Perceived Motives

Load the packages and the dataset

```
library(readxl)
library(forcats)
library(dplyr)
```

```
Attaching package: 'dplyr'

The following objects are masked from 'package:stats':

    filter, lag

The following objects are masked from 'package:base':

    intersect, setdiff, setequal, union
```

```
library(car)
```

```
Loading required package: carData


Attaching package: 'car'

The following object is masked from 'package:dplyr':

    recode
```

```r
library(emmeans)
```

```
Welcome to emmeans.
Caution: You lose important information if you filter this package's results.
See '? untidy'
```

```r
file_path <- "/Users/daryani/Desktop/data.xlsx"
data <- read_excel(file_path)
```

Label group and condition clearly

```r
data <- data %>%
  mutate(
    group_label = case_when(
      group == 1 ~ "Prolife",
      group == 2 ~ "Prochoice"
    ),
    condition_label = case_when(
      condition == 1 ~ "Outgroup",
      condition == 2 ~ "Meta",
      condition == 3 ~ "Ingroup"
    )
  )
```

Create composite motive scores: Lower rank = more important motive

```r
# Create composite framing scores: Lower rank = more important motive
data <- data %>%
  mutate(
    ingroup_framing = if_else(
      group_label == "Prochoice",
      rowMeans(select(., motive_1, motive_4), na.rm = TRUE),  # prochoice-framed motives
      rowMeans(select(., motive_2, motive_3), na.rm = TRUE)   # prolife-framed motives
    ),
    outgroup_framing = if_else(
      group_label == "Prochoice",
      rowMeans(select(., motive_2, motive_3), na.rm = TRUE),  # prolife-framed motives
```

```
      rowMeans(select(., motive_1, motive_4), na.rm = TRUE)   # prochoice-framed motives
    )
  )
```

Create a single misattribution index

.

```
## Because lower ranks indicate greater importance, more negative values reflect stronger re
data <- data %>%
mutate(
framing_bias = ingroup_framing - outgroup_framing
)
```

Inspect descriptives BEFORE testing

```
data %>%
  group_by(group_label, condition_label) %>%
  summarise(
    n = n(),
    ingroup_mean = mean(ingroup_framing, na.rm = TRUE),
    outgroup_mean = mean(outgroup_framing, na.rm = TRUE),
    bias_mean = mean(framing_bias, na.rm = TRUE),
    bias_sd = sd(framing_bias, na.rm = TRUE),
    .groups = "drop"
  )
```

```
# A tibble: 6 x 7
  group_label condition_label     n ingroup_mean outgroup_mean bias_mean bias_sd
  <chr>       <chr>           <int>        <dbl>          <dbl>     <dbl>   <dbl>
1 Prochoice   Ingroup            96         2.75           2.25    0.5      1.46
2 Prochoice   Meta               97         2.20           2.80   -0.608    1.41
3 Prochoice   Outgroup           96         2.97           2.03    0.938    1.48
4 Prolife     Ingroup            89         1.53           3.47   -1.94     0.327
5 Prolife     Meta               85         2.55           2.45    0.0941   1.80
6 Prolife     Outgroup           89         2.58           2.42    0.157    1.29
```

Primary inferential test

```
model <- lm(
  framing_bias ~ group_label * condition_label + ideology,
  data = data
)

Anova(model, type = 3)
```

```
Anova Table (Type III tests)

Response: framing_bias
                            Sum Sq  Df  F value    Pr(>F)
(Intercept)                   8.36   1   4.4328   0.03571 *
group_label                 219.59   1 116.4995 < 2.2e-16 ***
condition_label             122.04   2  32.3726 5.189e-14 ***
ideology                      1.92   1   1.0204   0.31288
group_label:condition_label 226.01   2  59.9528 < 2.2e-16 ***
Residuals                  1027.27 545
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

Planned contrasts

```
emm <- emmeans(model, ~ condition_label | group_label)

contrast(emm, method = list(
  "Outgroup vs Ingroup" = c(-1, 0, 1),
  "Meta vs Outgroup"    = c(0, -1, 1)
))
```

```
group_label = Prochoice:
 contrast            estimate    SE  df t.ratio p.value
 Outgroup vs Ingroup   0.4393 0.198 545   2.217  0.0271
 Meta vs Outgroup      1.5428 0.198 545   7.805  <.0001

group_label = Prolife:
 contrast            estimate    SE  df t.ratio p.value
 Outgroup vs Ingroup   2.1052 0.206 545  10.218  <.0001
 Meta vs Outgroup      0.0676 0.208 545   0.325  0.7456
```