

# Prediction

## Load the data

```
library(readxl)
library(broom)
library(effectsize)

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

## Define item sets

```
# Moral foundations
binding_items <- c("loyalty_1", "loyalty_2",
                     "authority_1", "authority_2",
                     "purity_1", "purity_2")

individualizing_items <- c("care_1", "care_2",
                            "equality_1", "equality_2",
                            "proportionality_1", "proportionality_2")

# Identity items
identity_items <- paste0("identity_", 1:6)
```

## LIBERALS: Does fusion predict binding mismatch?

```
lib_meta <- subset(data, Group == 1 & Condition == 2) # Liberal metaperception
con_out <- subset(data, Group == 2 & Condition == 1) # Conservative outgroup reality
```

```

# Binding
lib_meta$binding <- rowMeans(lib_meta[, binding_items], na.rm = TRUE)
con_out$binding <- rowMeans(con_out[, binding_items], na.rm = TRUE)

# Identity
lib_meta$identity <- rowMeans(lib_meta[, identity_items], na.rm = TRUE)

binding_mean_con_out <- mean(con_out$binding, na.rm = TRUE)

# Positive = liberals underestimate conservatives' binding positivity
lib_meta$binding_mismatch <- binding_mean_con_out - lib_meta$binding

model_mismatch_lib <- lm(
  binding_mismatch ~ fusion + identity + ideology,
  data = lib_meta
)

summary(model_mismatch_lib)

```

Call:

```
lm(formula = binding_mismatch ~ fusion + identity + ideology,
   data = lib_meta)
```

Residuals:

Min	1Q	Median	3Q	Max
-1.7583	-0.3484	0.1551	0.4173	1.3395

Coefficients:

	Estimate	Std. Error	t value	Pr(> t )							
(Intercept)	3.15923	0.52041	6.071	2.89e-08 ***							
fusion	-0.09457	0.08960	-1.055	0.2940							
identity	-0.30429	0.11990	-2.538	0.0129 *							
ideology	-0.39984	0.07020	-5.695	1.50e-07 ***							
---											
Signif. codes:	0	'***'	0.001	'**'	0.01	'*'	0.05	'. '	0.1	' '	1

Residual standard error: 0.6453 on 91 degrees of freedom

Multiple R-squared: 0.2699, Adjusted R-squared: 0.2458

F-statistic: 11.21 on 3 and 91 DF, p-value: 2.498e-06

```
nobs(model_mismatch_lib)
```

```
[1] 95
```

```
eta_squared(model_mismatch_lib)
```

```
# Effect Size for ANOVA (Type I)
```

Parameter	Eta2 (partial)	95% CI
fusion	8.42e-04	[0.00, 1.00]
identity	0.01	[0.00, 1.00]
ideology	0.26	[0.14, 1.00]

- One-sided CIs: upper bound fixed at [1.00].

```
confint(model_mismatch_lib)
```

	2.5 %	97.5 %
(Intercept)	2.1254923	4.19297129
fusion	-0.2725574	0.08342092
identity	-0.5424689	-0.06611606
ideology	-0.5392935	-0.26038740

## CONSERVATIVES: Does fusion predict individualizing mismatch?

```
con_meta <- subset(data, Group == 2 & Condition == 2) # Conservative metaperception
lib_out <- subset(data, Group == 1 & Condition == 1) # Liberal outgroup reality

# Individualizing
con_meta$individualizing <- rowMeans(con_meta[, individualizing_items], na.rm = TRUE)
lib_out$individualizing <- rowMeans(lib_out[, individualizing_items], na.rm = TRUE)

# Identity
con_meta$identity <- rowMeans(con_meta[, identity_items], na.rm = TRUE)

individualizing_mean_lib_out <- mean(lib_out$individualizing, na.rm = TRUE)
```

```

# Positive = conservatives overestimate liberals' individualizing positivity
con_meta$individualizing_mismatch <-
  con_meta$individualizing - individualizing_mean_lib_out

model_mismatch_con <- lm(
  individualizing_mismatch ~ fusion + identity + ideology,
  data = con_meta
)

summary(model_mismatch_con)

```

Call:

```
lm(formula = individualizing_mismatch ~ fusion + identity + ideology,
   data = con_meta)
```

Residuals:

Min	1Q	Median	3Q	Max
-1.51421	-0.32245	-0.01934	0.38111	1.30013

Coefficients:

	Estimate	Std. Error	t value	Pr(> t )							
(Intercept)	1.02501	0.28399	3.609	0.000527 ***							
fusion	-0.10911	0.05962	-1.830	0.070861 .							
identity	0.05248	0.08974	0.585	0.560252							
ideology	-0.03856	0.04762	-0.810	0.420397							
---											
Signif. codes:	0	'***'	0.001	'**'	0.01	'*'	0.05	'. '	0.1	' '	1

Residual standard error: 0.5674 on 82 degrees of freedom

Multiple R-squared: 0.05872, Adjusted R-squared: 0.02429

F-statistic: 1.705 on 3 and 82 DF, p-value: 0.1724

```
nobs(model_mismatch_con)
```

[1] 86

```
eta_squared(model_mismatch_con)
```

```
# Effect Size for ANOVA (Type I)
```

Parameter	Eta2 (partial)	95% CI
fusion	0.05	[0.00, 1.00]
identity	5.38e-04	[0.00, 1.00]
ideology	7.93e-03	[0.00, 1.00]

- One-sided CIs: upper bound fixed at [1.00].

```
confint(model_mismatch_con)
```

	2.5 %	97.5 %
(Intercept)	0.4600630	1.589949459
fusion	-0.2277047	0.009489002
identity	-0.1260366	0.231006127
ideology	-0.1332920	0.056167601

## Multicollinearity check

```
cor(lib_meta[, c("fusion", "identity")], use = "pairwise.complete.obs")
```

	fusion	identity
fusion	1.0000000	0.6608529
identity	0.6608529	1.0000000

```
cor(con_meta[, c("fusion", "identity")], use = "pairwise.complete.obs")
```

	fusion	identity
fusion	1.0000000	0.5099207
identity	0.5099207	1.0000000