# Replication

## Applied Stats II

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## Article: Honesty Requires Time (and Lack of Justifications)

- *The research article "Honesty Requires Time (and Lack of Justifications)" by Shaul Shalvi, Ori Eldar, and Yoella Bereby-Meyer explores the connection between time pressure, justifications, and ethical behavior. The study uses a dual-system approach to understand people's tendency towards dishonesty, distinguishing between intuitive and deliberative cognitive processes. Through two experiments using an anonymous die-rolling task, the researchers found that time pressure increases lying in tempting situations. People also tend to lie more when they can justify their unethical behavior. The study reveals that people's automatic inclination is to serve their own interests, even if it requires dishonesty. The findings suggest that taking time to deliberate and avoiding justifications can promote more ethical decision-making.*

- *People often lie to serve themselves. But given time, they can stop this. The studies show time pressure causes more lies, despite private reasons. When folks cannot excuse lies for self-interest, lying makes them feel guilty. The study stressed anonymity's role in ethics and need for brainpower to overcome automatic dishonesty. Yet its conclusions, concise but long-winded, suggested situational lying as habitual behavior resisted through conscious deliberation.*

*In order to replicate figure 1, I need to run several steps using R. This is the R Code used:*

```
1  # Load necessary libraries
2  library(ggplot2)
3  library(dplyr)
4
5  update.packages(ask = FALSE, checkBuilt = TRUE)
6
7  install.packages("cli")
8
9  # Set the path to the dataset
```

```r
dataset_path <- "/Users/iseli/Documents/GitHub/StatsII_Spring2024/replication/
    my_answers/Replication_answer/DataOriginalStudies.csv"

# Read the dataset
data <- read.csv(dataset_path)

# Read the dataset - Again due to error-
data <- read.csv("/Users/iseli/Documents/GitHub/StatsII_Spring2024/replication
    /my_answers/Replication_answer/DataOriginalStudies.csv", header=TRUE)

#Read data - Again due to another error
data <- read.csv("/Users/iseli/Documents/GitHub/StatsII_Spring2024/replication
    /my_answers/Replication_answer/DataOriginalStudies.csv", header=TRUE, sep=
    ";")
head(data)

#Add column names
colnames(data) <- c("Gender", "Time_pressure", "Experiment", "Dice_report", "
    Report_time", "Within_time", "Cheerful", "active", "active2", "happy", "
    loving", "worried", "tired", "tired2", "angry", "calm", "gloomy", "bored",
     "sad", "tense", "angry2", "satisfied", "pos_mood", "neg_mood", "filter_$"
    )

# Filter data for Experiment 1 -ERROR while running this code-
data_exp1 <- filter(data, Experiment == 1)

# Load necessary libraries - Again due to error
library(dplyr)

# Set the path to the dataset
dataset_path <- "/Users/iseli/Documents/GitHub/StatsII_Spring2024/replication/
    my_answers/Replication_answer/DataOriginalStudies.csv"

# Filter data for Experiment 1 using column index
data_exp1 <- filter(data, data[,3] == 1)

# Load necessary libraries -Just double checking due to errors-
library(ggplot2)
library(dplyr)

# Assuming data_summary is already created and contains 'Time_pressure' and '
    RollCategory'

# Convert 'Time_pressure' to a factor with labels 'Low' and 'High' within data
    _summary
data_summary$Time_pressure <- factor(data_summary$Time_pressure, levels = c(0,
    1), labels = c("Low", "High"))

#MORE ERRORS
# Assuming data_exp1 is already filtered for Experiment 1
```

```r
49  # Load necessary libraries
50  library(ggplot2)
51  library(dplyr)
52
53  # Calculate proportions
54  # Assuming 'Time_pressure' is in the 2nd column and 'Dice_report' is in the 4
       th column
55  data_summary <- data_exp1 %>%
56    mutate(RollCategory = ifelse(Dice_report <= 3, "1 to 3", "4 to 6")) %>%
57    group_by(Time_pressure = data_exp1[,2], RollCategory) %>%
58    summarise(Count = n(), .groups = 'drop') %>%
59    mutate(Proportion = Count / sum(Count))
60
61  # Convert 'Time_pressure' to a factor with labels 'Low' and 'High'
62  data_summary$Time_pressure <- factor(data_summary$Time_pressure, levels = c(0,
       1), labels = c("Low", "High"))
63
64  # Now plot using the corrected data_summary
65  ggplot(data_summary, aes(x = Time_pressure, y = Proportion, fill =
     RollCategory)) +
66    geom_bar(stat = "identity", position = position_dodge()) +
67    geom_hline(yintercept = 0.5, linetype = "dashed", color = "red") +
68    labs(title = "Proportion of Reported Die Rolls by Time Pressure",
69          x = "Time Pressure",
70          y = "Proportion",
71          fill = "Roll Category") +
72    theme_minimal() +
73    scale_fill_manual(values = c("1 to 3" = "blue", "4 to 6" = "green")) +
74    geom_errorbar(aes(ymin = Proportion - 0.05, ymax = Proportion + 0.05), width
       = .2,
75                  position = position_dodge(.9))
```

*Adding my own twist. -ALTERNATIVE OUTCOME- Based on Gender*

```r
1   # Load necessary libraries
2   library(ggplot2)
3   library(dplyr)
4
5   # Set the path to the dataset
6   dataset_path <- "/Users/iseli/Documents/GitHub/StatsII_Spring2024/replication/
       my_answers/Replication_answer/DataOriginalStudies.csv"
7
8   # Read the dataset
9   data <- read.csv(dataset_path, header=TRUE, sep=";")
10
11  # Filter data for Experiment 1 using column index
12  data_exp1 <- filter(data, data[,3] == 1)
13
14  # Calculate proportions including Gender --MAJOR ERROR AGAIN--
15  data_summary <- data_exp1 %>%
16    mutate(RollCategory = ifelse(data[,4] <= 3, "1 to 3", "4 to 6"),
```
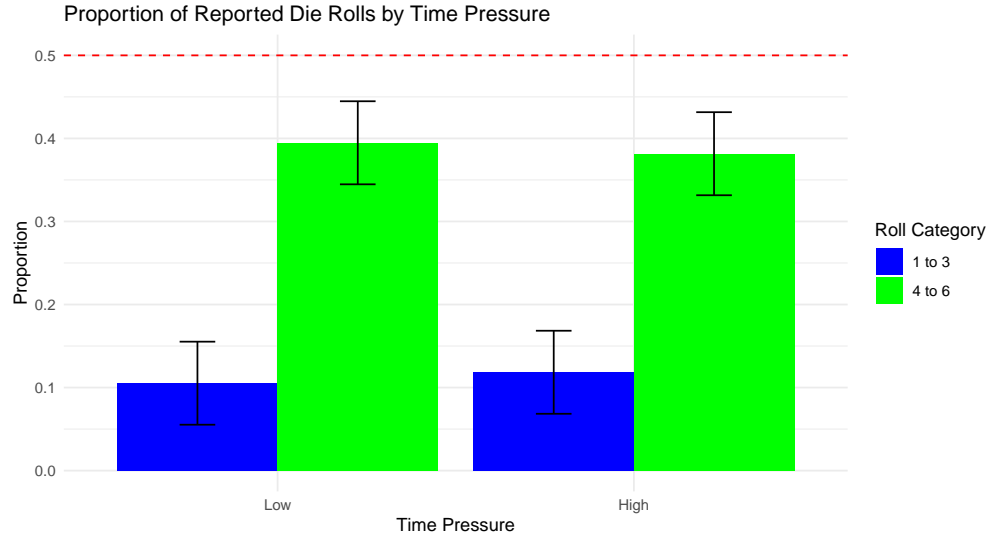
Figure 1: Proportion of Reported Die Rolls by Time Pressure.

```
17        Gender = factor(data[,1], levels = c(1, 2), labels = c("Female", "
    Male"))) %>%
18    group_by(Gender, Time_pressure = data[,2], RollCategory) %>%
19    summarise(Count = n(), .groups = 'drop') %>%
20    mutate(Proportion = Count / sum(Count))
21
22 #Redoing due to non stopping errors
23 # Assuming data_exp1 is already filtered for Experiment 1
24
25 # Load necessary libraries
26 library(ggplot2)
27 library(dplyr)
28
29 # Calculate proportions including Gender
30 data_summary <- data_exp1 %>%
31    mutate(RollCategory = ifelse(Dice_report <= 3, "1 to 3", "4 to 6"),
32        Gender = factor(Gender, levels = c(1, 2), labels = c("Female", "Male"
    ))) %>%
33    group_by(Gender, Time_pressure, RollCategory) %>%
34    summarise(Count = n(), .groups = 'drop') %>%
35    mutate(Proportion = Count / sum(Count))
36
37 # Convert 'Time_pressure' to a factor with labels 'Low' and 'High'
38 data_summary$Time_pressure <- factor(data_summary$Time_pressure, levels = c(0,
    1), labels = c("Low", "High"))
39
40 # Now plot using the corrected data_summary with Gender included
41 ggplot(data_summary, aes(x = Time_pressure, y = Proportion, fill =
    RollCategory)) +
42    geom_bar(stat = "identity", position = position_dodge()) +
```

```
43    facet_wrap(~Gender) + # Add a facet for Gender
44    geom_hline(yintercept = 0.5, linetype = "dashed", color = "red") +
45    labs(title = "Proportion of Reported Die Rolls by Time Pressure and Gender",
46         x = "Time Pressure",
47         y = "Proportion",
48         fill = "Roll Category") +
49    theme_minimal() +
50    scale_fill_manual(values = c("1 to 3" = "blue", "4 to 6" = "green")) +
51    geom_errorbar(aes(ymin = Proportion - 0.05, ymax = Proportion + 0.05), width
          = .2,
52               position = position_dodge(.9))
```
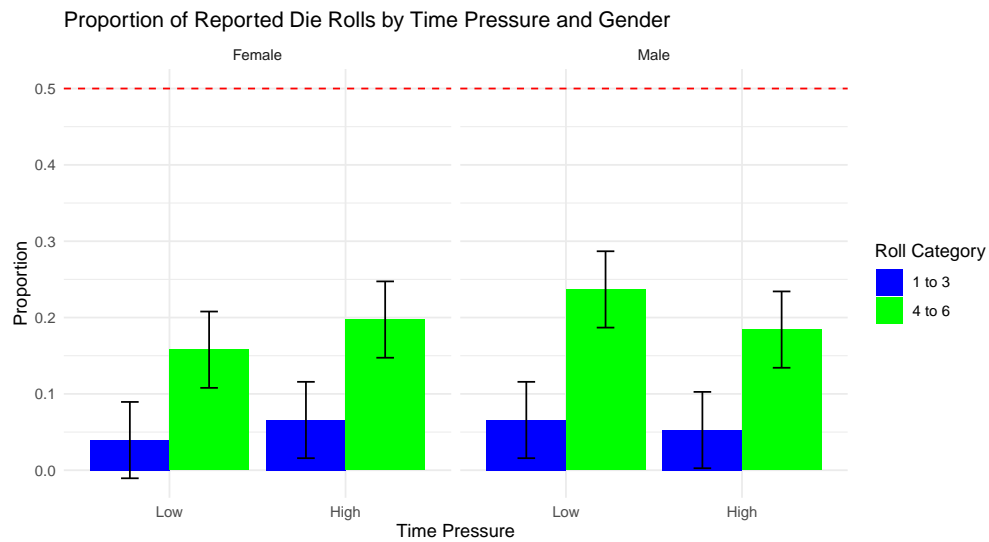


Figure 2: Proportion of reported Die Rolls by Time pressure and Gender.