Pilot Preliminary Analysis

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Prerequisites

Load the required libraries

```
library(lubridate)
library(plyr)
library(reshape2)
```

Load the data:

```
setwd('~/datasci/W241/w241-political-news/')
raw_data <- read.csv("241_Project__Pilot_mTurk.csv", na.strings='')
```

Data Cleaning

The most interesting decision is which observations to keep. We keep only people who took > 100 seconds to complete the survey, as an indicator of actual well-considered responses.

```
perform_data_cleaning <- function (raw_data) {

  # Not used in at runtime, but useful for debugging this function
  questions <- raw_data[1,]

  # Remove the question text row
  working_data <- raw_data[ 2:nrow(raw_data), ]

  start_time <- ymd_hms(working_data$V8)
  completion_time <- ymd_hms(working_data$V9)
  working_data$time_taken <- as.numeric( completion_time - start_time )

  working_data <- working_data[ working_data$time_taken > 100, ]

  working_data <- rename(working_data, c(
    "Q18_4" = "agreement_fox_correctly_labeled",
    "Q20_7" = "agreement_fox_counter_labeled",
    "Q18_5" = "credibility_fox_correctly_labeled",
    "Q20_9" = "credibility_fox_counter_labeled",
    "Q19_4" = "agreement_huff_correctly_labeled",
    "Q18_6" = "agreement_huff_counter_labeled",
    "Q19_5" = "credibility_huff_correctly_labeled",
    "Q18_7" = "credibility_huff_counter_labeled"
  ))

  likert <- levels(working_data$agreement_fox_correctly_labeled)
```

```r
likert_order <- c("Strongly Disagree", "Disagree", "Neither Agree nor Disagree", "Agree", "Strongly Ag
to_likert_factor <- function(ratings) {
  return(
    factor(likert[ratings], levels=likert_order)
  )
}

merge_responses <- function (correctly_labeled, counter_labeled) {
  return(ifelse(
    is.na(counter_labeled), correctly_labeled, counter_labeled
  ))
}

agreement_fox_raw <- merge_responses(
  working_data$agreement_fox_correctly_labeled,
  working_data$agreement_fox_counter_labeled
)

credibility_fox_raw <- merge_responses(
  working_data$credibility_fox_correctly_labeled,
  working_data$credibility_fox_counter_labeled
)

agreement_huff_raw <- merge_responses(
  working_data$agreement_huff_correctly_labeled,
  working_data$agreement_huff_counter_labeled
)

credibility_huff_raw <- merge_responses(
  working_data$credibility_huff_correctly_labeled,
  working_data$credibility_huff_counter_labeled
)

working_data$agreement_fox <- to_likert_factor(agreement_fox_raw)
working_data$credibility_fox <- to_likert_factor(credibility_fox_raw)
working_data$agreement_huff <- to_likert_factor(agreement_huff_raw)
working_data$credibility_huff <- to_likert_factor(credibility_huff_raw)

working_data <- rename(working_data, c(
  "Q1" = "party_dem_ind_rep",
  "Q2" = "raw_party_loyalty",
  "Q2.1" = "party_dem_rep"
))

party <- working_data$party_dem_ind_rep

##Assign Independents which party they feel more affiliated to
party[party=="Independent"] <- working_data$party_dem_rep[
  !is.na(working_data$party_dem_rep)
]

working_data$party <- factor(party)
```

```
  party_loyalty <- working_data$raw_party_loyalty

  party_loyalty[is.na(party_loyalty)] <- "Weak"
  working_data$party_loyalty <- factor(party_loyalty, levels=c("Weak", "Moderate", "Strong"))

  working_data$treatment <- ifelse(is.na(working_data$agreement_fox_counter_labeled), 0, 1)

  return(
    working_data[,c(
      "mTurkCode",
      "treatment",
      "agreement_huff",
      "credibility_huff",
      "agreement_fox",
      "credibility_fox",
      "party",
      "party_loyalty"
    )]
  )
}

clean_data <- perform_data_cleaning(raw_data)
```

Show a small sample of the resulting data:

```
head(clean_data)
```

```
##   mTurkCode treatment             agreement_huff
## 2   8552433         0                      Agree
## 4   7102945         1 Neither Agree nor Disagree
## 6   8765568         0                      Agree
## 7   9544771         1                      Agree
## 8   9765661         1 Neither Agree nor Disagree
## 9   2646531         0                      Agree
##              credibility_huff              agreement_fox
## 2                       Agree                      Agree
## 4 Neither Agree nor Disagree Neither Agree nor Disagree
## 6                       Agree Neither Agree nor Disagree
## 7                       Agree                      Agree
## 8                    Disagree                      Agree
## 9 Neither Agree nor Disagree                      Agree
##               credibility_fox      party party_loyalty
## 2                       Agree Republican      Moderate
## 4 Neither Agree nor Disagree   Democrat          Weak
## 6 Neither Agree nor Disagree   Democrat        Strong
## 7                       Agree   Democrat      Moderate
## 8                       Agree   Democrat      Moderate
## 9                       Agree Republican          Weak
```

Some key model specifications (courtesy of Sho):

```r
summary(lm(as.numeric(agreement_fox) ~ party + party_loyalty + treatment, data=clean_data))
```

```
##
## Call:
## lm(formula = as.numeric(agreement_fox) ~ party + party_loyalty +
##     treatment, data = clean_data)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -2.2377 -0.5248  0.4278  0.6354  1.7623
##
## Coefficients:
##                       Estimate Std. Error t value Pr(>|t|)
## (Intercept)            3.52479    0.14026  25.131   <2e-16 ***
## partyRepublican       -0.20760    0.14686  -1.414   0.1594
## party_loyaltyModerate  0.04738    0.15957   0.297   0.7669
## party_loyaltyStrong   -0.33575    0.18514  -1.813   0.0717 .
## treatment             -0.07949    0.14129  -0.563   0.5745
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.8872 on 158 degrees of freedom
## Multiple R-squared:  0.04067,    Adjusted R-squared:  0.01638
## F-statistic: 1.674 on 4 and 158 DF,  p-value: 0.1585
```

```r
summary(lm(as.numeric(credibility_fox) ~ party + party_loyalty + treatment, data=clean_data))
```

```
##
## Call:
## lm(formula = as.numeric(credibility_fox) ~ party + party_loyalty +
##     treatment, data = clean_data)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -2.5324 -0.5612  0.3250  0.6495  1.8104
##
## Coefficients:
##                       Estimate Std. Error t value Pr(>|t|)
## (Intercept)            3.56121    0.14402  24.726   <2e-16 ***
## partyRepublican       -0.34276    0.15080  -2.273   0.0244 *
## party_loyaltyModerate  0.14261    0.16385   0.870   0.3854
## party_loyaltyStrong   -0.21070    0.19011  -1.108   0.2694
## treatment             -0.02881    0.14508  -0.199   0.8429
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.911 on 158 degrees of freedom
## Multiple R-squared:  0.05022,    Adjusted R-squared:  0.02617
## F-statistic: 2.088 on 4 and 158 DF,  p-value: 0.08481
```

```r
summary(lm(as.numeric(agreement_huff) ~ party + party_loyalty + treatment, data=clean_data))
```

```
##
## Call:
## lm(formula = as.numeric(agreement_huff) ~ party + party_loyalty +
##     treatment, data = clean_data)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -2.8796 -0.5797  0.2327  0.4203  1.4596
##
## Coefficients:
##                       Estimate Std. Error t value Pr(>|t|)
## (Intercept)            3.80049    0.13844  27.451   <2e-16 ***
## partyRepublican        0.11841    0.14496   0.817    0.415
## party_loyaltyModerate -0.03931    0.15751  -0.250    0.803
## party_loyaltyStrong    0.06921    0.18275   0.379    0.705
## treatment             -0.22081    0.13946  -1.583    0.115
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.8757 on 158 degrees of freedom
## Multiple R-squared:  0.02006,    Adjusted R-squared:  -0.004746
## F-statistic: 0.8087 on 4 and 158 DF,  p-value: 0.5213
```

```
summary(lm(as.numeric(credibility_huff) ~ party + party_loyalty + treatment, data=clean_data))
```

```
##
## Call:
## lm(formula = as.numeric(credibility_huff) ~ party + party_loyalty +
##     treatment, data = clean_data)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -2.8606 -0.5869  0.1765  0.6171  1.6542
##
## Coefficients:
##                       Estimate Std. Error t value Pr(>|t|)
## (Intercept)            3.5869     0.1528  23.481   <2e-16 ***
## partyRepublican        0.2366     0.1599   1.480    0.141
## party_loyaltyModerate  0.0371     0.1738   0.213    0.831
## party_loyaltyStrong    0.3170     0.2016   1.572    0.118
## treatment             -0.2411     0.1539  -1.567    0.119
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.9663 on 158 degrees of freedom
## Multiple R-squared:  0.04149,    Adjusted R-squared:  0.01723
## F-statistic:  1.71 on 4 and 158 DF,  p-value: 0.1504
```

AP Score imputation

First we'll need a utility function to calculate the label from a source vector and a treatment assignment vector.

```
compute_label <- function(source, treatment) {
  counter_source <- ifelse(source == "Huff", "Fox", "Huff")
  return(factor(
    ifelse(
      treatment == 1,
      counter_source,
      as.character(source))
  ))
}
```

Since we did not ask the AP question directly in the pilot, impute AP as halfway between the Fox and HuffPo scores.

Then we measure the difference between the score of each source (Fox, HuffPo) against the imputed AP rating as the lift for that source.

Let's look at the imputed agreement ratings.

```
impute_agreement <- function(clean_data) {
  mTurkCode <- clean_data$mTurkCode
  treatment <- clean_data$treatment
  agreement_fox <- as.numeric(clean_data$agreement_fox)
  agreement_huff <- as.numeric(clean_data$agreement_huff)
  imputed_agreement_ap <- ( agreement_fox + agreement_huff ) / 2.0

  party <- clean_data$party
  party_loyalty <- clean_data$party_loyalty

  imputed_agreement <- data.frame(
    mTurkCode = mTurkCode,
    treatment = treatment,
    party = party,
    party_loyalty = party_loyalty,
    imputed_ap = imputed_agreement_ap,
    Fox = agreement_fox - imputed_agreement_ap,
    Huff = agreement_huff - imputed_agreement_ap
  )

  return(melt(
    imputed_agreement,
    id.vars = c("mTurkCode", "treatment", "party", "party_loyalty", "imputed_ap"),
    measure.vars = c("Fox", "Huff"),
    variable.name = "source",
    value.name = "lift"
  ))
}

imputed_agreement <- impute_agreement(clean_data)
imputed_agreement$label <- compute_label(imputed_agreement$source, imputed_agreement$treatment)

head(imputed_agreement)
```

```
##   mTurkCode treatment      party party_loyalty imputed_ap source lift
## 1   8552433         0 Republican      Moderate        4.0    Fox  0.0
```

```
## 2   7102945         1   Democrat          Weak        3.0    Fox  0.0
## 3   8765568         0   Democrat        Strong        3.5    Fox -0.5
## 4   9544771         1   Democrat      Moderate        4.0    Fox  0.0
## 5   9765661         1   Democrat      Moderate        3.5    Fox  0.5
## 6   2646531         0 Republican          Weak        4.0    Fox  0.0
##   label
## 1   Fox
## 2  Huff
## 3   Fox
## 4  Huff
## 5  Huff
## 6   Fox
```

Agreement Model specifications

The first interesting spec is the lift by source and party

```
summary(lm( lift ~ source + party + source:party, data = imputed_agreement ))
```

```
##
## Call:
## lm(formula = lift ~ source + party + source:party, data = imputed_agreement)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -1.7857 -0.3645  0.0000  0.3645  1.7857
##
## Coefficients:
##                            Estimate Std. Error t value Pr(>|t|)
## (Intercept)                -0.13551    0.06246  -2.170  0.03078 *
## sourceHuff                  0.27103    0.08834   3.068  0.00234 **
## partyRepublican            -0.15020    0.10657  -1.409  0.15967
## sourceHuff:partyRepublican  0.30040    0.15071   1.993  0.04708 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.6461 on 322 degrees of freedom
## Multiple R-squared:  0.08863,    Adjusted R-squared:  0.08014
## F-statistic: 10.44 on 3 and 322 DF,  p-value: 1.428e-06
```

Strange conclusions:

(a) HuffPo is significantly more agreed with, and
(b) especially by Republicans (very counter-intuitive)

Then we add the label to the regression

```
summary(lm( lift ~ source + party + source:party + label, data = imputed_agreement ))
```

```
##
## Call:
```

```
## lm(formula = lift ~ source + party + source:party + label, data = imputed_agreement)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -1.8167 -0.3371  0.0000  0.3371  1.8167
##
## Coefficients:
##                            Estimate Std. Error t value Pr(>|t|)
## (Intercept)                -0.16292    0.07061  -2.307  0.02168 *
## sourceHuff                  0.26600    0.08858   3.003  0.00289 **
## partyRepublican            -0.15379    0.10670  -1.441  0.15050
## labelHuff                   0.05984    0.07179   0.834  0.40518
## sourceHuff:partyRepublican  0.30757    0.15103   2.037  0.04252 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.6464 on 321 degrees of freedom
## Multiple R-squared:  0.0906, Adjusted R-squared:  0.07926
## F-statistic: 7.995 on 4 and 321 DF,  p-value: 3.731e-06
```

With a p-value of 0.40, nowhere near significance. Then we add the label:source interaction:

```
summary(lm( lift ~ source + party + source:party + label + label:source, data = imputed_agreement ))
```

```
##
## Call:
## lm(formula = lift ~ source + party + source:party + label + label:source,
##     data = imputed_agreement)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -1.8167 -0.3371  0.0000  0.3371  1.8167
##
## Coefficients:
##                              Estimate Std. Error t value Pr(>|t|)
## (Intercept)                -1.629e-01  7.801e-02  -2.088   0.0376 *
## sourceHuff                  2.660e-01  1.142e-01   2.329   0.0205 *
## partyRepublican            -1.538e-01  1.070e-01  -1.438   0.1515
## labelHuff                   5.984e-02  1.017e-01   0.588   0.5566
## sourceHuff:partyRepublican  3.076e-01  1.513e-01   2.033   0.0428 *
## sourceHuff:labelHuff        9.863e-17  1.438e-01   0.000   1.0000
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.6474 on 320 degrees of freedom
## Multiple R-squared:  0.0906, Adjusted R-squared:  0.07639
## F-statistic: 6.376 on 5 and 320 DF,  p-value: 1.159e-05
```

And finally the label:source:party interaction:

```
summary(lm( lift ~ source + party + source:party + label + label:source:party, data = imputed_agreement
```

```
##
```

```
## Call:
## lm(formula = lift ~ source + party + source:party + label + label:source:party,
##     data = imputed_agreement)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -1.7593 -0.3103  0.0000  0.3103  1.7593
##
## Coefficients: (1 not defined because of singularities)
##                                       Estimate Std. Error t value
## (Intercept)                         -1.897e-01  8.511e-02  -2.228
## sourceHuff                           2.611e-01  1.258e-01   2.076
## partyRepublican                     -6.960e-02  1.510e-01  -0.461
## labelHuff                           -5.109e-02  1.733e-01  -0.295
## sourceHuff:partyRepublican           3.085e-01  2.142e-01   1.441
## sourceFox:partyDemocrat:labelHuff    1.693e-01  2.142e-01   0.791
## sourceHuff:partyDemocrat:labelHuff   1.693e-01  2.142e-01   0.791
## sourceFox:partyRepublican:labelHuff  9.448e-17  2.452e-01   0.000
## sourceHuff:partyRepublican:labelHuff         NA         NA      NA
##                                     Pr(>|t|)
## (Intercept)                           0.0266 *
## sourceHuff                            0.0387 *
## partyRepublican                       0.6452
## labelHuff                             0.7684
## sourceHuff:partyRepublican            0.1507
## sourceFox:partyDemocrat:labelHuff     0.4298
## sourceHuff:partyDemocrat:labelHuff    0.4298
## sourceFox:partyRepublican:labelHuff   1.0000
## sourceHuff:partyRepublican:labelHuff      NA
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.6482 on 318 degrees of freedom
## Multiple R-squared:  0.09416,    Adjusted R-squared:  0.07422
## F-statistic: 4.722 on 7 and 318 DF,  p-value: 4.633e-05
```

Imputed Credibility

Then we also impute the credibility:

```
impute_credibility <- function(clean_data) {
  mTurkCode <- clean_data$mTurkCode
  treatment <- clean_data$treatment
  credibility_fox <- as.numeric(clean_data$credibility_fox)
  credibility_huff <- as.numeric(clean_data$credibility_huff)
  imputed_credibility_ap <- ( credibility_fox + credibility_huff ) / 2.0

  party <- clean_data$party
  party_loyalty <- clean_data$party_loyalty

  imputed_credibility <- data.frame(
    mTurkCode = mTurkCode,
    treatment = treatment,
```

```
    party = party,
    party_loyalty = party_loyalty,
    imputed_ap = imputed_credibility_ap,
    Fox = credibility_fox - imputed_credibility_ap,
    Huff = credibility_huff - imputed_credibility_ap
  )

  return(melt(
    imputed_credibility,
    id.vars = c("mTurkCode", "treatment", "party", "party_loyalty", "imputed_ap"),
    measure.vars = c("Fox", "Huff"),
    variable.name = "source",
    value.name = "lift"
  ))
}

imputed_credibility <- impute_credibility(clean_data)
imputed_credibility$label <- compute_label(imputed_credibility$source, imputed_credibility$treatment)

head(imputed_credibility)
```

```
##   mTurkCode treatment      party party_loyalty imputed_ap source lift
## 1   8552433         0 Republican      Moderate        4.0    Fox  0.0
## 2   7102945         1   Democrat          Weak        3.0    Fox  0.0
## 3   8765568         0   Democrat        Strong        3.5    Fox -0.5
## 4   9544771         1   Democrat      Moderate        4.0    Fox  0.0
## 5   9765661         1   Democrat      Moderate        3.0    Fox  1.0
## 6   2646531         0 Republican          Weak        3.5    Fox  0.5
##   label
## 1   Fox
## 2  Huff
## 3   Fox
## 4  Huff
## 5  Huff
## 6   Fox
```

First spec, lift by source and party:

```
summary(lm( lift ~ source + party + source:party, data = imputed_credibility ))
```

```
##
## Call:
## lm(formula = lift ~ source + party + source:party, data = imputed_credibility)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -1.7768 -0.4953  0.0000  0.4953  1.7768
##
## Coefficients:
##                             Estimate Std. Error t value Pr(>|t|)
## (Intercept)                -0.004673   0.067593  -0.069 0.944927
## sourceHuff                  0.009346   0.095591   0.098 0.922177
```

```
## partyRepublican            -0.272113   0.115320  -2.360 0.018889 *
## sourceHuff:partyRepublican  0.544226   0.163086   3.337 0.000946 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.6992 on 322 degrees of freedom
## Multiple R-squared:  0.05172,    Adjusted R-squared:  0.04288
## F-statistic: 5.854 on 3 and 322 DF,  p-value: 0.000666
```

Again, strange conclusions:

(a) Republicans more likely to give credibility to the source
(b) especially by HuffPo (very counter-intuitive)

Then we add the label to the regression

```
summary(lm( lift ~ source + party + source:party + label, data = imputed_credibility ))
```

```
##
## Call:
## lm(formula = lift ~ source + party + source:party + label, data = imputed_credibility)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -1.8248 -0.4529  0.0000  0.4529  1.8248
##
## Coefficients:
##                             Estimate Std. Error t value Pr(>|t|)
## (Intercept)                -0.047095   0.076325  -0.617 0.537648
## sourceHuff                  0.001554   0.095751   0.016 0.987062
## partyRepublican            -0.277663   0.115337  -2.407 0.016630 *
## labelHuff                   0.092637   0.077595   1.194 0.233421
## sourceHuff:partyRepublican  0.555326   0.163244   3.402 0.000754 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.6987 on 321 degrees of freedom
## Multiple R-squared:  0.05591,    Adjusted R-squared:  0.04414
## F-statistic: 4.752 on 4 and 321 DF,  p-value: 0.000974
```

With a p-value of 0.23, still not significant. Then we add the label:source interaction:

```
summary(lm( lift ~ source + party + source:party + label + label:source, data = imputed_credibility ))
```

```
##
## Call:
## lm(formula = lift ~ source + party + source:party + label + label:source,
##     data = imputed_credibility)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -1.8248 -0.4529  0.0000  0.4529  1.8248
```

```
##
## Coefficients:
##                              Estimate Std. Error t value Pr(>|t|)
## (Intercept)                -4.710e-02  8.432e-02  -0.559 0.576886
## sourceHuff                  1.554e-03  1.234e-01   0.013 0.989964
## partyRepublican            -2.777e-01  1.156e-01  -2.402 0.016889 *
## labelHuff                   9.264e-02  1.099e-01   0.843 0.399938
## sourceHuff:partyRepublican  5.553e-01  1.635e-01   3.397 0.000769 ***
## sourceHuff:labelHuff        2.219e-16  1.554e-01   0.000 1.000000
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.6998 on 320 degrees of freedom
## Multiple R-squared:  0.05591,    Adjusted R-squared:  0.04116
## F-statistic:  3.79 on 5 and 320 DF,  p-value: 0.002385
```

And finally the label:source:party interaction:

```
summary(lm( lift ~ source + party + source:party + label + label:source:party, data = imputed_credibili
```

```
##
## Call:
## lm(formula = lift ~ source + party + source:party + label + label:source:party,
##     data = imputed_credibility)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -1.8148 -0.4483  0.0000  0.4483  1.8148
##
## Coefficients: (1 not defined because of singularities)
##                                       Estimate Std. Error t value
## (Intercept)                         -5.172e-02  9.217e-02  -0.561
## sourceHuff                           7.037e-04  1.362e-01   0.005
## partyRepublican                     -2.631e-01  1.635e-01  -1.609
## labelHuff                            7.344e-02  1.877e-01   0.391
## sourceHuff:partyRepublican           5.555e-01  2.319e-01   2.395
## sourceFox:partyDemocrat:labelHuff    2.931e-02  2.319e-01   0.126
## sourceHuff:partyDemocrat:labelHuff   2.931e-02  2.319e-01   0.126
## sourceFox:partyRepublican:labelHuff  3.044e-16  2.655e-01   0.000
## sourceHuff:partyRepublican:labelHuff         NA         NA      NA
##                                     Pr(>|t|)
## (Intercept)                           0.5751
## sourceHuff                            0.9959
## partyRepublican                       0.1087
## labelHuff                             0.6959
## sourceHuff:partyRepublican            0.0172 *
## sourceFox:partyDemocrat:labelHuff     0.8995
## sourceHuff:partyDemocrat:labelHuff    0.8995
## sourceFox:partyRepublican:labelHuff   1.0000
## sourceHuff:partyRepublican:labelHuff      NA
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
```

```
## Residual standard error: 0.702 on 318 degrees of freedom
## Multiple R-squared:  0.056,  Adjusted R-squared:  0.03522
## F-statistic: 2.695 on 7 and 318 DF,  p-value: 0.01002
```