exp1_analysis

```
knitr::opts_chunk$set(echo = TRUE, message = FALSE, warning = FALSE,
                      error = FALSE, cache = TRUE, tidy = FALSE)

library(tidyverse)
```

```
## -- Attaching packages --------------------------------------------------------- tidyverse 1.3.0 --
```

```
## v ggplot2 3.3.2     v purrr   0.3.4
## v tibble  3.0.1     v dplyr   1.0.0
## v tidyr   1.1.0     v stringr 1.4.0
## v readr   1.3.1     v forcats 0.5.0
```

```
## -- Conflicts ------------------------------------------------------------ tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
```

```
library(jsonlite)
```

```
##
## Attaching package: 'jsonlite'
```

```
## The following object is masked from 'package:purrr':
##
##     flatten
```

```
library(here)
```

```
## here() starts at /Users/clairebergey/Documents/contrast
```

```
library(tidyboot)
library(anonymizer)
library(lme4)
```

```
## Loading required package: Matrix
```

```
##
## Attaching package: 'Matrix'
```

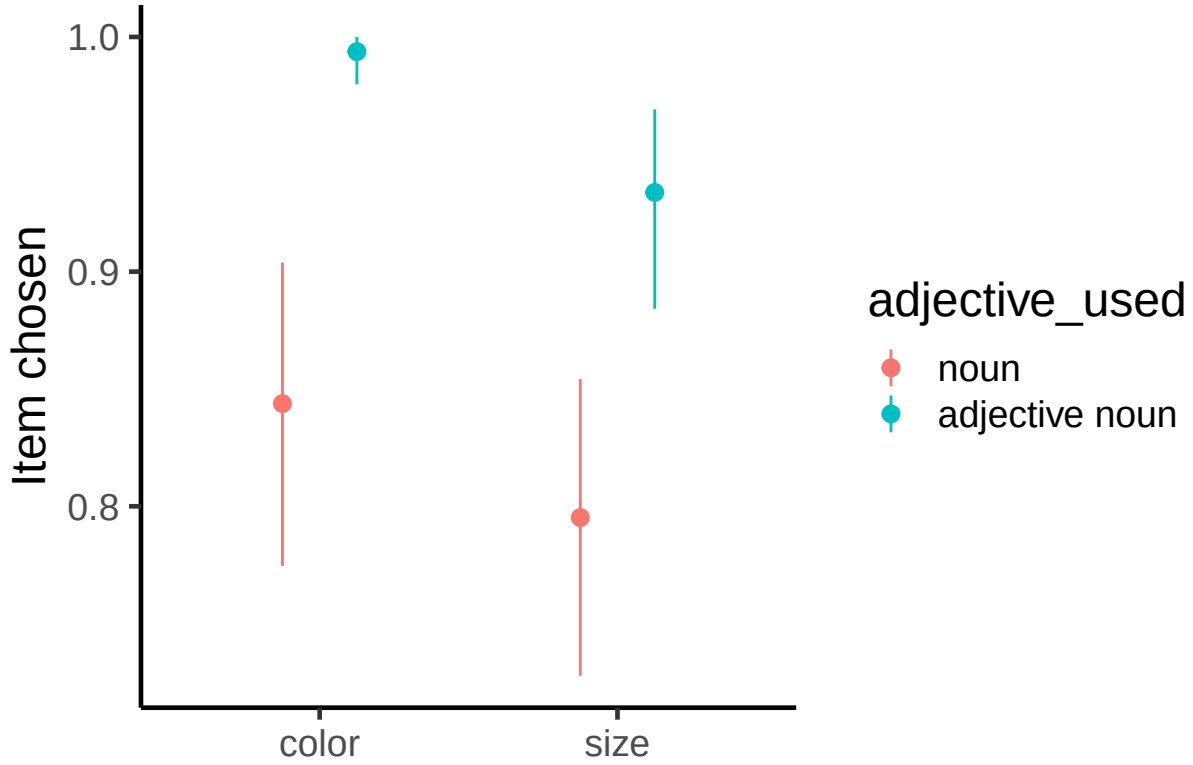
```
## The following objects are masked from 'package:tidyr':
##
##     expand, pack, unpack
```

```
library(broom)

theme_set(theme_classic(base_size = 18))
```

```
data <- read_csv(here("data/exp1_turk_data.csv"))

keep_subjs <- data %>%
  filter(searchtype == "colorcheck", chosetarget == TRUE, attncheckscore >= 6) %>%
  group_by(subid) %>%
  count() %>%
```

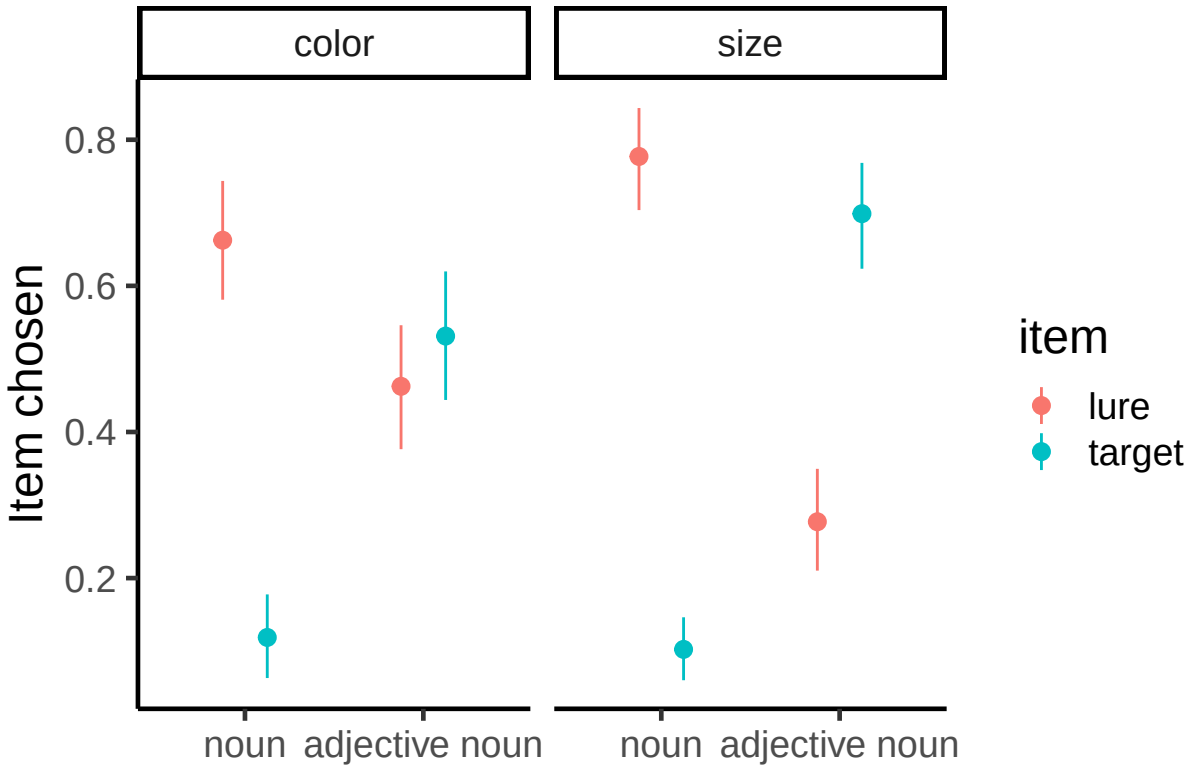
```
  filter(n == 4)

sub_data_gathered <- data %>%
  filter(subid %in% keep_subjs$subid) %>%
  gather(item, chose, chosetarget, choselure, choseunique) %>%
  mutate(item = gsub("chose", "", item),
         subid = as.factor(subid))

sub_data <- data %>%
  filter(subid %in% keep_subjs$subid)

mean_data <- sub_data_gathered %>%
  filter(trialtype != 0) %>%
  group_by(searchtype, adj, condition, item, subid) %>%
  summarise(chose = mean(chose), n = n()) %>%
  tidyboot_mean(chose) %>%
  ungroup() %>%
  mutate(adjective_used = factor(adj, labels = c("noun", "adjective noun")))
```

```
ggplot(mean_data %>% filter(searchtype == "uniquetarget", item == "target"),
       aes(x = condition, color = adjective_used)) +
  geom_pointrange(aes(ymin = ci_lower, ymax = ci_upper, y = empirical_stat),
                  position = position_dodge(.5)) +
  ylab("Item chosen") +
  xlab("")
```




```
ggplot(mean_data %>% filter(searchtype == "contrast", item != "unique"),
       aes(x = adjective_used, color = item)) +
  facet_wrap(~ condition) +
  geom_pointrange(aes(ymin = ci_lower, ymax = ci_upper, y = empirical_stat),
```

```
                  position = position_dodge(.5)) +
  ylab("Item chosen") +
  xlab("")
```




```
# in contrast trials w/an adjective, do people choose the target over the lure?
# prereg'd
chance_model <- sub_data %>%
  filter(searchtype == "contrast", adj == TRUE, (chosetarget == TRUE || choselure == TRUE)) %>%
  glmer(chosetarget ~ 1 + (1 | subid),
        family = "binomial", data = .) %>%
  tidy() %>%
  filter(group == "fixed")

# in only *color* contrast trials w/an adjective, do people choose the target over the lure?
# not prereg'd
color_model <- sub_data %>%
  filter(searchtype == "contrast", adj == TRUE, condition == "color",
         (chosetarget == TRUE || choselure == TRUE)) %>%
  glmer(chosetarget ~ 1 + (1 | subid),
        family = "binomial", data = .) %>%
  tidy() %>%
  filter(group == "fixed")

# in contrast trials w/an adjective,
# does the type of adjective matter in choosing target over lure?
# prereg'd
adj_type_model <- sub_data %>%
  filter(searchtype == "contrast", adj == TRUE, (chosetarget == TRUE || choselure == TRUE)) %>%
  glmer(chosetarget ~ condition + (1 | subid),
```

```
        family = "binomial", data = .) %>%
  tidy()

# in contrast trials, do adj type and presence of an adj interact
# in determining target over lure choice?
# not prereg'd
adj_by_adjtype_model <- sub_data %>%
  filter(searchtype == "contrast", (chosetarget == TRUE || choselure == TRUE)) %>%
  glmer(chosetarget ~ condition * adj + (1 | subid),
        family = "binomial", data = .) %>%
  tidy()


# throw everything in the model
# prereg'd
full_model <- sub_data %>%
  glmer(chosetarget ~ adj * condition * searchtype + (searchtype * adj | subid),
        family = "binomial", data = .) %>%
  tidy()
```