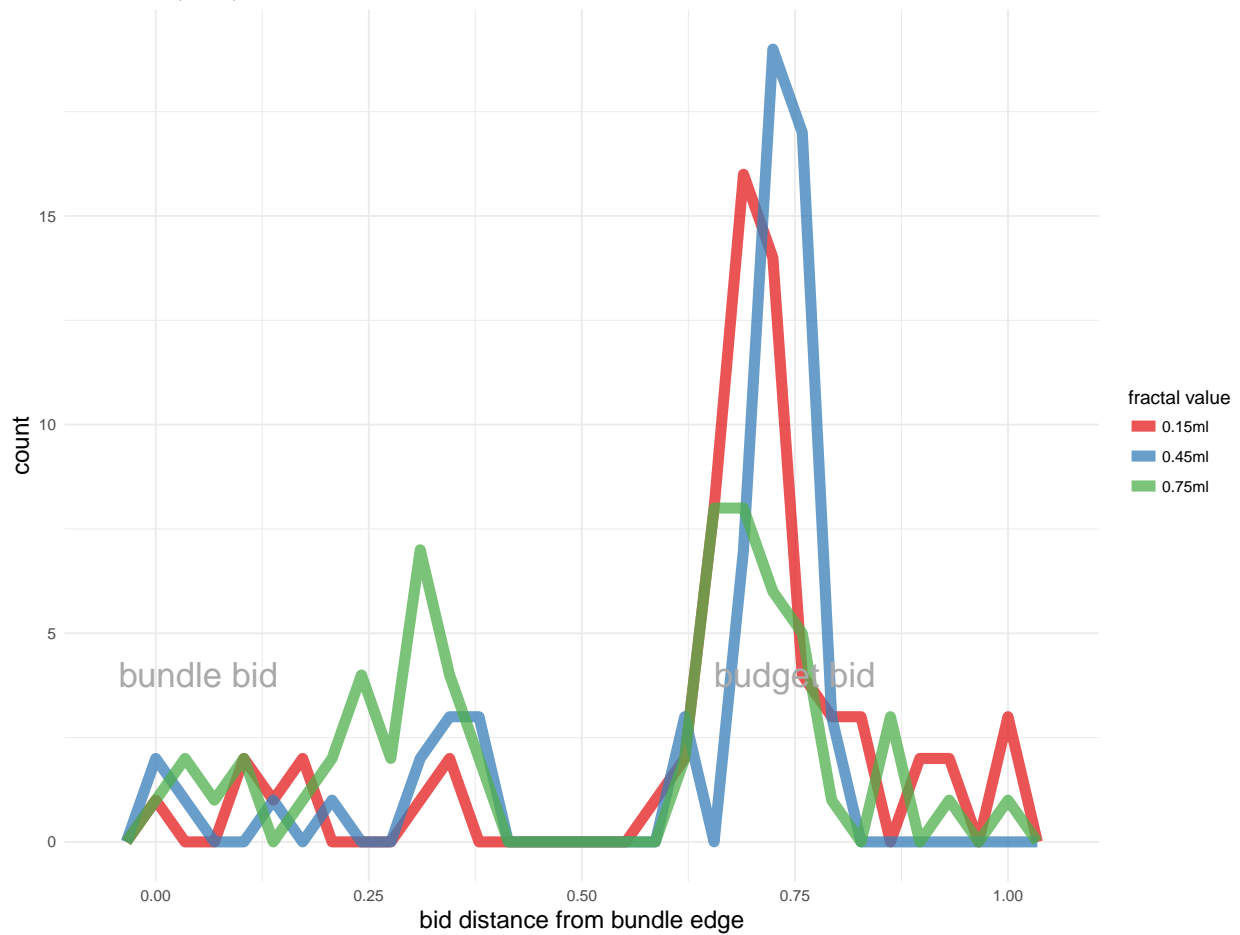


Graph of choices for each block. Circles indicate bid selecting the bundle, squares are bid selecting the budget. A fractal bid position of 1 means that the bundle is on the left hand side of the screen. Bids range from -1 (all the way to the left) to 1 (all the way to the right)

#plot p2  
p2

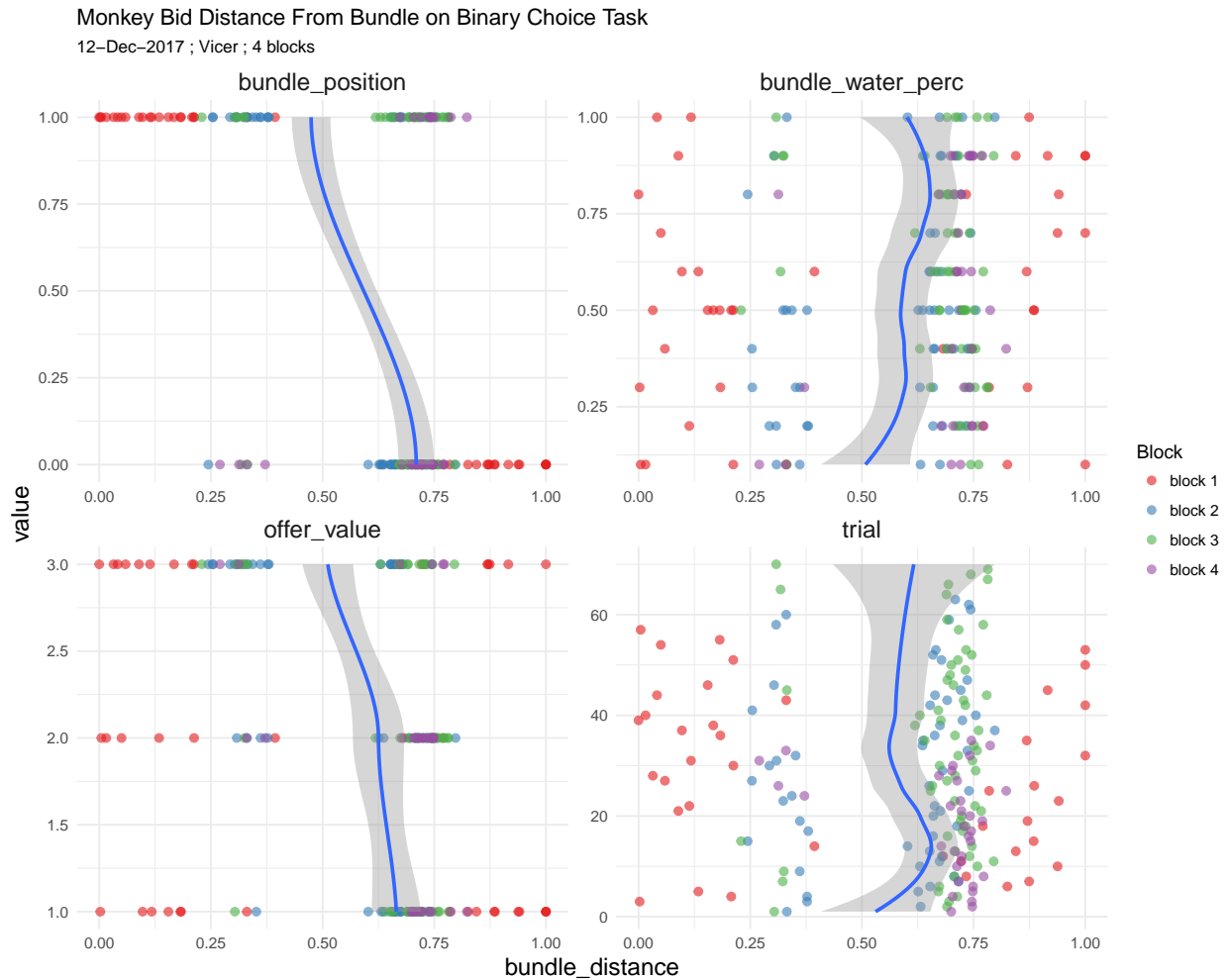
### Monkey Bid Distance From Bundle on Binary Choice Task

12-Dec-2017 ; Vicer ; 4 blocks



Graph showing all choices and how far away they are from the edge of the screen on the bundle side. 0 indicates full movement to the bundle side of the screen and 1 represent full movement away. Count is over all blocks for all values of the fractal (in ml of juice).

```
#plot p3
p3
```



Graphs of various factors against the distance from the bundle side of the screen the monkey bids.

A bundle position of 1 indicates that the bundle is on the left hand side of the screen. A bundle water percentage of 1 indicates that the bundle contains no water [CHECK THIS- PRETTY SURE ITS CORRECT], whereas zero means it contains the full 1.2ml. Offer values of 1, 2, and 3 represent 0.15ml, 0.45ml, and 0.75mls of apple and mango juice (150ml in 950ml of water).

Fit lines use LOESS method.

```

#generate a model of likelihood to bid for the fractal dependent on it's position,
#value and associated water
model <- glm(data = task_data,
             fractal_bid ~ bundle_position + bundle_water_perc + offer_value + trial,
             family = "binomial")

#summarise the parameters
summary(model)

```

```

##
## Call:
## glm(formula = fractal_bid ~ bundle_position + bundle_water_perc +
##      offer_value + trial, family = "binomial", data = task_data)
##
## Deviance Residuals:
##      Min       1Q   Median       3Q      Max
## -1.7910  -0.5672  -0.2462   0.5399   2.3272
##
## Coefficients:
##              Estimate Std. Error z value Pr(>|z|)
## (Intercept)   -4.554428   0.945458  -4.817 1.46e-06 ***
## bundle_position    2.966572   0.501037   5.921 3.20e-09 ***
## bundle_water_perc -1.688564   0.760160  -2.221  0.0263 *
## offer_value      1.183203   0.286665   4.127 3.67e-05 ***
## trial           0.002322   0.011304   0.205  0.8373
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## (Dispersion parameter for binomial family taken to be 1)
##
##      Null deviance: 220.22  on 191  degrees of freedom
## Residual deviance: 147.57  on 187  degrees of freedom
##      (33 observations deleted due to missingness)
## AIC: 157.57
##
## Number of Fisher Scoring iterations: 5

```