The Subconscious Effect of Subtle Media Bias on Perceptions of Terrorism

Replication File

3 September 2020

Loading Data

These analyses were conducted using R 3.5.2. To run the analyses, you must load the data `mediabias_analysisdata.csv`, as shown below.

```
## If you do not have packages, use install.packages()
library(foreign)
library(cobalt)
library(cregg)
library(cjoint)
library(qwraps2)

## load data
med2 <- read.csv("mediabias_analysisdata.csv", header = T)
```

The next section prepares the data and reshapes it from respondent-wide to respondent-task long format.

```
## create new variable indicating word choice
wording <- factor(x = c(1,2), labels = c("Neutral", "Negative"))


## assign word choice to corresponding element in the data
med2$word1A <- wording[1] # "Neutral"
med2$word1B <- wording[2] # "Negative"
med2$word2A <- wording[2] # "Negative"
med2$word2B <- wording[1] # "Neutral"
med2$word3A <- wording[1] # "Neutral"
med2$word3B <- wording[1] # "Neutral"

med2$word4A <- wording[1] # "Neutral"
med2$word4B <- wording[2] # "Negative"
med2$word5A <- wording[2] # "Negative"
med2$word5B <- wording[1] # "Neutral"
med2$word6A <- wording[2] # "Negative"
med2$word6B <- wording[2] # "Negative"


## reshape from respondent-wide to respondent-task-long
medialong <-  reshape(med2,
                      idvar = "ResponseId",
                      varying = list(c("loc1A", "loc1B", "loc2A", "loc2B", "loc3A", "loc3B",
```

```
                                  "loc4A", "loc4B", "loc5A", "loc5B", "loc6A", "loc6B"),
                                c("lab1A", "lab1B", "lab2A", "lab2B", "lab3A", "lab3B",
                                  "lab4A", "lab4B", "lab5A", "lab5B", "lab6A", "lab6B"),
                                c("sev1A", "sev1B", "sev2A", "sev2B", "sev3A", "sev3B",
                                  "sev4A", "sev4B", "sev5A", "sev5B", "sev6A", "sev6B"),
                                c("type1A", "type1B", "type2A", "type2B", "type3A", "type3B",
                                  "type4A", "type4B", "type5A", "type5B", "type6A", "type6B"),
                                c("word1A", "word1B", "word2A", "word2B", "word3A", "word3B",
                                  "word4A", "word4B", "word5A", "word5B", "word6A", "word6B"),
                                c("choice1", "choice1", "choice2", "choice2", "choice3", "choice3"
                                  "choice4", "choice4", "choice5", "choice5", "choice6", "choice6"
                                c("rate1_1", "rate1_2", "rate2_1", "rate2_2", "rate3_1", "rate3_2"
                                  "rate4_1", "rate4_2", "rate5_1", "rate5_2", "rate6_1", "rate6_2"
                                c("credib1", "credib1", "credib2", "credib2", "credib3", "credib3"
                                  "credib4", "credib4", "credib5", "credib5", "credib6", "credib6"
                    # repeat every outcome twice because there are two observations for each choice o
                    v.names = c("Location",
                                "Label",
                                "Severity",
                                "Type",
                                "Wording",
                                "Chosen",
                                "Rating",
                                "Credib"),
                    times = c(1, 1, 2, 2, 3, 3, 1, 1, 2, 2, 3, 3),
                    # repeat (1,2,3) because there are two groups
                    direction = "long")

## reorder columns so that the "time" var is second for better overview
names(medialong)
```

```
##  [1] "X"             "ResponseId"    "age"           "ideol"
##  [5] "party"         "party_D"       "party_R"       "party_I"
##  [9] "gender"        "educ"          "attention1"    "attention1_DO"
## [13] "relig"         "resid"         "group1"        "group2"
## [17] "FL_20_DO"      "FL_16_DO"      "time"          "Location"
## [21] "Label"         "Severity"      "Type"          "Wording"
## [25] "Chosen"        "Rating"        "Credib"
```

```
medord <- medialong[, c(1, 19, 2:18, 20:length(names(medialong)))]

## rename "time" var to "contest_no" (contest number)
names(medord)[2] <- "contest_no"

## order / cluster by responseID
medord <- medord[order(medord$ResponseId),]

## drop unused factor levels
medord <- droplevels(medord)


## recode factors and baseline levels
medord$Location <- relevel(medord$Location, "Baghdad, Iraq")
```

```r
## now we should be good to go on all other variables
## just recode them as necessary (baselines etc.)
levels(medord$Label) <- c("Attackers", "Islamists", "Terrorists")
medord$Label <- factor(medord$Label,
                       levels = c("Attackers", "Terrorists", "Islamists"))


levels(medord$Severity) <- c("High", "Middle", "Low")
medord$Severity <- factor(medord$Severity,
                       levels = c("Low", "Middle", "High"))

levels(medord$Type) <- c("Vehicle", "Bombing", "Shooting")
medord$Type <- factor(medord$Type,
                     levels = c("Shooting", "Bombing", "Vehicle"))


## delete the unnecessary rownames in the df
rownames(medord) <- NULL

## Delete rows with NAs on outcomes (eliminates unnecessary observations)
medord <- medord[is.na(medord$Chosen) == F & is.na(medord$Rating) == F & is.na(medord$Credib) == F, ]

## Also eliminate respondents with item non-response
t <- sort(table(medord$ResponseId))
medord <- medord[medord$ResponseId != "R_1LXuzDy2ElOPvIy",]
medord$ResponseId <- as.character(medord$ResponseId)

## attention check quota
sum(medord$attention1 == 1) / nrow(medord) * 100 # 96%
```

```
## [1] 96.01386
```

```r
## number of repsondents who failed attention check
sum(medord$attention1 != 1) / 6
```

```
## [1] 23
```

This section prepares the outcome variables and covariates.

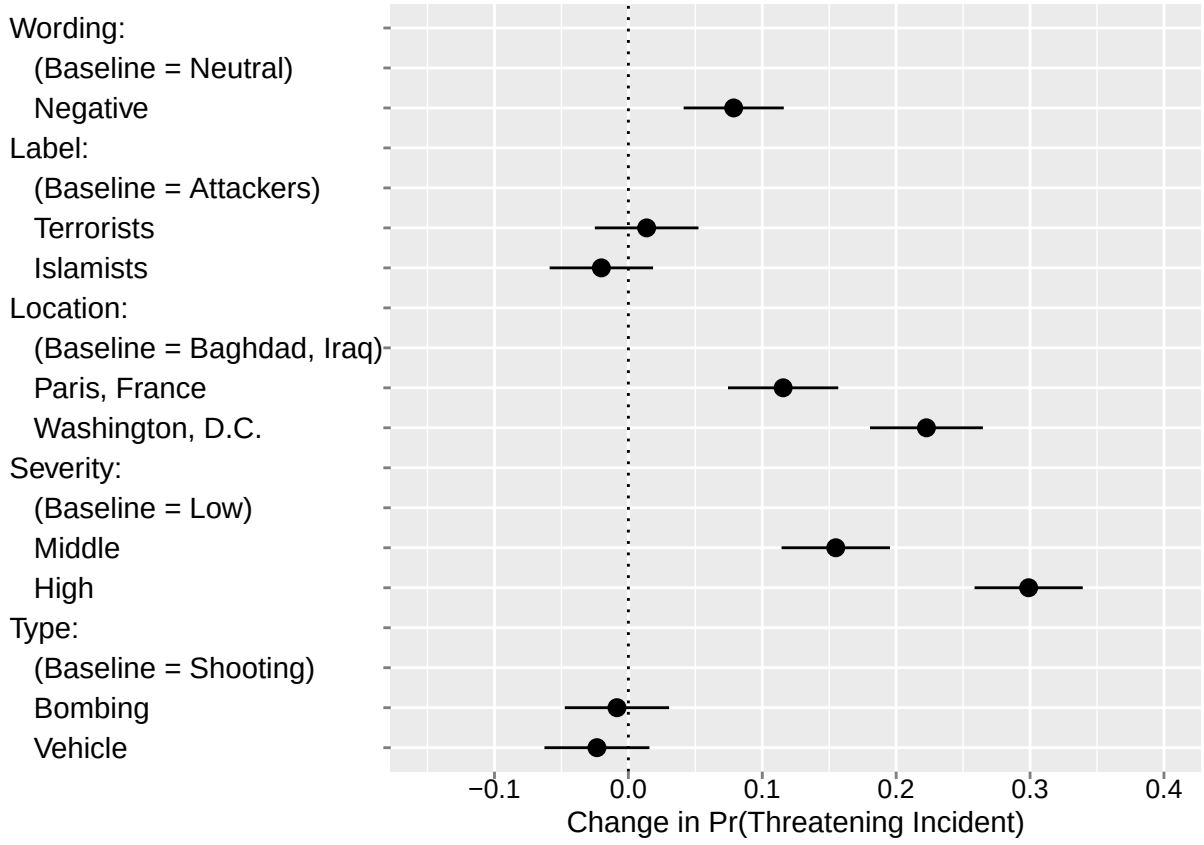
```r
## add additional variable "profile"
medord$profile <- rep(c(1:2), nrow(medord)/2)

## now recode chosen profile to binary indicator
## i.e., which profile "won" in each choice task?
medord$Chosen2 <- ifelse(medord$Chosen==1 & medord$profile == 1, 1,
                         ifelse(medord$Chosen==2 & medord$profile == 2, 1,
                                0))

## recode Likert-scale rating variable to use as DV
## re-scale rating to vary from 0 to 1 (i.e., standardize):

medord$Rating <- as.numeric(as.character(medord$Rating))

scale.01 <- function(x){
  (x - min(x, na.rm =T)) /
    (max(x, na.rm =T) - min(x, na.rm =T))
```

```
}

## call function on Rating var:
medord$Rating2 <- scale.01(medord$Rating)

## now also recode objective / credible profile to binary indicator
medord$Credib2 <- ifelse(medord$Credib==1 & medord$profile == 1, 1,
                         ifelse(medord$Credib==2 & medord$profile == 2, 1,
                                0))

## PREPARE COVARIATES

## one respondent reported that he mistakenly put his age in as 4 rather than 44
medord$age[medord$age==4] <- 44

medord$party <- as.factor(medord$party)
levels(medord$party) <- c("Rep", "Dem", "Ind", "Other")

medord$gender <- as.factor(medord$gender)
levels(medord$gender) <- c("Male", "Female")


medord$relig <- as.factor(medord$relig)
levels(medord$relig) <- c("Catholic", "Protestant", "Jewish", "Muslim", "Other",
                          "Atheist", "Agnostic")

medord$resid <- as.factor(medord$resid)
levels(medord$resid) <- c("Rural", "Small town", "Not_Multicult", "Multicult")

## now the data is prepared for analysis
```

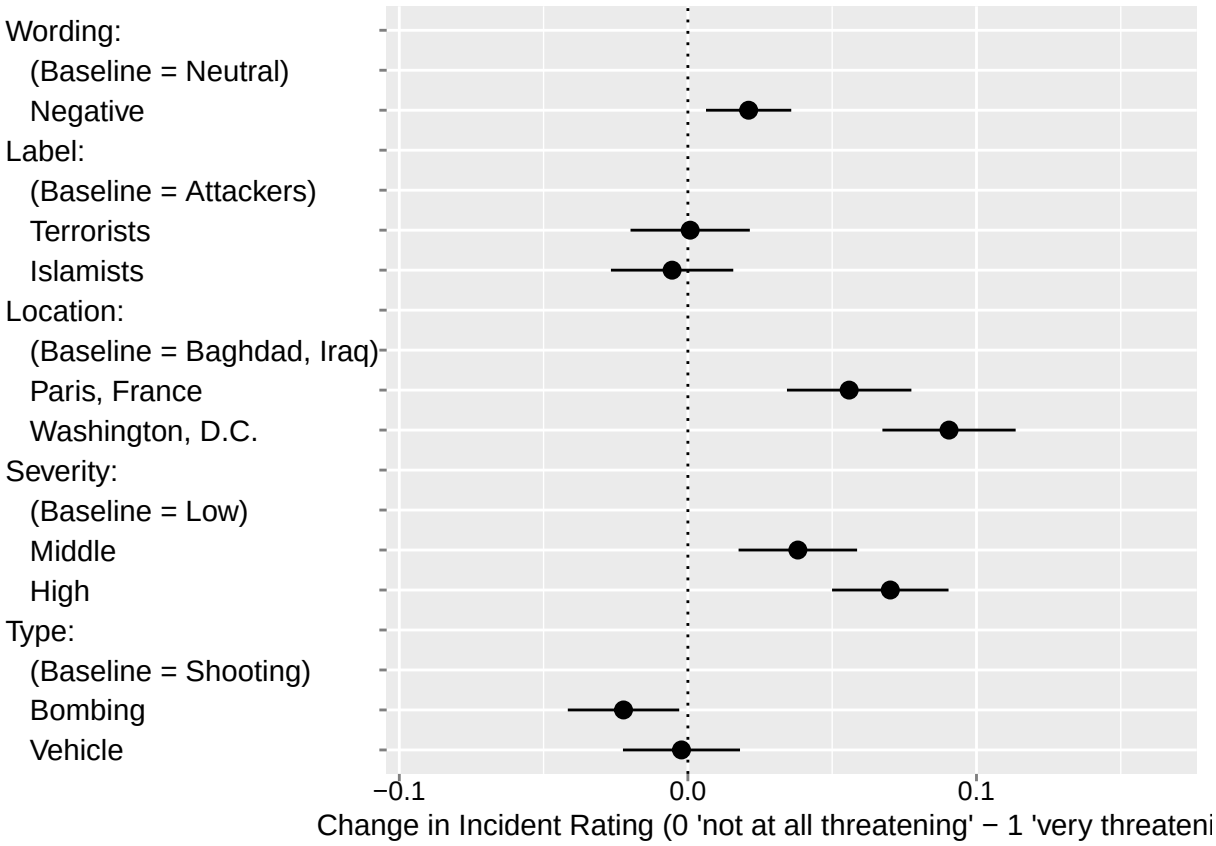
Analysis

```
## There are six models in total:

## Model 1: AMCEs w/ DV = threat binary
## Model 2: AMCEs w/ DV = threat rating
## Model 3: AMCEs + ACIE Wording*Label w/ DV = threat binary
## Model 4: AMCEs + ACIE Wording*Label w/ DV = threat rating
## Model 5: AMCEs w/ DV = credibility binary
## Model 6: AMCEs + ACIE Wording*Label w/ DV = credibility binary
## Plus additional subsets / baseline variations

## Plots of models 1, 2 and 5 (i.e., those without interaction effects) are
## reported in the body of the manuscript.

## Figure 1 (top)
model1 <- amce(Chosen2 ~ Wording + Label + Location + Severity + Type,
               data = medord, cluster = T, respondent.id = "ResponseId",
               design = "uniform")

plot.amce(model1,
```

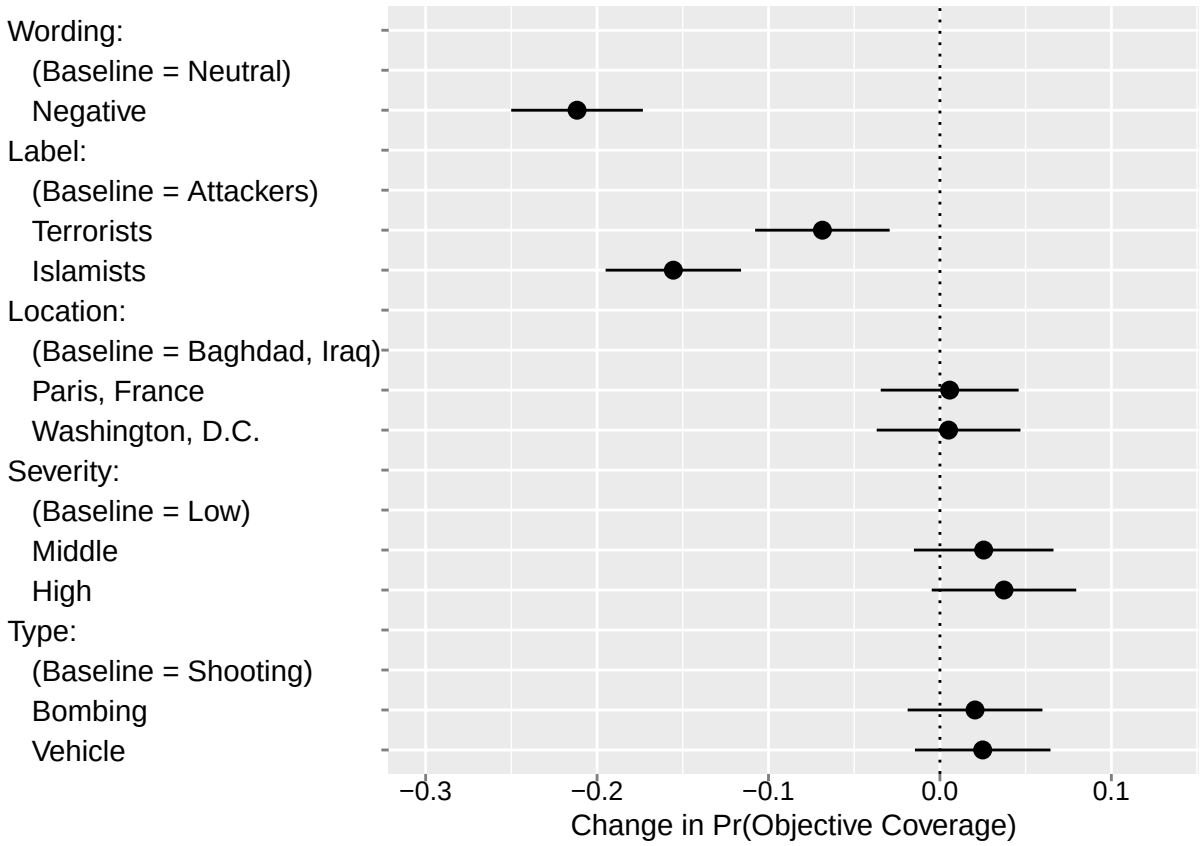
```
          group.order = c("Wording", "Label", "Location",
                          "Severity", "Type"),
          colors = "black",
          xlab = "Change in Pr(Threatening Incident)",
          breaks = seq(-.1, .4, .1),
          xlim = c(-.15, .4))
```




```
## Figure 1 (bottom)
model2 <- amce(Rating2 ~ Wording + Label + Location + Severity + Type,
               data = medord, cluster = T, respondent.id = "ResponseId",
               design = "uniform")

plot.amce(model2,
          group.order = c("Wording", "Label", "Location",
                          "Severity", "Type"),
          colors = "black",
          xlab = "Change in Incident Rating (0 'not at all threatening' - 1 'very threatening')")
```




```
## Figure 2
model5 <- amce(Credib2 ~ Wording + Label + Location + Severity + Type,
               data = medord, cluster = T, respondent.id = "ResponseId",
               design = "uniform")

plot.amce(model5,
          group.order = c("Wording", "Label", "Location",
                          "Severity", "Type"),
          colors = "black",
          xlab = "Change in Pr(Objective Coverage)")
```




```
## Remaining models

model3 <- amce(Chosen2 ~ Wording + Label + Location + Severity + Type +
                 Wording*Label,
               data = medord, cluster = T, respondent.id = "ResponseId",
               design = "uniform")

model4 <- amce(Rating2 ~ Wording + Label + Location + Severity + Type +
                 Wording*Label,
               data = medord, cluster = T, respondent.id = "ResponseId",
               design = "uniform")

model6 <- amce(Credib2 ~ Wording + Label + Location + Severity + Type +
                 Wording*Label,
               data = medord, cluster = T, respondent.id = "ResponseId",
               design = "uniform")
```

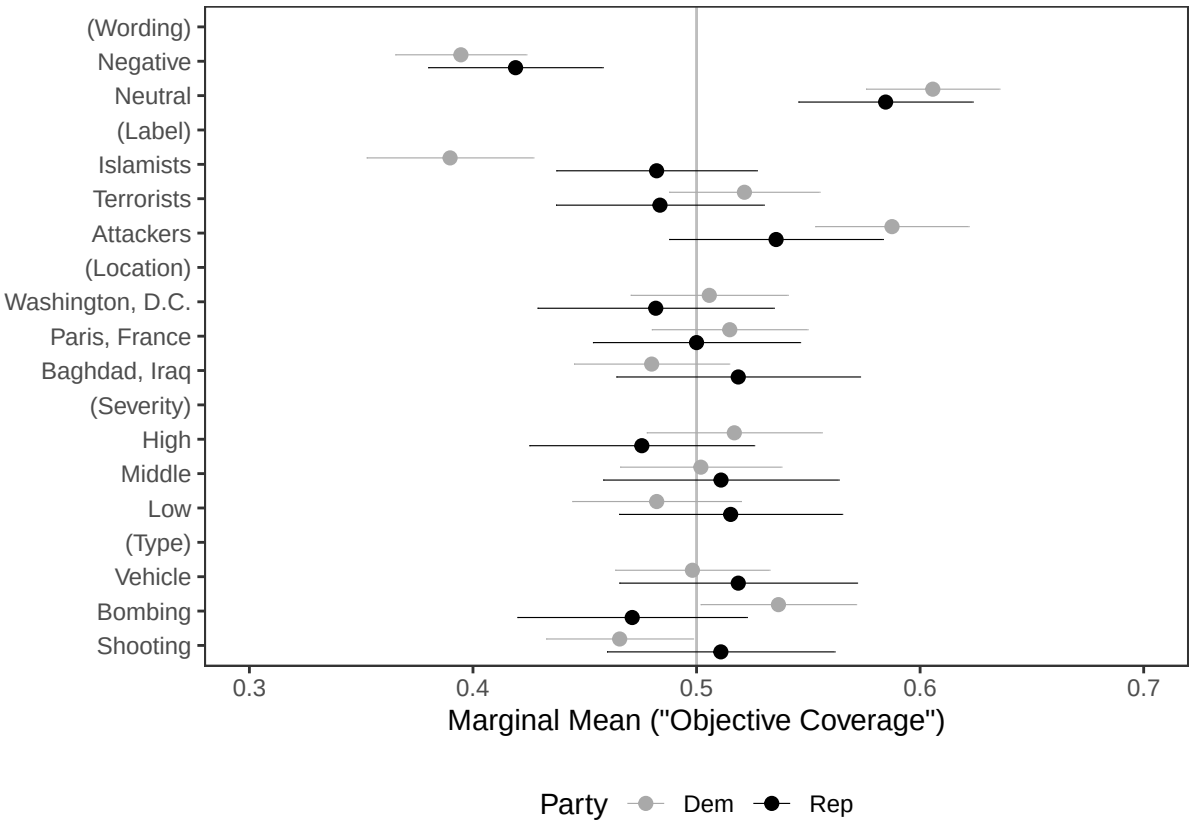
Supplementary Information

The following sections show replication code for the Supplementary Information.

Analyzing subgroup effects

```
## subset by Reps and Dems only (i.e. exclude Independents and "Others")

repdem <- subset(medord,
```

```
                 subset = medord$party=="Rep" | medord$party=="Dem")

levels(repdem$party) <- c("Rep", "Dem", NA, NA)

## estimate marginal mean (by party) for threat outcome

threat_mm <- cj(data = repdem,
                formula = Chosen2 ~ Wording + Label + Location + Severity + Type,
                by = ~ party,
                id = ~ ResponseId,
                estimate = "mm")

## estimate marginal mean (by party) for objectivity outcome

object_mm <- cj(data = repdem,
                formula = Credib2 ~ Wording + Label + Location + Severity + Type,
                by = ~ party,
                id = ~ ResponseId,
                estimate = "mm")

## Figure S1 in SI
plot_MM <- plot(object_mm, group = "party", vline = .5, size = 2,
                theme = ggplot2::theme_bw(),
                legend_title = "Party",
                xlim = c(0.3, 0.7),
                xlab = "Marginal Mean (\"Objective Coverage\")")

plot_MM + ggplot2::scale_color_manual(breaks = c("Dem", "Rep"),
                                      labels = c("Dem", "Rep"),
                                      guide = ggplot2::guide_legend(title = "Party"),
                                      values = c("darkgrey", "black"))
```

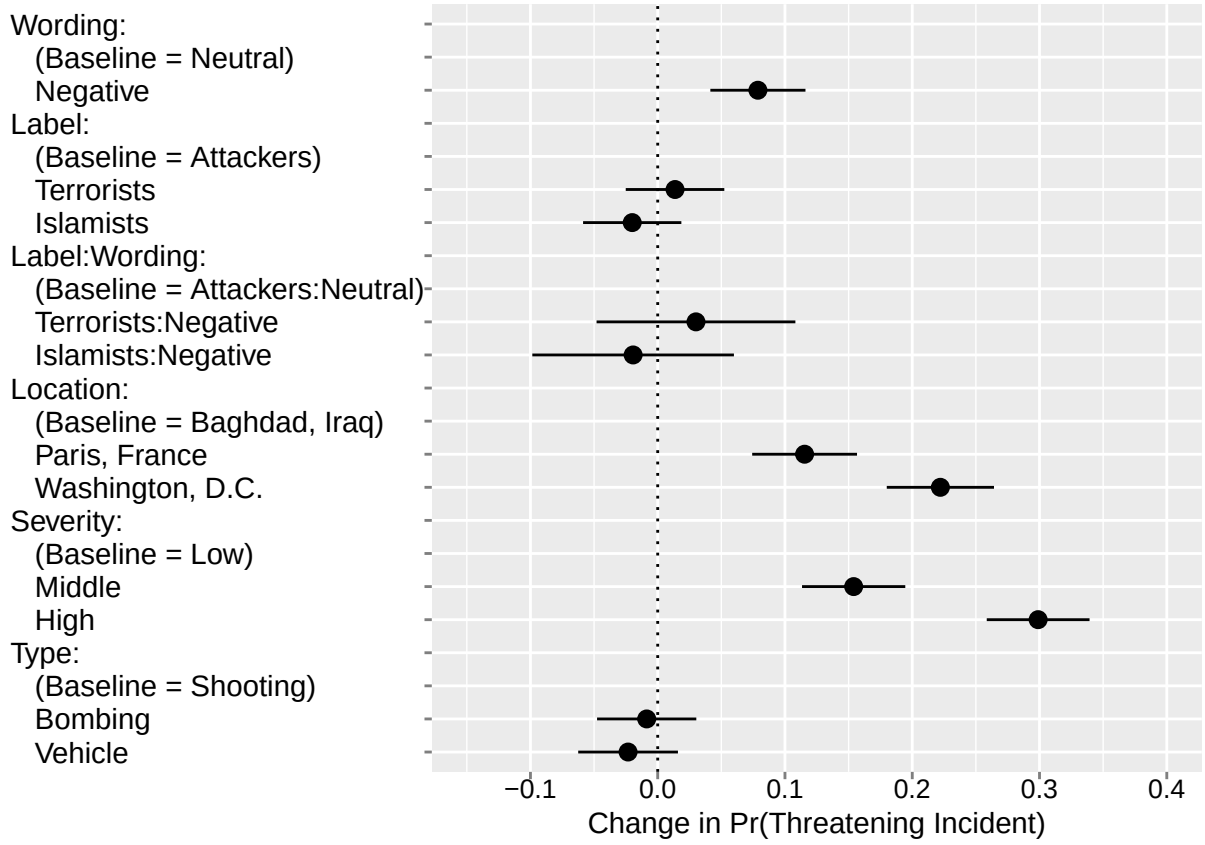


Scrutinizing the impact of word choice

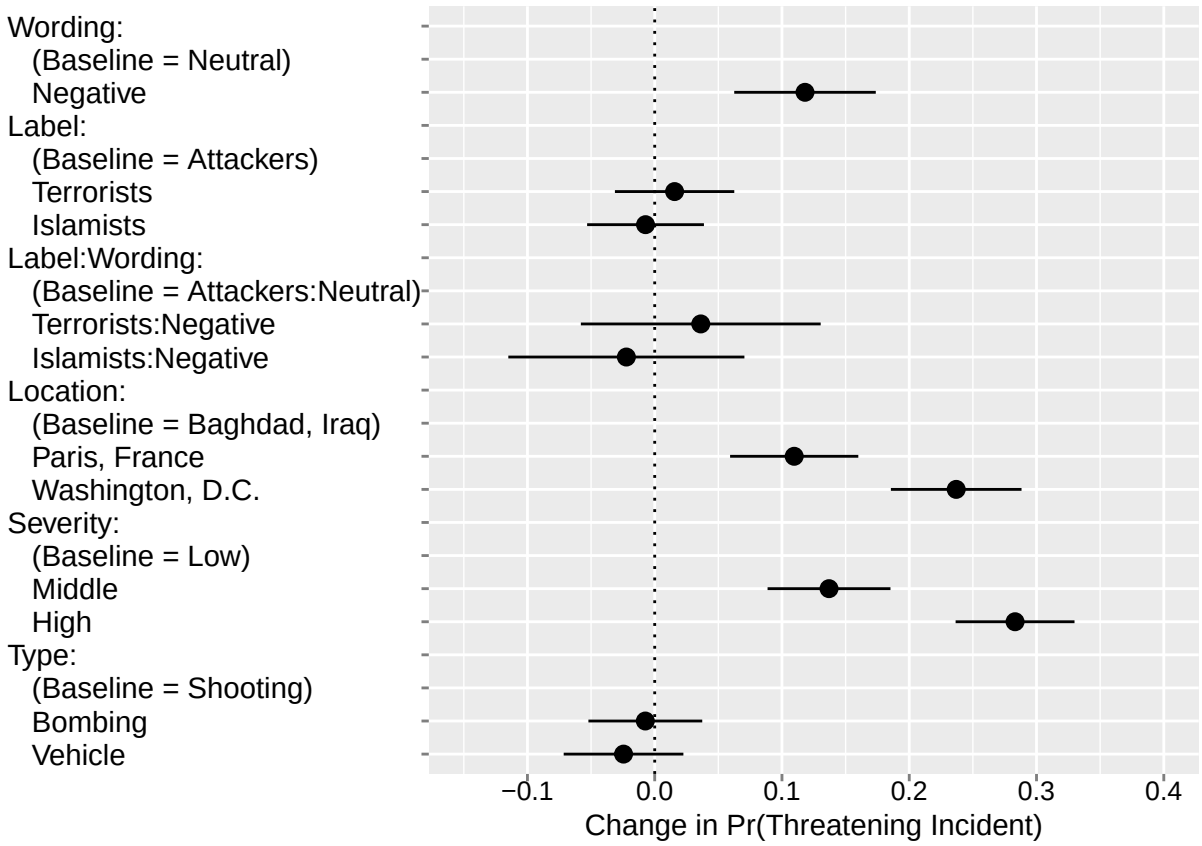
```
## threat: exlude constant word choice (i.e. include only rounds 1+2)
model3subs12 <- amce(Chosen2 ~ Wording + Label + Location + Severity + Type +
                       Wording*Label,
                     data = medord, cluster = T, respondent.id = "ResponseId",
                     design = "uniform",
                     subset = medord$contest_no==1 | medord$contest_no==2)

## threat: focus on constant word choice (i.e. include only rounds 3)
model3subs3 <- amce(Chosen2 ~ Wording + Label + Location + Severity + Type +
                       Wording*Label,
                     data = medord, cluster = T, respondent.id = "ResponseId",
                     design = "uniform",
                     subset = medord$contest_no==3)

## objectivity: exlude constant word choice (i.e. include only rounds 1+2)
model6subs12 <- amce(Credib2 ~ Wording + Label + Location + Severity + Type +
                       Wording*Label,
                     data = medord, cluster = T, respondent.id = "ResponseId",
                     design = "uniform",
                     subset = medord$contest_no==1 | medord$contest_no==2)

## objectivity: focus on constant word choice (i.e. include only rounds 3)
model6subs3 <- amce(Credib2 ~ Wording + Label + Location + Severity + Type +
                       Wording*Label,
                     data = medord, cluster = T, respondent.id = "ResponseId",
```

```
                    design = "uniform",
                    subset = medord$contest_no==3)
```

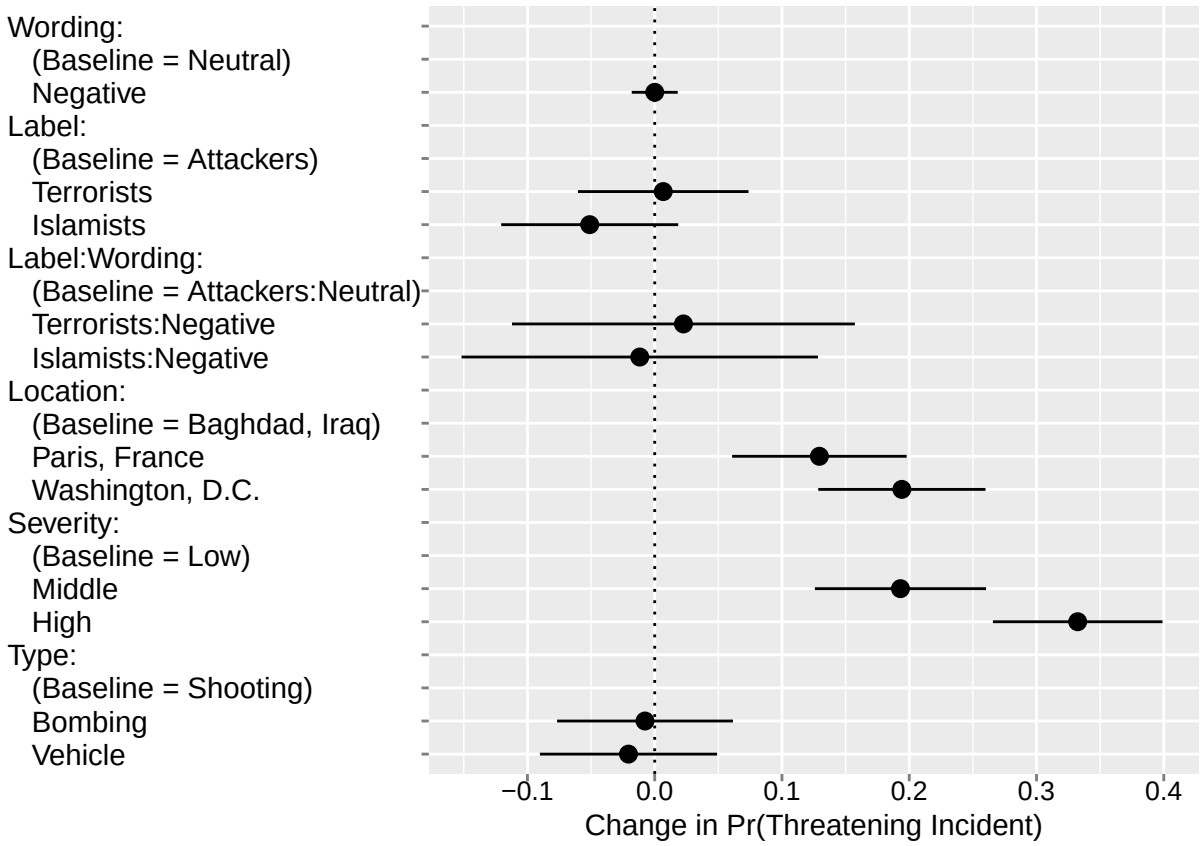
```
## Figure S2 in SI
## Plot (a) [full sample on threat, see above]
plot.amce(model3,
          group.order = c("Wording", "Label", "Label:Wording", "Location",
                          "Severity", "Type"),
          colors = "black",
          xlab = "Change in Pr(Threatening Incident)",
          breaks = seq(-.1, .4, .1),
          xlim = c(-.15, .4))
```



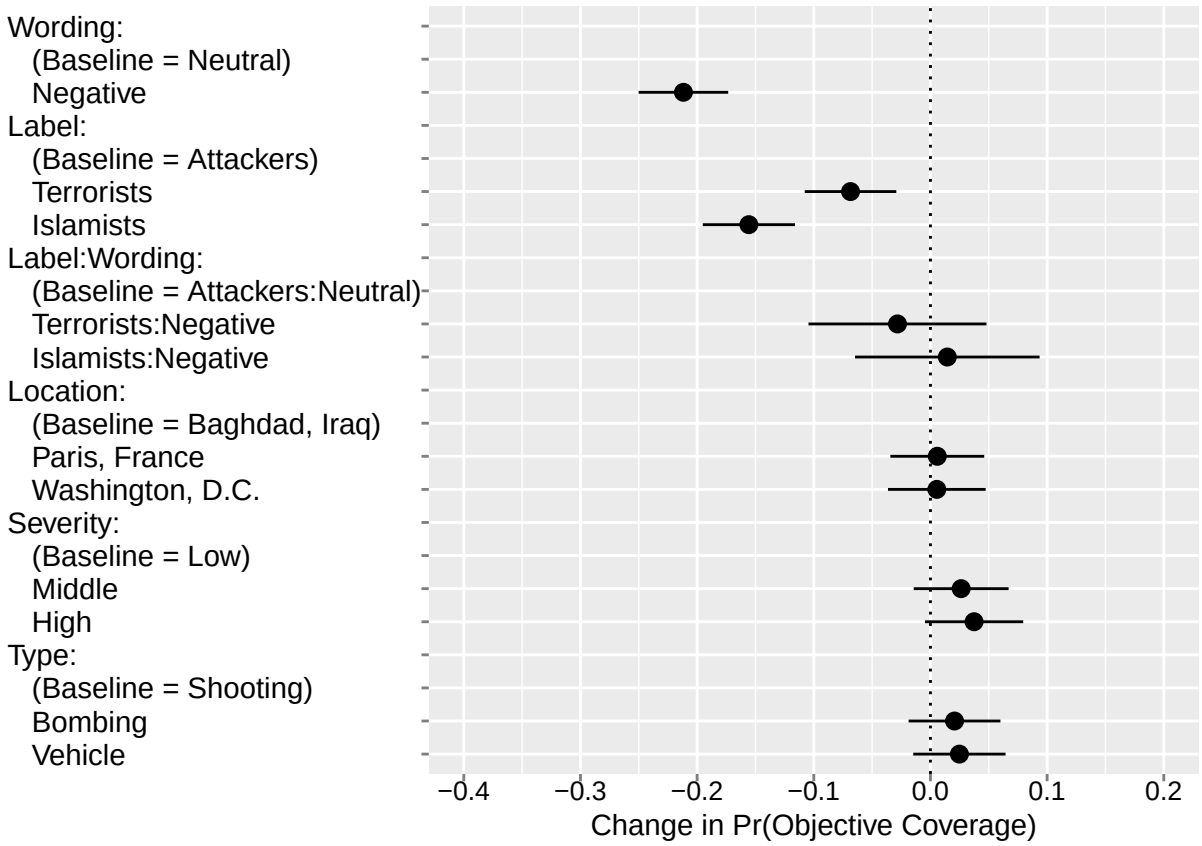

```
## Plot (b)
plot.amce(model3subs12,
          group.order = c("Wording", "Label", "Label:Wording", "Location",
                          "Severity", "Type"),
          colors = "black",
          xlab = "Change in Pr(Threatening Incident)",
          breaks = seq(-.1, .4, .1),
          xlim = c(-.15, .4))
```



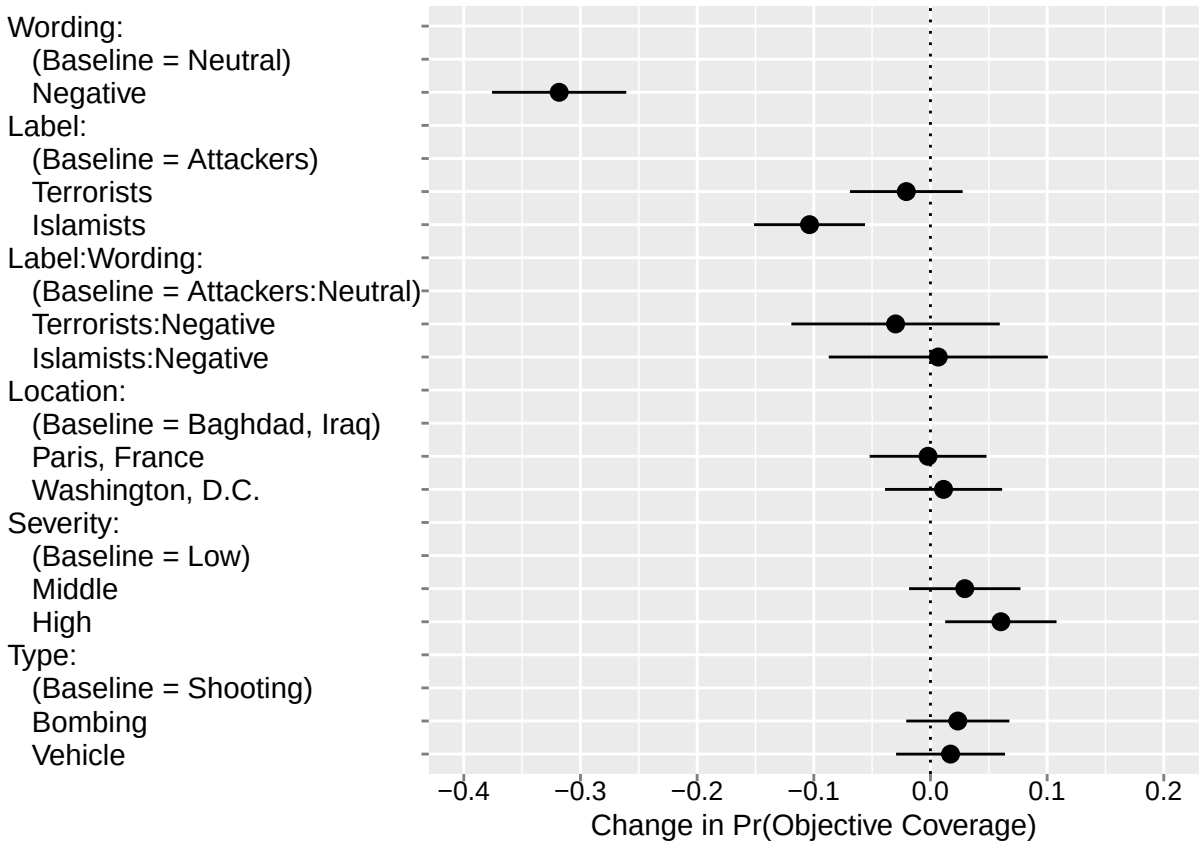

```
## Plot (c)
plot.amce(model3subs3,
          group.order = c("Wording", "Label", "Label:Wording", "Location",
                          "Severity", "Type"),
          colors = "black",
          xlab = "Change in Pr(Threatening Incident)",
          breaks = seq(-.1, .4, .1),
          xlim = c(-.15, .4))
```



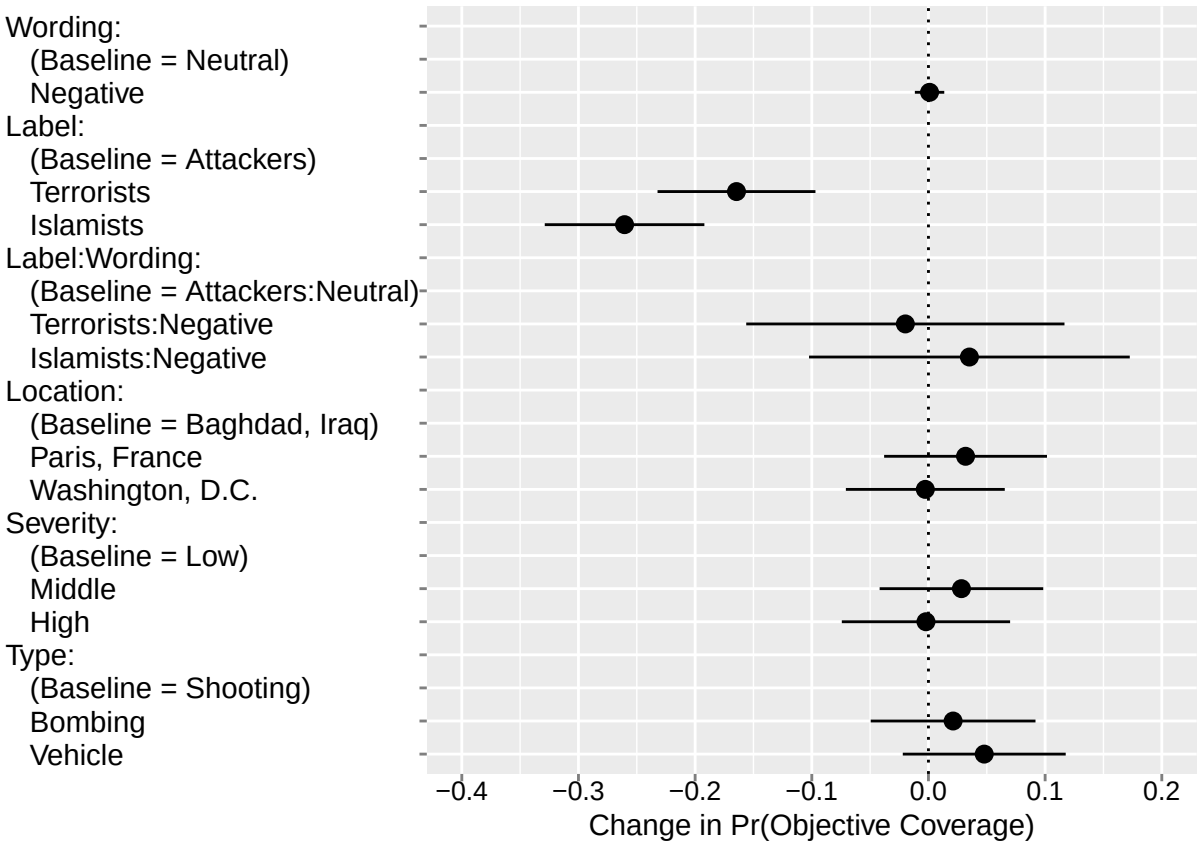

```
## Plot (d) [full sample on objectivity, see above]
plot.amce(model6,
          group.order = c("Wording", "Label", "Label:Wording", "Location",
                          "Severity", "Type"),
          colors = "black",
          xlab = "Change in Pr(Objective Coverage)",
          breaks = seq(-.4, .2, .1),
          xlim = c(-.4, .2))
```




```
## Plot (e)
plot.amce(model6subs12,
          group.order = c("Wording", "Label", "Label:Wording", "Location",
                          "Severity", "Type"),
          colors = "black",
          xlab = "Change in Pr(Objective Coverage)",
          breaks = seq(-.4, .2, .1),
          xlim = c(-.4, .2))
```




```
## Plot (f)
plot.amce(model6subs3,
          group.order = c("Wording", "Label", "Label:Wording", "Location",
                          "Severity", "Type"),
          colors = "black",
          xlab = "Change in Pr(Objective Coverage)",
          breaks = seq(-.4, .2, .1),
          xlim = c(-.4, .2))
```



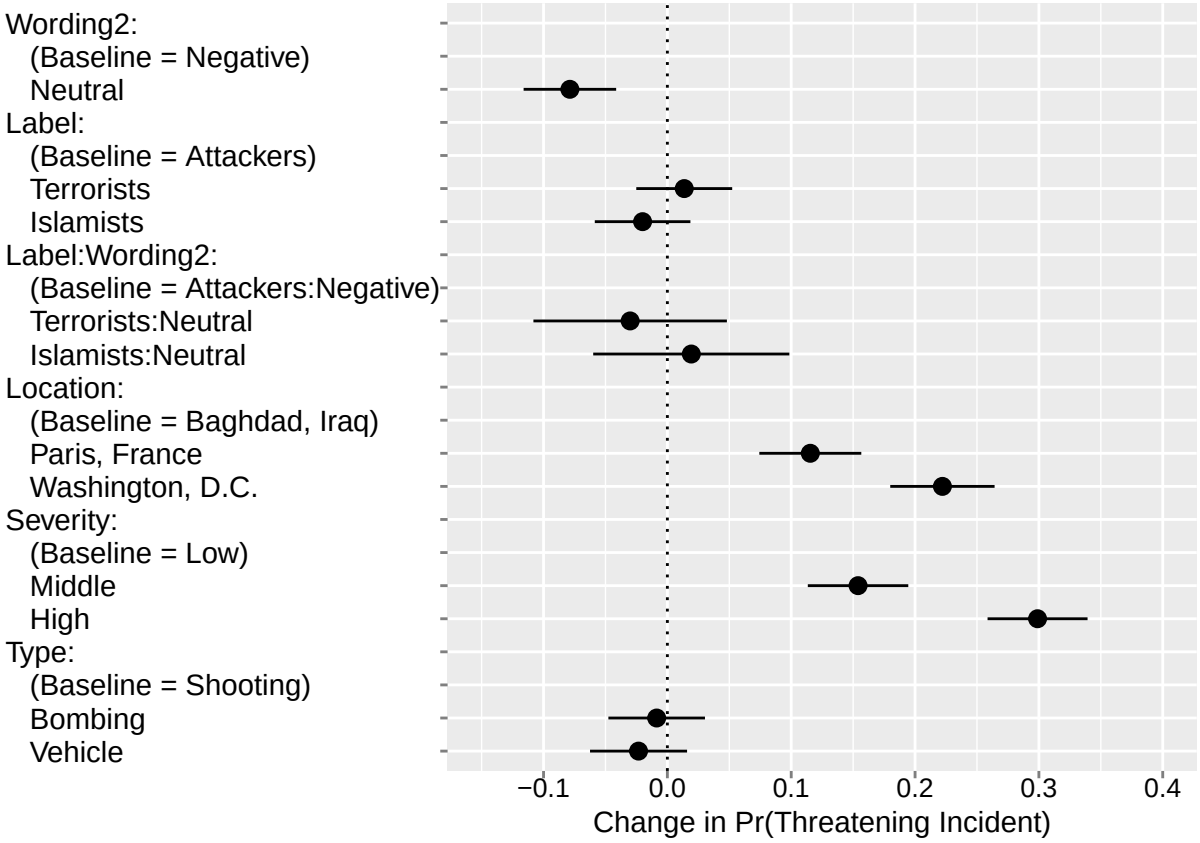
Interactions of wording and labels

```
## INTERACTION EFFECTS W/ DIFFERENT BASELINES -----------------------

# 1) WORDING BASELINE:
medord$Wording2 <- relevel(medord$Wording, "Negative")

model3_a <- amce(Chosen2 ~ Wording2 + Label + Location + Severity + Type +
                   Wording2*Label,
                 data = medord, cluster = T, respondent.id = "ResponseId",
                 design = "uniform")
summary(model3_a)
```

```
## ----------------------------------------
## Average Marginal Component Effects (AMCE):
## ----------------------------------------
##  Attribute            Level  Estimate Std. Err  z value   Pr(>|z|)
##      Label       Terrorists  0.013617 0.019762  0.68906 4.9079e-01
##      Label        Islamists -0.020022 0.019699 -1.01641 3.0944e-01
##   Location    Paris, France  0.115424 0.021009  5.49410 3.9271e-08 ***
##   Location Washington, D.C.  0.222095 0.021496 10.33167 5.0669e-25 ***
##   Severity           Middle  0.153971 0.020700  7.43821 1.0206e-13 ***
##   Severity             High  0.298913 0.020604 14.50746 1.0867e-47 ***
##       Type          Bombing -0.008646 0.019896 -0.43457 6.6388e-01
##       Type          Vehicle -0.023284 0.019991 -1.16472 2.4413e-01
##   Wording2          Neutral -0.078732 0.019066 -4.12947 3.6359e-05 ***
```

```
## ---
## Number of Obs. = 3462
## ---
## Number of Respondents = 577
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05
##
## --------------------
## AMCE Baseline Levels:
## --------------------
##  Attribute         Level
##      Label     Attackers
##   Location Baghdad, Iraq
##   Severity           Low
##       Type      Shooting
##   Wording2      Negative
##
##
## ---------------------------------------------
## Average Component Interaction Effects (ACIE):
## ---------------------------------------------
##       Attribute              Level  Estimate Std. Err  z value Pr(>|z|)
##  Label:Wording2 Terrorists:Neutral -0.030062 0.039854 -0.75431  0.45066
##  Label:Wording2  Islamists:Neutral  0.019314 0.040410  0.47795  0.63268
## ---
## Number of Obs. = 3462
## Number of Respondents = 577
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05
##
## --------------------
## ACIE Baseline Levels:
## --------------------
##       Attribute              Level
##  Label:Wording2 Attackers:Negative
```

```
plot.amce(model3_a,
          group.order = c("Wording2", "Label", "Label:Wording2", "Location",
                          "Severity", "Type"),
          colors = "black",
          xlab = "Change in Pr(Threatening Incident)",
          breaks = seq(-.1, .4, .1),
          xlim = c(-.15, .4))
```

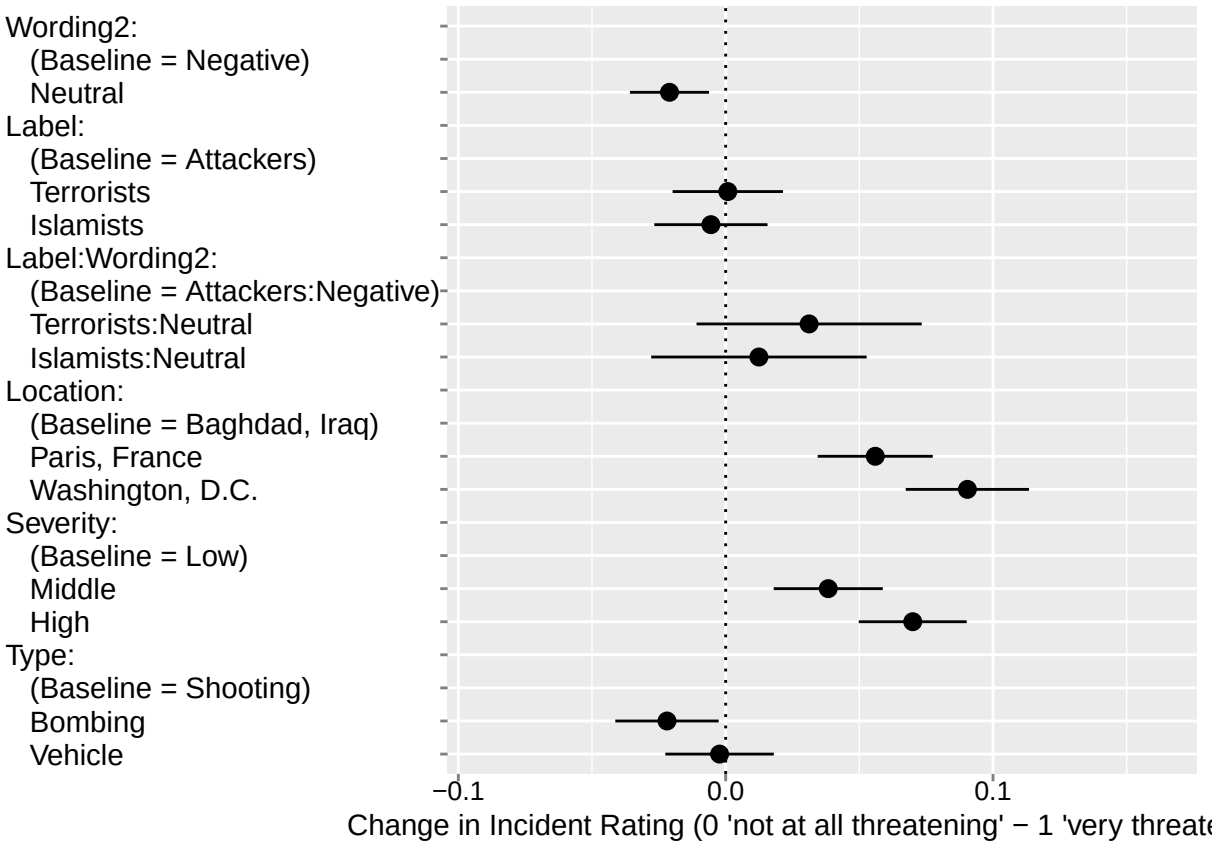



```
model4_a <- amce(Rating2 ~ Wording2 + Label + Location + Severity + Type +
                   Wording2*Label,
                 data = medord, cluster = T, respondent.id = "ResponseId",
                 design = "uniform")
summary(model4_a)
```

```
## ----------------------------------------
## Average Marginal Component Effects (AMCE):
## ----------------------------------------
##  Attribute            Level    Estimate  Std. Err   z value   Pr(>|z|)
##      Label       Terrorists  0.00079954 0.0105376  0.075875 9.3952e-01
##      Label        Islamists -0.00551780 0.0108052 -0.510659 6.0959e-01
##   Location    Paris, France  0.05595365 0.0109788  5.096500 3.4599e-07 ***
##   Location Washington, D.C.  0.09041322 0.0117644  7.685329 1.5260e-14 ***
##   Severity           Middle  0.03836773 0.0104134  3.684468 2.2918e-04 ***
##   Severity             High  0.06997752 0.0103012  6.793174 1.0969e-11 ***
##       Type          Bombing -0.02194958 0.0098673 -2.224480 2.6116e-02   *
##       Type          Vehicle -0.00227386 0.0103510 -0.219674 8.2612e-01
##   Wording2          Neutral -0.02100819 0.0075504 -2.782388 5.3960e-03  **
## ---
## Number of Obs. = 3462
## ---
## Number of Respondents = 577
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05
##
## ----------------------
```

```
## AMCE Baseline Levels:
## --------------------
##  Attribute         Level
##      Label     Attackers
##   Location Baghdad, Iraq
##   Severity           Low
##       Type      Shooting
##   Wording2      Negative
##
##
## ---------------------------------------------
## Average Component Interaction Effects (ACIE):
## ---------------------------------------------
##       Attribute              Level Estimate Std. Err z value Pr(>|z|)
##  Label:Wording2 Terrorists:Neutral 0.031210 0.021483 1.45277  0.14629
##  Label:Wording2  Islamists:Neutral 0.012436 0.020561 0.60484  0.54529
## ---
## Number of Obs. = 3462
## Number of Respondents = 577
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05
##
## --------------------
## ACIE Baseline Levels:
## --------------------
##       Attribute              Level
##  Label:Wording2 Attackers:Negative
```

```
plot.amce(model4_a,
          group.order = c("Wording2", "Label", "Label:Wording2", "Location",
                          "Severity", "Type"),
          colors = "black",
          xlab = "Change in Incident Rating (0 'not at all threatening' - 1 'very threatening')")
```

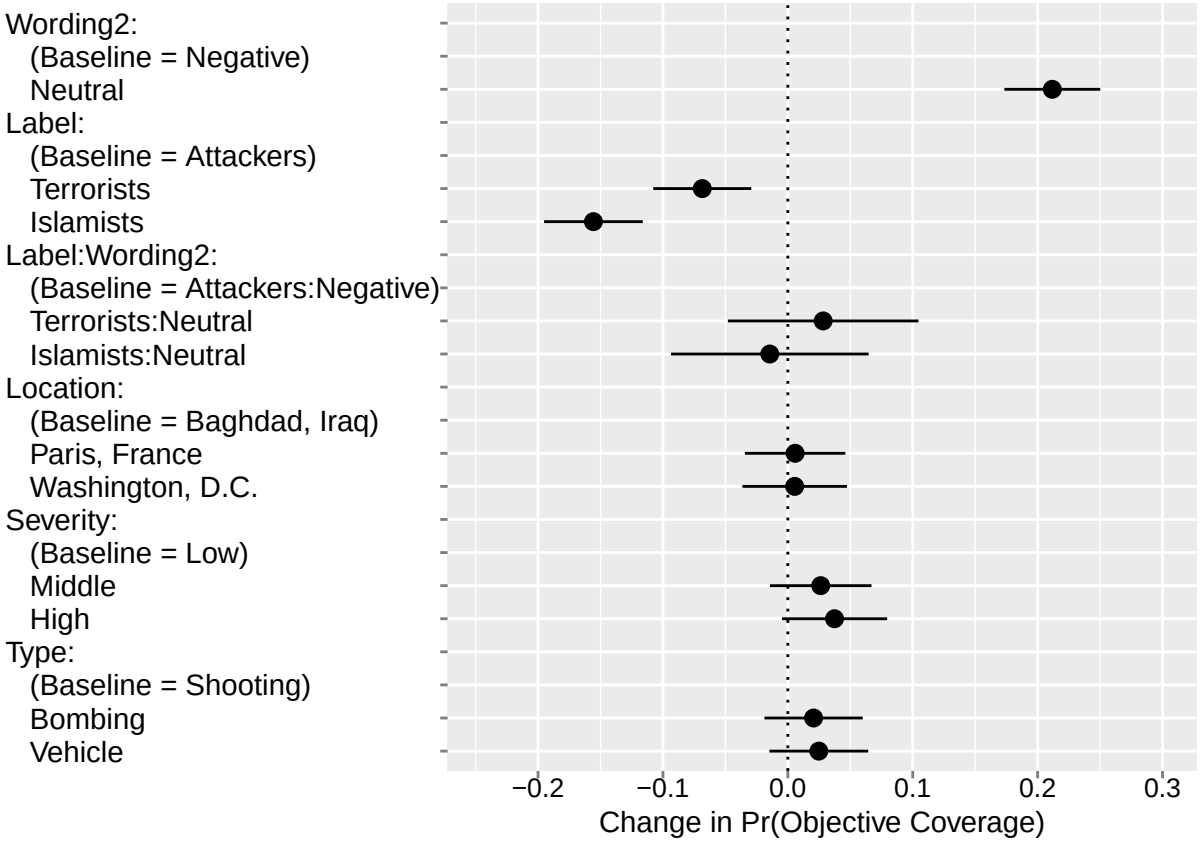



```
model6_a <- amce(Credib2 ~ Wording2 + Label + Location + Severity + Type +
                   Wording2*Label,
                 data = medord, cluster = T, respondent.id = "ResponseId",
                 design = "uniform")
summary(model6_a)
```

```
## ------------------------------------------
## Average Marginal Component Effects (AMCE):
## ------------------------------------------
##  Attribute            Level   Estimate Std. Err  z value   Pr(>|z|)
##      Label       Terrorists -0.0685169 0.020024 -3.42167 6.2238e-04 ***
##      Label        Islamists -0.1556503 0.020160 -7.72063 1.1575e-14 ***
##   Location    Paris, France  0.0058359 0.020534  0.28421 7.7625e-01
##   Location Washington, D.C.  0.0054551 0.021362  0.25537 7.9844e-01
##   Severity           Middle  0.0263190 0.020753  1.26821 2.0472e-01
##   Severity             High  0.0373820 0.021495  1.73913 8.2012e-02
##       Type          Bombing  0.0206222 0.020078  1.02710 3.0437e-01
##       Type          Vehicle  0.0248086 0.020185  1.22909 2.1904e-01
##   Wording2          Neutral  0.2117500 0.019596 10.80556 3.2399e-27 ***
## ---
## Number of Obs. = 3462
## ---
## Number of Respondents = 577
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05
##
## ------------------
```

```
## AMCE Baseline Levels:
## --------------------
##  Attribute         Level
##      Label     Attackers
##   Location Baghdad, Iraq
##   Severity           Low
##       Type      Shooting
##   Wording2      Negative
##
##
## ---------------------------------------------
## Average Component Interaction Effects (ACIE):
## ---------------------------------------------
##       Attribute              Level  Estimate Std. Err  z value Pr(>|z|)
##  Label:Wording2 Terrorists:Neutral  0.028264 0.038926  0.72609  0.46779
##  Label:Wording2  Islamists:Neutral -0.014440 0.040354 -0.35783  0.72047
## ---
## Number of Obs. = 3462
## Number of Respondents = 577
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05
##
## --------------------
## ACIE Baseline Levels:
## --------------------
##       Attribute              Level
##  Label:Wording2 Attackers:Negative
```

```
plot.amce(model6_a,
          group.order = c("Wording2", "Label", "Label:Wording2", "Location",
                          "Severity", "Type"),
          colors = "black",
          xlab = "Change in Pr(Objective Coverage)")
```

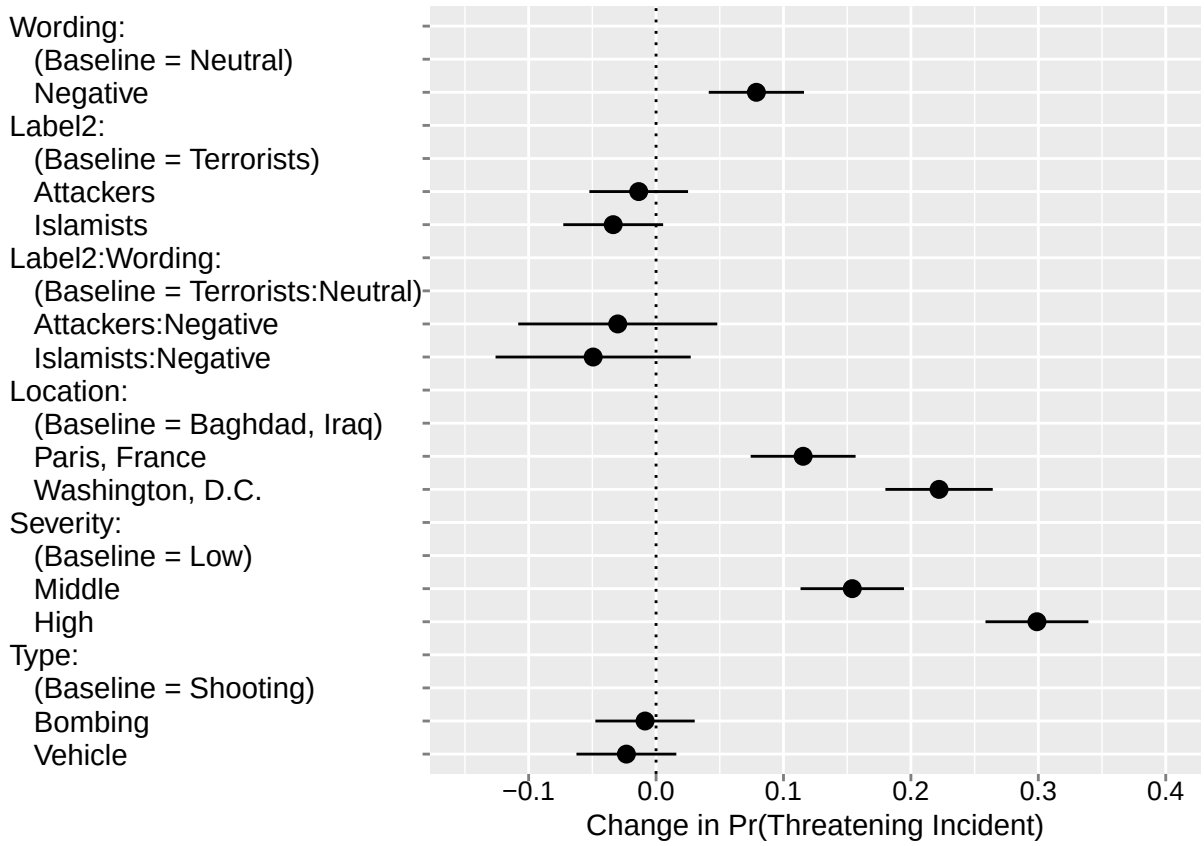



```
# 2) LABEL BASELINE:
medord$Label2 <- relevel(medord$Label, "Terrorists")

model3_b <- amce(Chosen2 ~ Wording + Label2 + Location + Severity + Type +
                   Wording*Label2,
                 data = medord, cluster = T, respondent.id = "ResponseId",
                 design = "uniform")
summary(model3_b)
```

```
## ------------------------------------------
## Average Marginal Component Effects (AMCE):
## ------------------------------------------
##  Attribute            Level  Estimate Std. Err  z value   Pr(>|z|)
##     Label2        Attackers -0.013617 0.019762 -0.68906 4.9079e-01
##     Label2        Islamists -0.033639 0.019988 -1.68298 9.2379e-02
##   Location    Paris, France  0.115424 0.021009  5.49410 3.9271e-08 ***
##   Location Washington, D.C.  0.222095 0.021496 10.33167 5.0669e-25 ***
##   Severity           Middle  0.153971 0.020700  7.43821 1.0206e-13 ***
##   Severity             High  0.298913 0.020604 14.50746 1.0867e-47 ***
##       Type          Bombing -0.008646 0.019896 -0.43457 6.6388e-01
##       Type          Vehicle -0.023284 0.019991 -1.16472 2.4413e-01
##    Wording         Negative  0.078732 0.019066  4.12947 3.6359e-05 ***
## ---
## Number of Obs. = 3462
## ---
## Number of Respondents = 577
## ---
```

```
## Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05
##
## --------------------
## AMCE Baseline Levels:
## --------------------
##  Attribute         Level
##     Label2    Terrorists
##   Location Baghdad, Iraq
##   Severity           Low
##       Type      Shooting
##    Wording       Neutral
##
##
## ---------------------------------------------
## Average Component Interaction Effects (ACIE):
## ---------------------------------------------
##       Attribute              Level  Estimate Std. Err  z value Pr(>|z|)
##  Label2:Wording Attackers:Negative -0.030062 0.039854 -0.75431  0.45066
##  Label2:Wording Islamists:Negative -0.049376 0.039078 -1.26352  0.20640
## ---
## Number of Obs. = 3462
## Number of Respondents = 577
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05
##
## --------------------
## ACIE Baseline Levels:
## --------------------
##       Attribute              Level
##  Label2:Wording Terrorists:Neutral
```

```r
plot.amce(model3_b,
          group.order = c("Wording", "Label2", "Label2:Wording", "Location",
                          "Severity", "Type"),
          colors = "black",
          xlab = "Change in Pr(Threatening Incident)",
          breaks = seq(-.1, .4, .1),
          xlim = c(-.15, .4))
```

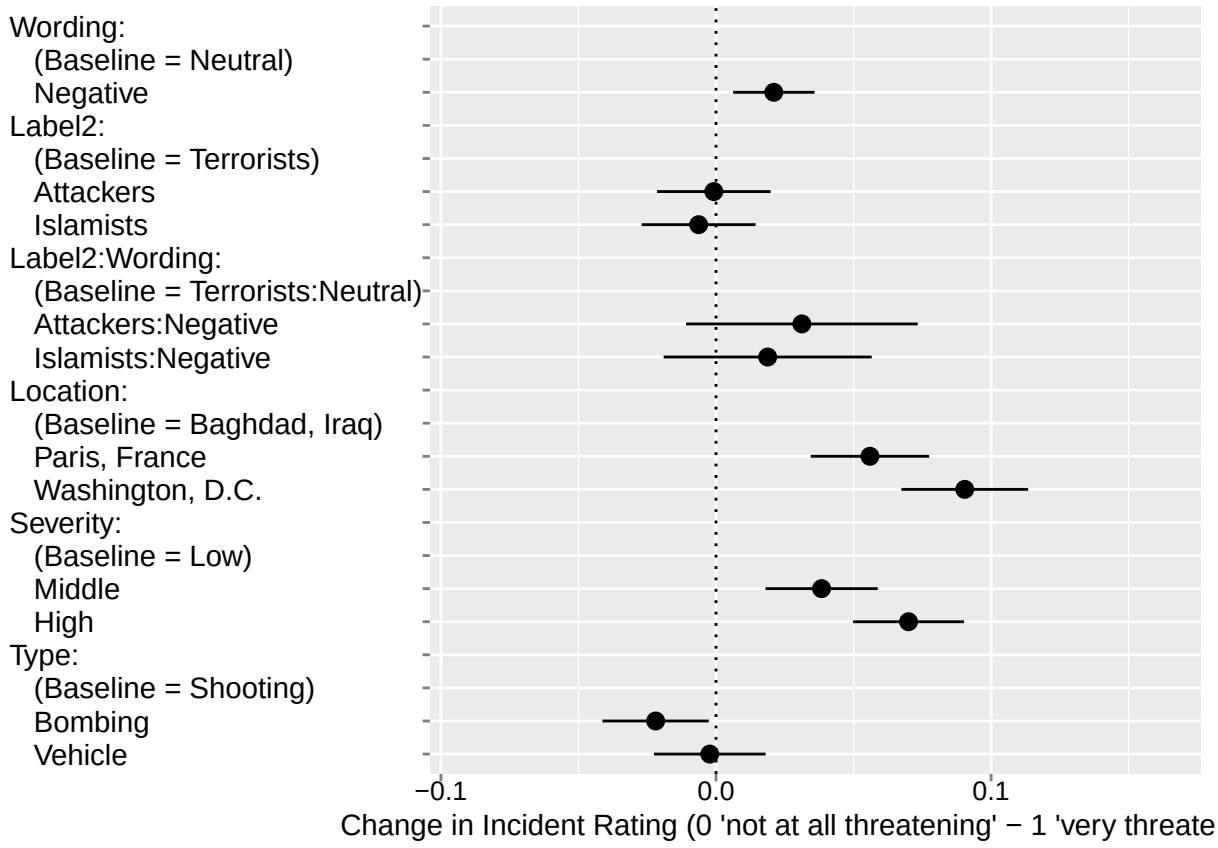



```
model4_b <- amce(Rating2 ~ Wording + Label2 + Location + Severity + Type +
                   Wording*Label2,
                 data = medord, cluster = T, respondent.id = "ResponseId",
                 design = "uniform")
summary(model4_b)
```

```
## ------------------------------------------
## Average Marginal Component Effects (AMCE):
## ------------------------------------------
##  Attribute             Level    Estimate  Std. Err   z value   Pr(>|z|)
##     Label2         Attackers -0.00079954 0.0105376 -0.075875 9.3952e-01
##     Label2         Islamists -0.00631734 0.0105581 -0.598341 5.4961e-01
##   Location    Paris, France  0.05595365 0.0109788  5.096500 3.4599e-07 ***
##   Location Washington, D.C.  0.09041322 0.0117644  7.685329 1.5260e-14 ***
##   Severity            Middle  0.03836773 0.0104134  3.684468 2.2918e-04 ***
##   Severity              High  0.06997752 0.0103012  6.793174 1.0969e-11 ***
##       Type           Bombing -0.02194958 0.0098673 -2.224480 2.6116e-02   *
##       Type           Vehicle -0.00227386 0.0103510 -0.219674 8.2612e-01
##    Wording          Negative  0.02100819 0.0075504  2.782388 5.3960e-03  **
## ---
## Number of Obs. = 3462
## ---
## Number of Respondents = 577
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05
##
## ------------------
```

```
## AMCE Baseline Levels:
## --------------------
##  Attribute         Level
##     Label2    Terrorists
##   Location Baghdad, Iraq
##   Severity           Low
##       Type      Shooting
##    Wording       Neutral
##
##
## ---------------------------------------------
## Average Component Interaction Effects (ACIE):
## ---------------------------------------------
##       Attribute              Level Estimate Std. Err z value Pr(>|z|)
##  Label2:Wording Attackers:Negative 0.031210 0.021483 1.45277  0.14629
##  Label2:Wording Islamists:Negative 0.018774 0.019295 0.97305  0.33053
## ---
## Number of Obs. = 3462
## Number of Respondents = 577
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05
##
## --------------------
## ACIE Baseline Levels:
## --------------------
##       Attribute              Level
##  Label2:Wording Terrorists:Neutral
```

```
plot.amce(model4_b,
          group.order = c("Wording", "Label2", "Label2:Wording", "Location",
                          "Severity", "Type"),
          colors = "black",
          xlab = "Change in Incident Rating (0 'not at all threatening' - 1 'very threatening')")
```

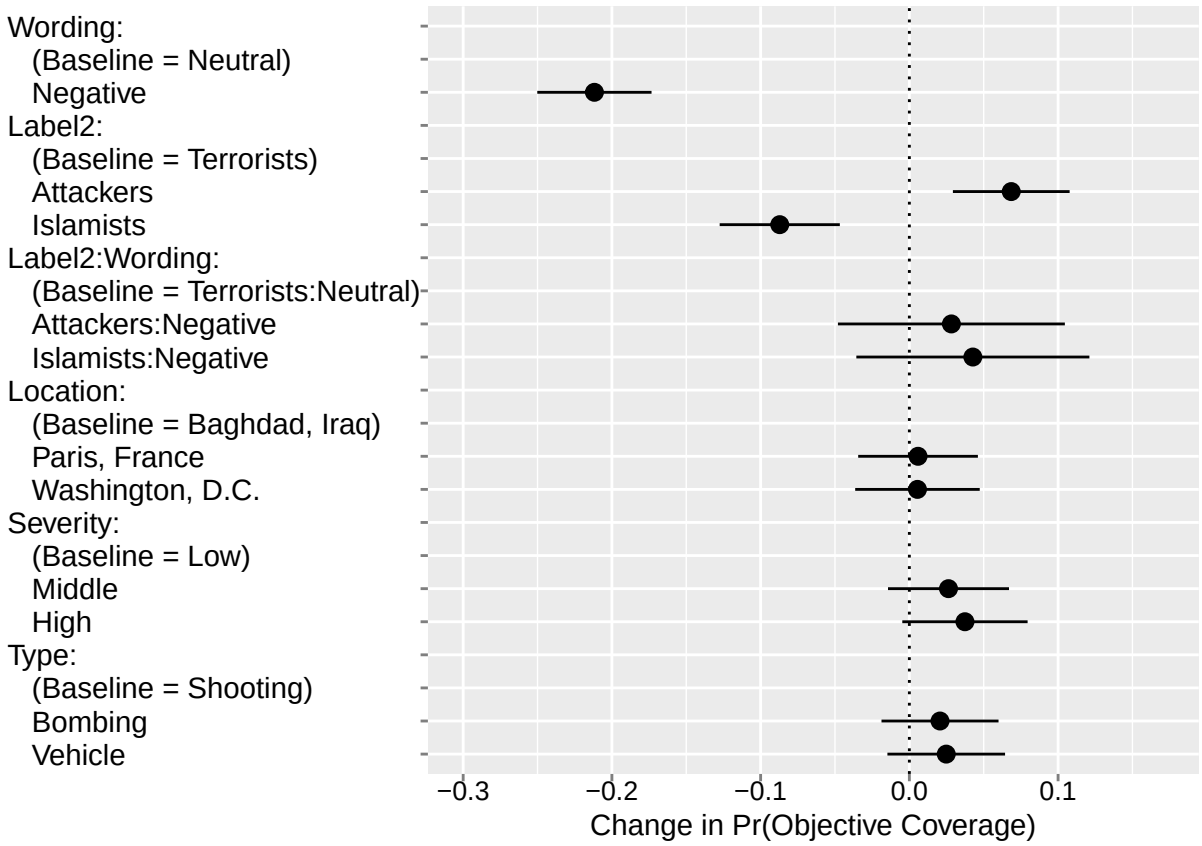



```
model6_b <- amce(Credib2 ~ Wording + Label2 + Location + Severity + Type +
                   Wording*Label2,
                 data = medord, cluster = T, respondent.id = "ResponseId",
                 design = "uniform")
summary(model6_b)
```

```
## ----------------------------------------
## Average Marginal Component Effects (AMCE):
## ----------------------------------------
##  Attribute             Level   Estimate Std. Err   z value   Pr(>|z|)
##     Label2         Attackers  0.0685169 0.020024   3.42167 6.2238e-04 ***
##     Label2         Islamists -0.0871335 0.020612  -4.22723 2.3659e-05 ***
##   Location    Paris, France  0.0058359 0.020534   0.28421 7.7625e-01
##   Location Washington, D.C.  0.0054551 0.021362   0.25537 7.9844e-01
##   Severity            Middle  0.0263190 0.020753   1.26821 2.0472e-01
##   Severity              High  0.0373820 0.021495   1.73913 8.2012e-02
##       Type           Bombing  0.0206222 0.020078   1.02710 3.0437e-01
##       Type           Vehicle  0.0248086 0.020185   1.22909 2.1904e-01
##    Wording          Negative -0.2117500 0.019596 -10.80556 3.2399e-27 ***
## ---
## Number of Obs. = 3462
## ---
## Number of Respondents = 577
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05
##
## ----------------------
```

```
## AMCE Baseline Levels:
## --------------------
##  Attribute         Level
##     Label2    Terrorists
##   Location Baghdad, Iraq
##   Severity           Low
##       Type      Shooting
##    Wording       Neutral
##
##
## ---------------------------------------------
## Average Component Interaction Effects (ACIE):
## ---------------------------------------------
##       Attribute              Level Estimate Std. Err z value Pr(>|z|)
##  Label2:Wording Attackers:Negative 0.028264 0.038926 0.72609  0.46779
##  Label2:Wording Islamists:Negative 0.042704 0.039975 1.06826  0.28540
## ---
## Number of Obs. = 3462
## Number of Respondents = 577
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05
##
## --------------------
## ACIE Baseline Levels:
## --------------------
##       Attribute              Level
##  Label2:Wording Terrorists:Neutral
```

```
plot.amce(model6_b,
          group.order = c("Wording", "Label2", "Label2:Wording", "Location",
                          "Severity", "Type"),
          colors = "black",
          xlab = "Change in Pr(Objective Coverage)")
```

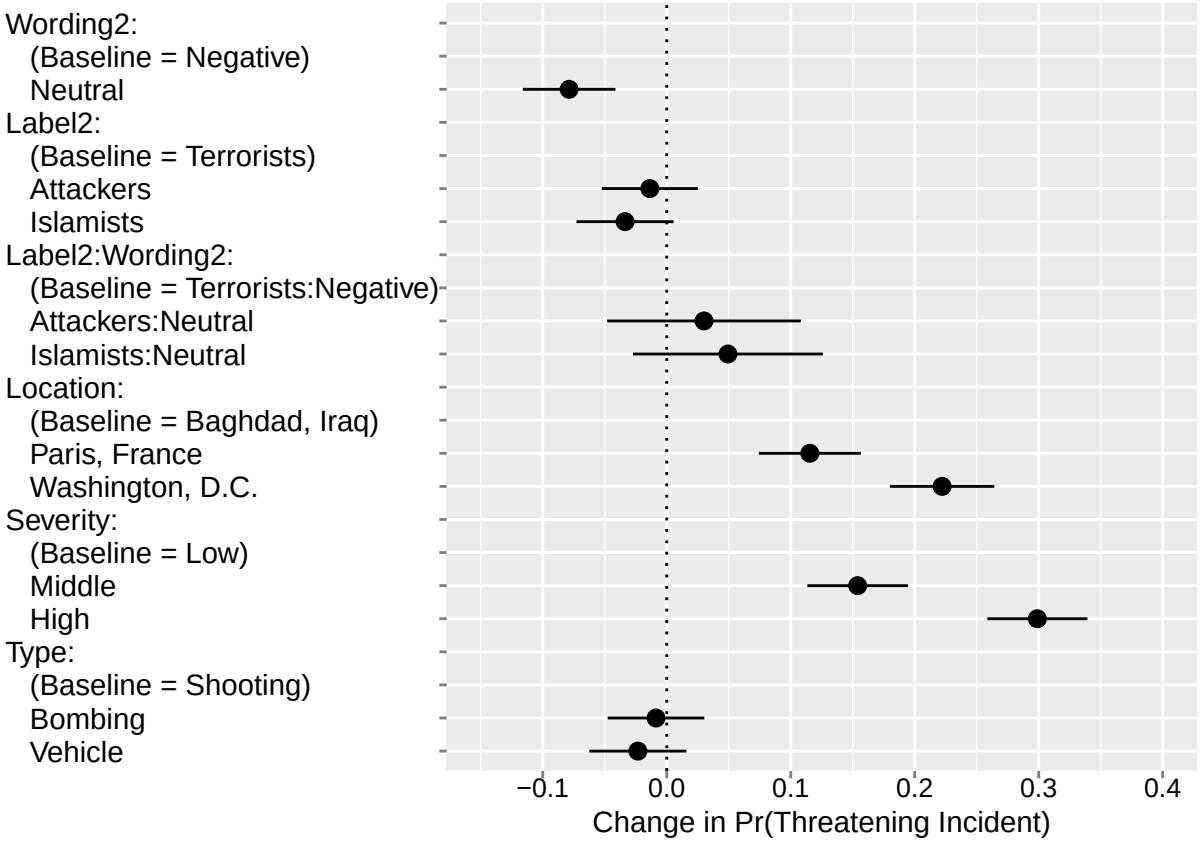



```
# 3) LABEL BASELINE AND WORDING BASELINE:
model3_c <- amce(Chosen2 ~ Wording2 + Label2 + Location + Severity + Type +
                   Wording2*Label2,
                 data = medord, cluster = T, respondent.id = "ResponseId",
                 design = "uniform")
summary(model3_c)
```

```
## ------------------------------------------
## Average Marginal Component Effects (AMCE):
## ------------------------------------------
##  Attribute            Level  Estimate Std. Err  z value   Pr(>|z|)
##     Label2        Attackers -0.013617 0.019762 -0.68906 4.9079e-01
##     Label2        Islamists -0.033639 0.019988 -1.68298 9.2379e-02
##   Location    Paris, France  0.115424 0.021009  5.49410 3.9271e-08 ***
##   Location Washington, D.C.  0.222095 0.021496 10.33167 5.0669e-25 ***
##   Severity           Middle  0.153971 0.020700  7.43821 1.0206e-13 ***
##   Severity             High  0.298913 0.020604 14.50746 1.0867e-47 ***
##       Type          Bombing -0.008646 0.019896 -0.43457 6.6388e-01
##       Type          Vehicle -0.023284 0.019991 -1.16472 2.4413e-01
##   Wording2          Neutral -0.078732 0.019066 -4.12947 3.6359e-05 ***
## ---
## Number of Obs. = 3462
## ---
## Number of Respondents = 577
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05
##
```

```
## --------------------
## AMCE Baseline Levels:
## --------------------
##  Attribute         Level
##     Label2    Terrorists
##   Location Baghdad, Iraq
##   Severity           Low
##       Type      Shooting
##   Wording2      Negative
##
##
## ---------------------------------------------
## Average Component Interaction Effects (ACIE):
## ---------------------------------------------
##        Attribute             Level Estimate Std. Err z value Pr(>|z|)
##  Label2:Wording2 Attackers:Neutral 0.030062 0.039854 0.75431  0.45066
##  Label2:Wording2 Islamists:Neutral 0.049376 0.039078 1.26352  0.20640
## ---
## Number of Obs. = 3462
## Number of Respondents = 577
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05
##
## --------------------
## ACIE Baseline Levels:
## --------------------
##        Attribute               Level
##  Label2:Wording2 Terrorists:Negative
```

```r
plot.amce(model3_c,
          group.order = c("Wording2", "Label2", "Label2:Wording2", "Location",
                          "Severity", "Type"),
          colors = "black",
          xlab = "Change in Pr(Threatening Incident)",
          breaks = seq(-.1, .4, .1),
          xlim = c(-.15, .4))
```

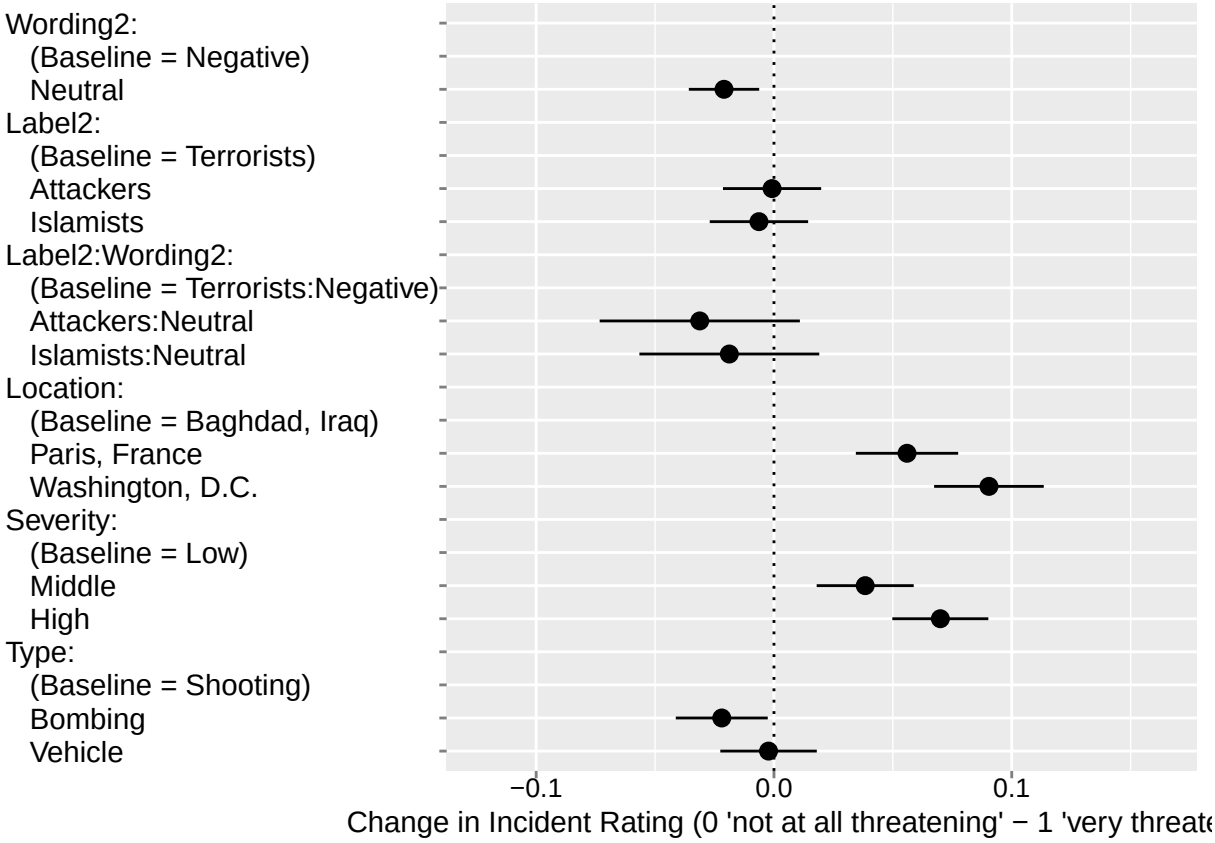



```
model4_c <- amce(Rating2 ~ Wording2 + Label2 + Location + Severity + Type +
                   Wording2*Label2,
                 data = medord, cluster = T, respondent.id = "ResponseId",
                 design = "uniform")
summary(model4_c)
```

```
## ----------------------------------------
## Average Marginal Component Effects (AMCE):
## ----------------------------------------
##  Attribute            Level    Estimate  Std. Err   z value   Pr(>|z|)
##     Label2        Attackers -0.00079954 0.0105376 -0.075875 9.3952e-01
##     Label2        Islamists -0.00631734 0.0105581 -0.598341 5.4961e-01
##   Location    Paris, France  0.05595365 0.0109788  5.096500 3.4599e-07 ***
##   Location Washington, D.C.  0.09041322 0.0117644  7.685329 1.5260e-14 ***
##   Severity           Middle  0.03836773 0.0104134  3.684468 2.2918e-04 ***
##   Severity             High  0.06997752 0.0103012  6.793174 1.0969e-11 ***
##       Type          Bombing -0.02194958 0.0098673 -2.224480 2.6116e-02   *
##       Type          Vehicle -0.00227386 0.0103510 -0.219674 8.2612e-01
##   Wording2          Neutral -0.02100819 0.0075504 -2.782388 5.3960e-03  **
## ---
## Number of Obs. = 3462
## ---
## Number of Respondents = 577
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05
##
## ----------------------
```

```
## AMCE Baseline Levels:
## --------------------
##  Attribute         Level
##     Label2    Terrorists
##   Location Baghdad, Iraq
##   Severity           Low
##       Type      Shooting
##   Wording2      Negative
##
##
## ---------------------------------------------
## Average Component Interaction Effects (ACIE):
## ---------------------------------------------
##        Attribute             Level  Estimate Std. Err  z value Pr(>|z|)
##  Label2:Wording2 Attackers:Neutral -0.031210 0.021483 -1.45277  0.14629
##  Label2:Wording2 Islamists:Neutral -0.018774 0.019295 -0.97305  0.33053
## ---
## Number of Obs. = 3462
## Number of Respondents = 577
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05
##
## --------------------
## ACIE Baseline Levels:
## --------------------
##        Attribute               Level
##  Label2:Wording2 Terrorists:Negative
```

```
plot.amce(model4_c,
          group.order = c("Wording2", "Label2", "Label2:Wording2", "Location",
                          "Severity", "Type"),
          colors = "black",
          xlab = "Change in Incident Rating (0 'not at all threatening' - 1 'very threatening')")
```

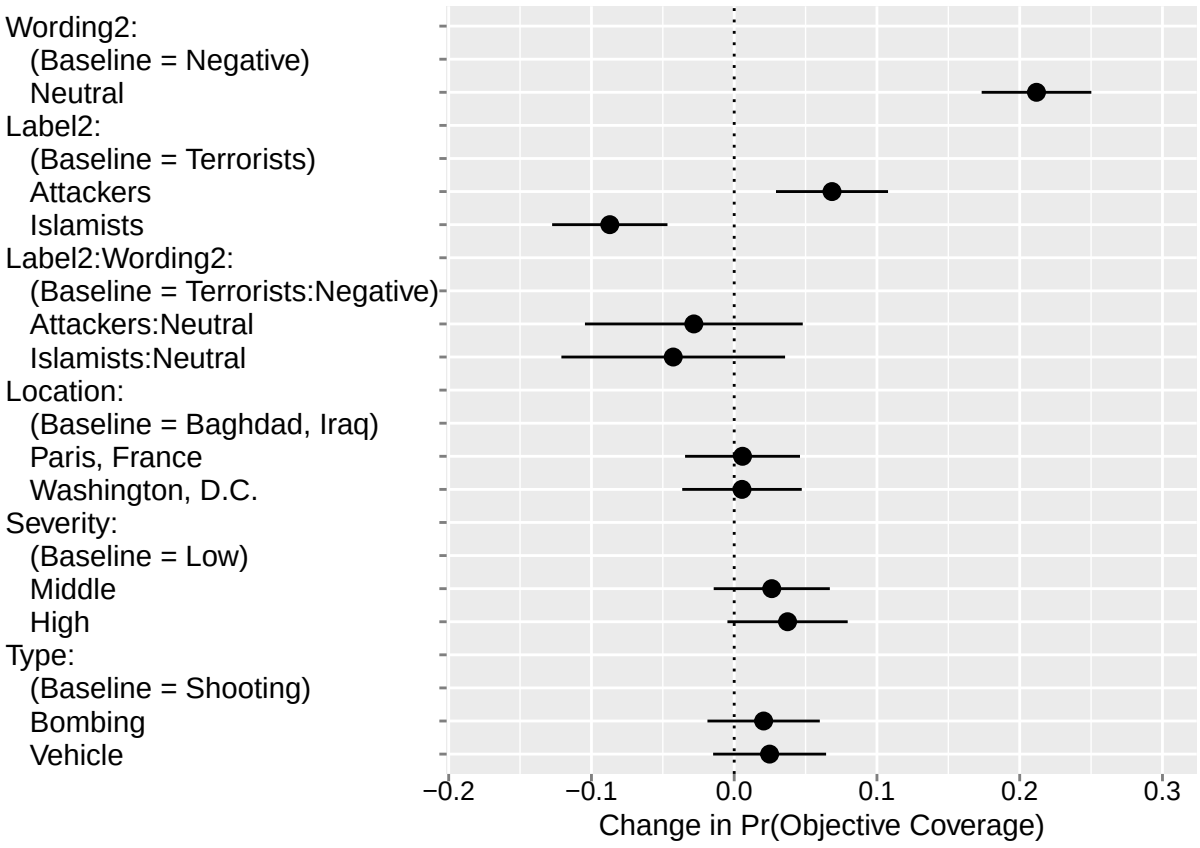



```
model6_c <- amce(Credib2 ~ Wording2 + Label2 + Location + Severity + Type +
                   Wording2*Label2,
                 data = medord, cluster = T, respondent.id = "ResponseId",
                 design = "uniform")
summary(model6_c)
```

```
## ------------------------------------------
## Average Marginal Component Effects (AMCE):
## ------------------------------------------
##  Attribute            Level   Estimate Std. Err  z value   Pr(>|z|)
##     Label2        Attackers  0.0685169 0.020024  3.42167 6.2238e-04 ***
##     Label2        Islamists -0.0871335 0.020612 -4.22723 2.3659e-05 ***
##   Location    Paris, France  0.0058359 0.020534  0.28421 7.7625e-01
##   Location Washington, D.C.  0.0054551 0.021362  0.25537 7.9844e-01
##   Severity           Middle  0.0263190 0.020753  1.26821 2.0472e-01
##   Severity             High  0.0373820 0.021495  1.73913 8.2012e-02
##       Type          Bombing  0.0206222 0.020078  1.02710 3.0437e-01
##       Type          Vehicle  0.0248086 0.020185  1.22909 2.1904e-01
##   Wording2          Neutral  0.2117500 0.019596 10.80556 3.2399e-27 ***
## ---
## Number of Obs. = 3462
## ---
## Number of Respondents = 577
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05
##
## ------------------
```

```
## AMCE Baseline Levels:
## --------------------
##  Attribute         Level
##     Label2    Terrorists
##   Location Baghdad, Iraq
##   Severity           Low
##       Type      Shooting
##   Wording2      Negative
##
##
## ---------------------------------------------
## Average Component Interaction Effects (ACIE):
## ---------------------------------------------
##        Attribute             Level  Estimate Std. Err  z value Pr(>|z|)
##  Label2:Wording2 Attackers:Neutral -0.028264 0.038926 -0.72609  0.46779
##  Label2:Wording2 Islamists:Neutral -0.042704 0.039975 -1.06826  0.28540
## ---
## Number of Obs. = 3462
## Number of Respondents = 577
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05
##
## --------------------
## ACIE Baseline Levels:
## --------------------
##        Attribute               Level
##  Label2:Wording2 Terrorists:Negative
```

```
plot.amce(model6_c,
          group.order = c("Wording2", "Label2", "Label2:Wording2", "Location",
                          "Severity", "Type"),
          colors = "black",
          xlab = "Change in Pr(Objective Coverage)")
```



Summary table of sample demographics

```
covs <- c("age", "ideol", "party", "gender", "educ", "relig", "resid")

newsum <- qsummary(medord[,covs],
                   numeric_summaries = list("Minimum" = "~ min(%s)",
                                            "Median" = "~ median(%s)",
                                            "Mean" = "~ mean(%s)",
                                            "Maximum" = "~ max(%s)"),
                   n_perc_args = list(digits = 1, show_symbol = FALSE)
                   )

# paste into LaTeX
# summary_table(medord[,covs], newsum)
```