# Replication and Improvement

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## Replication of Table 4

```
apsrtable(pooled.model.guess.control,pooled.model.guess,
model.names=c('No Demand Information','All Conditions'),
caption=c('Pooled Estimates of Treatment Effect Variation by Correct Guess of
          Prior Exp. Intent'),
omitcoef=expression(grep(pattern="study",coefnames)),coef.names=c('(Intercept)',
          'Treatment','Correct Guess','Treatment*Correct Guess'))
```

```
## \begin{table}[!ht]
## \caption{Pooled Estimates of Treatment Effect Variation by Correct Guess of
##           Prior Exp. Intent}
## \label{}
## \begin{tabular}{ l D{.}{.}{2}D{.}{.}{2} }
## \hline
##   & \multicolumn{ 1 }{ c }{ No Demand Information } & \multicolumn{ 1 }{ c }{ All Conditions } \\ \hl
##  %                        & No Demand Information & All Conditions       \\
## (Intercept)             & 0.53 ^*               & 0.55 ^*              \\
##                         & (0.03)                & (0.03)               \\
## Treatment               & 0.18 ^*               & 0.19 ^*              \\
##                         & (0.06)                & (0.06)               \\
## Correct Guess           & -0.04                 & -0.01                \\
##                         & (0.03)                & (0.03)               \\
## Treatment*Correct Guess & 0.06                  & 0.01                 \\
##                         & (0.04)                & (0.04)                \\
##  $N$                     & 1232                  & 3750                 \\
## $R^2$                   & 0.10                  & 0.10                 \\
## adj. $R^2$              & 0.09                  & 0.09                 \\
## Resid. sd               & 0.38                  & 0.37                  \\ \hline
##  \multicolumn{3}{l}{\footnotesize{Robust standard errors in parentheses}}\\
## \multicolumn{3}{l}{\footnotesize{$^*$ indicates significance at $p< 0.05 $}}
## \end{tabular}
##  \end{table}
```

## Improvement

```
library(estimatr)
library(robustbase)
```

```
##
## Attaching package: 'robustbase'

## The following object is masked from 'package:survival':
##
##     heart
```

```
#All Demand Type Conditions Versus Basline
pooled.model.1 <- lm(outcome ~ experimental.treatment*correct.guess + factor(study),data=combined.frame

#
pooled.model.2 <- lm_robust(outcome ~ experimental.treatment*correct.guess + factor(study),data=combine

#
pooled.model.3 <- lmrob(outcome ~ experimental.treatment*correct.guess + factor(study),data=combined.fra

#Separate Out Baseline/Information/Incentive+Information Conditions
pooled.model.guess.1 <- lm(outcome ~ experimental.treatment*correct.guess + factor(study),data=combined

#
pooled.model.guess.2 <- lm_robust(outcome ~ experimental.treatment*correct.guess + factor(study),data=c

#
pooled.model.guess.3 <- lmrob(outcome ~ experimental.treatment*correct.guess + factor(study),data=combi


########
########
###TABLE 4 HERE
########
########
apsrtable(pooled.model.guess.1,pooled.model.1,
model.names=c('No Demand Information','All Conditions'),
caption=c('Pooled Estimates of Treatment Effect Variation by Correct Guess of
          Prior Exp. Intent'),
omitcoef=expression(grep(pattern="study",coefnames)),coef.names=c('(Intercept)',
          'Treatment','Correct Guess','Treatment*Correct Guess'))
```

```
## \begin{table}[!ht]
## \caption{Pooled Estimates of Treatment Effect Variation by Correct Guess of
##           Prior Exp. Intent}
## \label{}
## \begin{tabular}{ l D{.}{.}{2}D{.}{.}{2} }
## \hline
##   & \multicolumn{ 1 }{ c }{ No Demand Information } & \multicolumn{ 1 }{ c }{ All Conditions } \\ \hl
##  %                        & No Demand Information & All Conditions       \\
## (Intercept)              & 0.53 ^*               & 0.55 ^*              \\
##                          & (0.05)                & (0.03)               \\
## Treatment                & 0.18 ^*               & 0.19 ^*              \\
```

```
##                           & (0.03)               & (0.02)               \\
## Correct Guess             & -0.04                 & -0.01                \\
##                           & (0.03)               & (0.02)               \\
## Treatment*Correct Guess & 0.06                  & 0.01                 \\
##                           & (0.04)               & (0.03)                \\
##  $N$                       & 1232                 & 3750                  \\
## $R^2$                     & 0.10                  & 0.10                 \\
## adj. $R^2$                & 0.09                  & 0.09                 \\
## Resid. sd                 & 0.38                  & 0.37                  \\ \hline
##  \multicolumn{3}{l}{\footnotesize{Standard errors in parentheses}}\\
## \multicolumn{3}{l}{\footnotesize{$^*$ indicates significance at $p< 0.05 $}}
## \end{tabular}
##  \end{table}
```

```
#model 2 (lm_robust)
pooled.model.2
```

```
##                                      Estimate Std. Error    t value
## (Intercept)                         0.546480934 0.02394538 22.8219783
## experimental.treatment1             0.190912228 0.01489195 12.8198310
## correct.guess                      -0.005486642 0.01891458 -0.2900748
## factor(study)Study1-News           -0.109821049 0.03333547 -3.2944202
## factor(study)Study2-News           -0.108051324 0.03282233 -3.2920064
## factor(study)Study2-Resume          0.069676327 0.02827157  2.4645368
## factor(study)Study3-Peace          -0.270804912 0.03105765 -8.7194272
## factor(study)Study3-Welfare        -0.113985484 0.02907583 -3.9202832
## factor(study)Study4-Framing        -0.092388604 0.02634937 -3.5062929
## factor(study)Study4-Peace          -0.186479630 0.02595946 -7.1834944
## factor(study)Study4-Welfare        -0.100759111 0.02562136 -3.9326217
## experimental.treatment1:correct.guess  0.011757900 0.02600012  0.4522248
##                                         Pr(>|t|)    CI Lower    CI Upper
## (Intercept)                        4.874183e-108  0.49953365  0.59342822
## experimental.treatment1             7.504400e-37  0.16171510  0.22010936
## correct.guess                       7.717751e-01 -0.04257054  0.03159726
## factor(study)Study1-News            9.954395e-04 -0.17517853 -0.04446356
## factor(study)Study2-News            1.003997e-03 -0.17240275 -0.04369990
## factor(study)Study2-Resume          1.376371e-02  0.01424712  0.12510554
## factor(study)Study3-Peace           4.135757e-18 -0.33169650 -0.20991332
## factor(study)Study3-Welfare         9.002993e-05 -0.17099152 -0.05697945
## factor(study)Study4-Framing         4.597374e-04 -0.14404915 -0.04072806
## factor(study)Study4-Peace           8.161929e-13 -0.23737571 -0.13558354
## factor(study)Study4-Welfare         8.554829e-05 -0.15099232 -0.05052591
## experimental.treatment1:correct.guess  6.511333e-01 -0.03921791  0.06273371
##                                      DF
## (Intercept)                        3738
## experimental.treatment1            3738
## correct.guess                      3738
## factor(study)Study1-News           3738
## factor(study)Study2-News           3738
## factor(study)Study2-Resume         3738
## factor(study)Study3-Peace          3738
## factor(study)Study3-Welfare        3738
## factor(study)Study4-Framing        3738
## factor(study)Study4-Peace          3738
```

```
## factor(study)Study4-Welfare           3738
## experimental.treatment1:correct.guess 3738
```

```
#Intercept: 0.546480934
#correct.guess: -0.005486642
#experimental.treatment1: 0.190912228
#experimental.treatment1:correct.guess: 0.011757900

pooled.model.guess.2
```

```
##                                      Estimate Std. Error    t value
## (Intercept)                         0.52657159 0.04176608 12.6076389
## experimental.treatment1             0.18229732 0.02696392  6.7607879
## correct.guess                      -0.03855760 0.03179611 -1.2126515
## factor(study)Study1-News           -0.08409739 0.05790812 -1.4522556
## factor(study)Study2-News           -0.07665980 0.05918385 -1.2952823
## factor(study)Study2-Resume          0.04139557 0.05191001  0.7974488
## factor(study)Study3-Peace          -0.20619262 0.05496656 -3.7512375
## factor(study)Study3-Welfare        -0.08086672 0.05233433 -1.5451944
## factor(study)Study4-Framing        -0.06696700 0.04613998 -1.4513878
## factor(study)Study4-Peace          -0.18501160 0.04600925 -4.0211826
## factor(study)Study4-Welfare        -0.08000242 0.04487852 -1.7826440
## experimental.treatment1:correct.guess  0.06314902 0.04408751  1.4323563
##                                         Pr(>|t|)    CI Lower     CI Upper
## (Intercept)                        2.396263e-34  0.44463030  0.608512890
## experimental.treatment1            2.122349e-11  0.12939653  0.235198110
## correct.guess                      2.254979e-01 -0.10093873  0.023823522
## factor(study)Study1-News           1.466877e-01 -0.19770793  0.029513148
## factor(study)Study2-News           1.954679e-01 -0.19277321  0.039453620
## factor(study)Study2-Resume         4.253456e-01 -0.06044721  0.143238354
## factor(study)Study3-Peace          1.842239e-04 -0.31403209 -0.098353158
## factor(study)Study3-Welfare        1.225586e-01 -0.18354199  0.021808554
## factor(study)Study4-Framing        1.469290e-01 -0.15748950  0.023555501
## factor(study)Study4-Peace          6.146027e-05 -0.27527763 -0.094745576
## factor(study)Study4-Welfare        7.489288e-02 -0.16805004  0.008045209
## experimental.treatment1:correct.guess 1.522980e-01 -0.02334672  0.149644752
##                                      DF
## (Intercept)                        1220
## experimental.treatment1            1220
## correct.guess                      1220
## factor(study)Study1-News           1220
## factor(study)Study2-News           1220
## factor(study)Study2-Resume         1220
## factor(study)Study3-Peace          1220
## factor(study)Study3-Welfare        1220
## factor(study)Study4-Framing        1220
## factor(study)Study4-Peace          1220
## factor(study)Study4-Welfare        1220
## experimental.treatment1:correct.guess 1220
```

```
#Intercept: 0.52657159
#correct.guess: -0.03855760
#experimental.treatment1: 0.18229732
```

```
#experimental.treatment1:correct.guess: 0.06314902

#model 3 (lmrob)
pooled.model.3
```

```
##
## Call:
## lmrob(formula = outcome ~ experimental.treatment * correct.guess + factor(study),     data = combine
##  \--> method = "MM"
## Coefficients:
##                             (Intercept)                experimental.treatment1
##                                0.544290                               0.221973
##                           correct.guess               factor(study)Study1-News
##                                -0.008928                              -0.117746
##               factor(study)Study2-News             factor(study)Study2-Resume
##                                -0.117605                               0.062408
##             factor(study)Study3-Peace            factor(study)Study3-Welfare
##                                -0.301613                              -0.125316
##           factor(study)Study4-Framing              factor(study)Study4-Peace
##                                -0.097445                              -0.202909
##           factor(study)Study4-Welfare  experimental.treatment1:correct.guess
##                                -0.107626                               0.017397
```

```
#Intercept: 0.544069
#correct.guess: -0.009159
#experimental.treatment1: 0.223836
#experimental.treatment1:correct.guess: 0.017769

pooled.model.guess.3
```

```
##
## Call:
## lmrob(formula = outcome ~ experimental.treatment * correct.guess + factor(study),     data = combine
##  \--> method = "MM"
## Coefficients:
##                             (Intercept)                experimental.treatment1
##                                 0.52712                                0.21328
##                           correct.guess               factor(study)Study1-News
##                                -0.04941                               -0.09508
##               factor(study)Study2-News             factor(study)Study2-Resume
##                                -0.08660                                0.03029
##             factor(study)Study3-Peace            factor(study)Study3-Welfare
##                                -0.22843                               -0.09005
##           factor(study)Study4-Framing              factor(study)Study4-Peace
##                                -0.07473                               -0.20653
##           factor(study)Study4-Welfare  experimental.treatment1:correct.guess
##                                -0.08797                                0.07799
```

```
#Intercept: 0.52715
#correct.guess: -0.04871
#experimental.treatment1: 0.21139
#experimental.treatment1:correct.guess: 0.07706
```