

# W203: Statistics for Data Science

## Lab 2: Comparing Means

Joshua Noble

Praveen Joseph

Jill Cheney

### Abstract

Hypothesis testing of parametric and non-parametric data sets represent key tasks evaluated within this lab. Frequentist statistics techniques are used to answer a series of questions derived from the ANES 2018 Pilot Study. Key aspects evaluated include the identification of relevant assumptions, development of null & alternative hypotheses and the assessment of statistical & practical significance.

### Overview

The mission of the American National Election Studies (ANES) is to advance the scientific study of public opinion and political behavior. They accomplish this by developing and employing surveys that measure many variables and support rich hypothesis testing to assess voter turnout and vote choice. The origins of their analysis started with a nation opinion survey conducted at the University of Michigan's Survey Research Center with the 1948 presidential election. They continued to conduct surveys in every presidential election year through 2004. In 2006, Stanford University's Institute for Research in the Social Sciences and the University of Michigan's Institute for Social Research developed a partnership which maintains and evolves the ANES.

Through the decades, Time Series studies conducted before and after presidential elections represent the focus of ANES studies. Typically collection occurs via face-to-face interviews with respondents in their homes. Pilot Studies are used to test and refine new questions for the Time Series. These supporting studies are conducted telephonically. The data assessed in this lab is from the 2018 Pilot Study.

ANES studies use procedures known as complex sampling instead of simple random sampling. Some of the key methods that make ANES samples complex include:

- Oversampling.
- Stratified cluster sampling.
- Within household sampling.

```
setwd("C:/Users/winbase/MIDS/w203/lab_2-master")
anes_data = read.csv("anes_pilot_2018.csv")
library(knitr)
opts_chunk$set(tidy.opts=list(width.cutoff=50),tidy=TRUE)
```

## 1. Do US voters have more respect for the police or for journalists?

### Overview.

Within the ANES pilot questions, two specific ones directly support the posed question:

- How would you rate the police?
- How would you rate journalists?

Though these questions do not provide a holistic assessment of public opinion, they do provide a start point for an initial perspective on opinion trends.

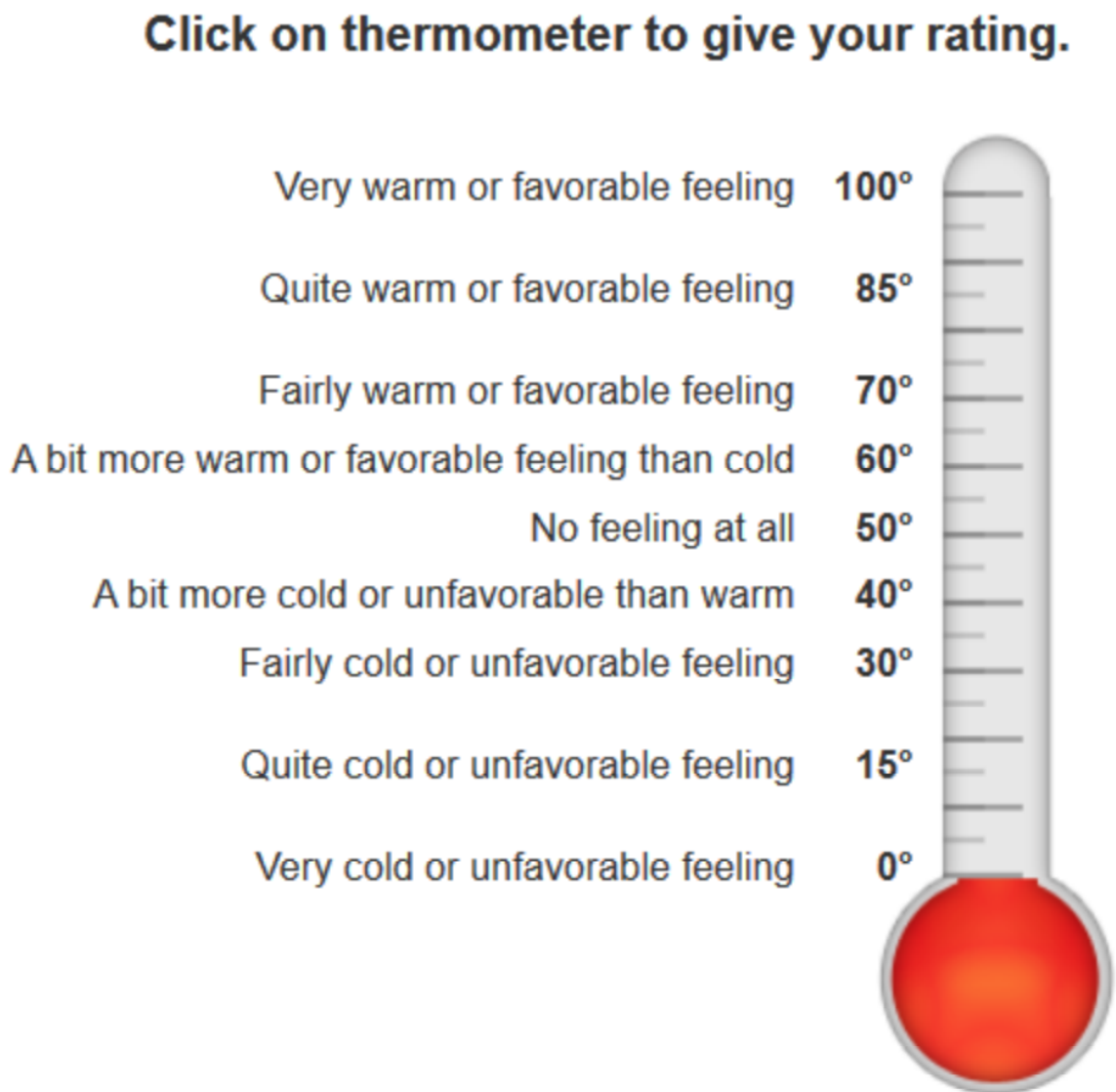


Figure 1: 2018 ANES Feeling Thermometer

### Operationalization.

The context of these questions was in a 'feeling thermometer', as depicted in Figure 1. Using this approach, each respondent provides a numerical value which is in a categorical range from 0 to 100. An issue with

these questions is that they are structured to assess ‘feelings towards’ instead of ‘respect for’. A further feature of this thermometer is the varied interpretation of the scale by respondents.

Values existed for all respondents for these two questions. The expected range of the data for each of these survey questions is [0,100]. The police data meets this criteria; however, the press data does not. This question possesses negative values, which indicates these was no respondent answer. To prevent the results from being skewed by these values, the responses associated with those respondents were not included in the analysis. Using this approach, the overall number of respondents reduced by 2. The final data set analysed possessed data from 2498 respondents with values from 0 to 100 for both the press and police questions.

### Exploratory Data Analysis.

```
press = anes_data$ftjournal
police = anes_data$ftpolice
press_range = range(press) # press_range # [-7,100]
police_range = range(police) # police_range # [0,100]
trust_data = data.frame(police,press)
# subset(press_data, press == -7)
# press_data = press_data[!subset(press_data, press == -7)]
trust_data = trust_data[-c(51),] # delete row with -7 value
trust_data = trust_data[-c(597),] # delete row with -7 value
```

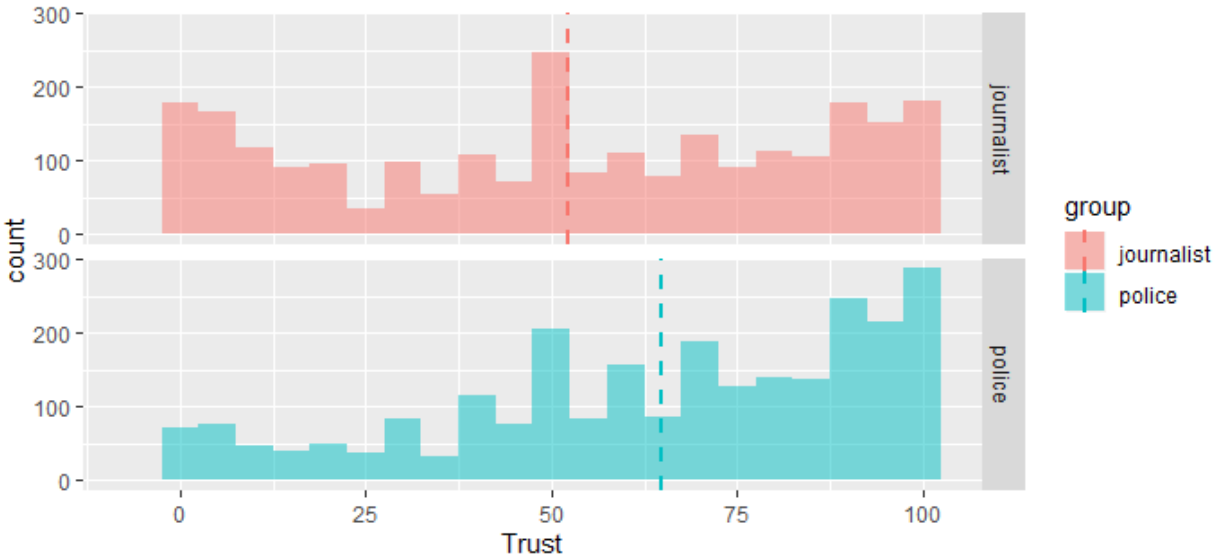


Figure 2: Journalist Police Trust

### Analysis

Though the data is numerical in nature, individuals will use different scales when assessing their relative values on the thermometer. Consequently, a linear relationship cannot be assumed to exist between the values. This data feature supports the use of a non-parametric hypothesis test - namely the Wilcoxon Rank-Sum Test. Employing the Hypothesis of Means for  $H_0$  for this analysis capitalizes on the metric scale that the thermometer context provides. For this question, the hypotheses tested were:

- Null: The means of the two groups is the same.  $H_0 : E(Press) = E(Police)$
- Alternative: The means of the two groups are not the same.  $H_A : E(Press) \neq E(Police)$

```
x = trust_data$police # police data
y = trust_data$press # press data
# length(x); length(y)
wilcox.test(x,y, paired = FALSE, mu = 0, conf.level = 0.95)
```

```
##
## Wilcoxon rank sum test with continuity correction
##
## data: x and y
## W = 3800504, p-value < 2.2e-16
## alternative hypothesis: true location shift is not equal to 0
```

### Outcome.

**Statistical Significance.** The p-value obtained from the Wilcoxon rank-sum test supports rejecting the null hypotheses - namely that there is no translation in the distributions of public opinion of the police and the press.

**Practical Significance.** Spearman's rank correlation coefficient represents an effective way to assess the practical significance of the police and press analysis. It provides a non-parametric measure of rank correlation, which aligns to the hypothesis test.

```
cor(x,y, method = "spearman")
```

```
## [1] -0.1233844
```

- The values for Spearman's Rank-Order Correlation,  $r_s$ , can take on the values from +1 to -1.  $r_s$  has the following associations:
  - +1: perfect association of ranks
  - 0: no association between the ranks
  - -1: perfect negative association of ranks.

The  $r_s$  value obtained from this test was -0.123. This indicates a weak negative correlation between the public opinion of the press and the police.

As for which group, police or journalists, is more respected by US voters, our analysis indicates that the average level of trust is higher for police than journalists.

## 2. Are Republican voters older or younger than Democratic voters?

### Overview.

Of keen interest in politics is the age of voters. This has emerged as a topic of interest with the public as it relates to enhanced gun control laws. Youth affected by school mass shootings have opened the debate on whether the federal voting age in the United States should be lowered from 18 to 16. The 26th Amendment to the US Constitution establishes the voting age. Though it was originally set at 21 years of age, a student movement in the 1960s in the midst of the Vietnam War lobbied for the age to be dropped to 18. Armed with the slogan: 'old enough to fight, old enough to vote', the movement successfully lobbied Congress to lower the voting age to 18 for national elections.

### Operationalization.

Two entries within the survey directly support establishing a frame for this question. These two questions are:

- What year were you born?
- Generally speaking, do you usually think of yourself as a Democrat, a Republican, an Independent, or what?

Together, these questions, along with the assumption that surveyed individuals provided truthful data for these questions, creates an informed estimate for approaching the question of which party has older voters. The age of the respondent is a numerical value which subtracts 2018 from the provided respondent birth year. Their party affiliation is categorical, and is a best estimate assessment of an individual's political association.

### Exploratory Data Analysis.

This type of data supports using the independent sample t-test. One set of data is numerical (respondents' ages), and the other is categorical (Republican or Democrat). With this test, we conducted a comparison of means. The hypotheses being tested were:

$$H_0 : E(\text{Republicans}) = E(\text{Democrats})$$

$$H_A : E(\text{Republicans}) \neq E(\text{Democrats})$$

Assumptions needed for this analysis include:

- Metric scale. The age data meets this assumption.
- Each value pair is drawn independent of other pairs from the same distribution.
- The two variables have the same distribution, just with some potential shift.

```
partisans = anes_data[which(anes_data$pid1d == c(1,2)),] # 1 = democrat, 2 = republican
age = 2018 - partisans$birthyr
party = partisans$pid1d
partisanAge = data.frame(age, party)
```

### Analysis.

```
t.test(age ~ party, data = partisans)
```

```
##
## Welch Two Sample t-test
##
## data: age by party
## t = -0.60281, df = 347.32, p-value = 0.547
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -4.450148 2.362228
```

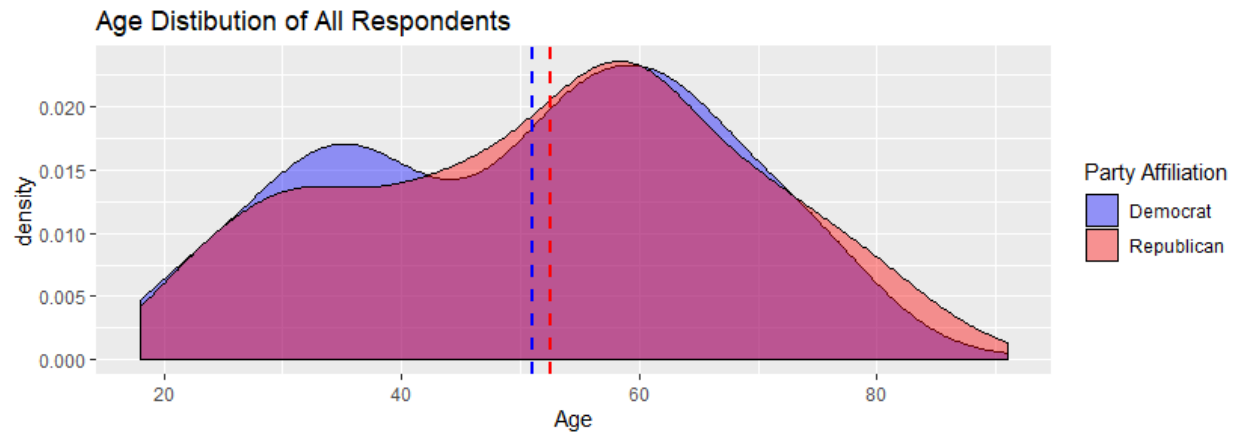


Figure 3: All Respondents

```
## sample estimates:
## mean in group 1 mean in group 2
##      51.74771      52.79167
```

**Statistical significance.** The high p-value from this test, 0.547 indicates that the null hypothesis cannot be rejected.

**Practical significance.** The Cohen's d test supports determining the effect size for the analysis. With this test, the outcome value ( $d = -0.0624$ ) indicates that there is only a small effect present with this test.

```
library(effsize)
cohen.d(age ~ party, data = partisans)
```

```
## Warning in cohen.d.formula(age ~ party, data = partisans): Cohercing rhs of
## formula to factor
```

```
##
## Cohen's d
##
## d estimate: -0.06240283 (negligible)
## 95 percent confidence interval:
##      lower      upper
## -0.2643016  0.1394960
```

Thus far, we have only addressed individuals who identified themselves as either Republicans or Democrats. What has yet to be addressed is whether they voted. One of the survey questions captures whether respondents voted in the election held the month prior (November 2018). Integrating this criteria into the dataset gives some further insights into party voters.

```
partisansVoted = partisans[which(partisans$turnout18 == c(1,2,3)),]
```

```
## Warning in partisans$turnout18 == c(1, 2, 3): longer object length is not a
## multiple of shorter object length
```

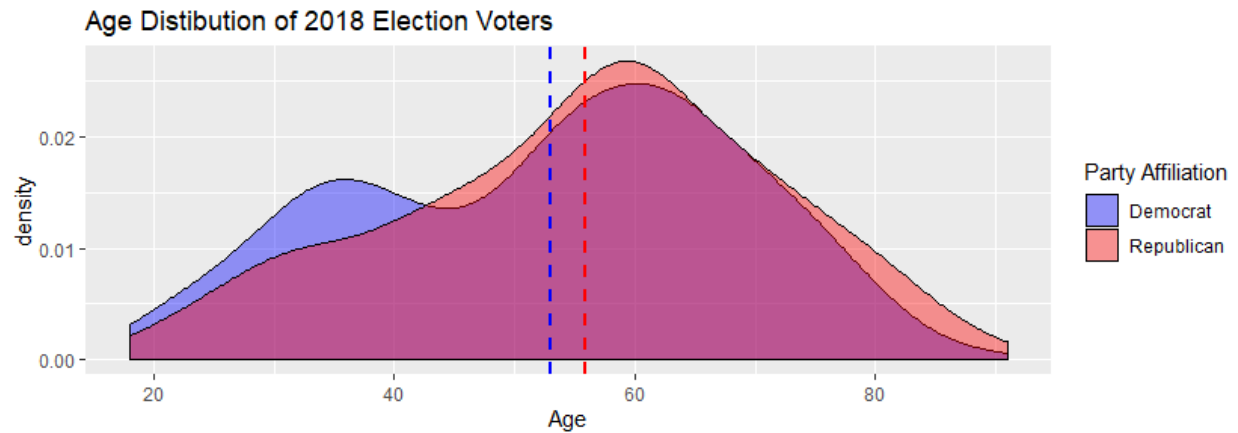


Figure 4: Voted Age Distribution

```
t.test(2018 ~ partisansVoted$birthyr ~ partisansVoted$pid1d, data = partisansVoted)
```

```
##
## Welch Two Sample t-test
##
## data: 2018 - partisansVoted$birthyr by partisansVoted$pid1d
## t = -3.3955, df = 104.02, p-value = 0.0009709
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -15.257998 -4.006959
## sample estimates:
## mean in group 1 mean in group 2
##      51.12308      60.75556
```

### Outcome.

Including the constraint of having voted in the previous month's election conveys a distinctly different picture. The p-value no longer supports not rejecting the null hypothesis. The data does not support that the difference in means is zero. A point of note is that for the Democrats, the average age between the two scenarios stayed quite constant (51.7 and 51.1). However, for the Republicans, the average age of those that voted in the November election was 8 years older than Republicans at large from the survey.

```
library(effsize)
cohen.d(2018 ~ partisansVoted$birthyr ~ partisansVoted$pid1d, data = partisansVoted)
```

```
## Warning in cohen.d.formula(2018 ~ partisansVoted$birthyr ~
## partisansVoted$pid1d, : Cohercing rhs of formula to factor
```

```
##
## Cohen's d
##
## d estimate: -0.6376504 (medium)
## 95 percent confidence interval:
##      lower      upper
## -1.0313752 -0.2439256
```

Re-assessing the practical significance of the results on the adjusted dataset with the Cohen's  $d$  test now indicates a medium effect size. These results indicate that the average age of Democrats at large in the survey and those that voted in the November 2018 election are consistent. However, Republicans that voted in the November 2018 election are on average 8 years older than Republicans at large in the survey.



### 3. Do a majority of independent voters believe that the federal investigations of Russia election interference are baseless?

#### Overview.

Prior to the 2016 presidential election, members of the US Congress publically disclosed the existence of attempted Russian interference activities. Robert Mueller, a former FBI director, led a Special Counsel Investigation from May 2017 to March 2019. the intent of this Special Counsel investigation was an investigation of Russian interference in the 2016 US elections and of suspicious links between President Trump and Russian officials. This survey occurred while Mueller's investigation was ongoing.

#### Operationalization.

Within the survey a specific section was dedicated to the Russia/Trump campaign investigation. Three questions exist on this topic, which are:

- Do you think the Russian government probably interfered in the 2016 presidential election to try and help Donald Trump win, or do you think this probably did not happen?
- Do you think Donald Trump's 2016 campaign probably coordinated with the Russians, or do you think his campaign probably did not do this?
- Do you approve, disapprove, or neither approve nor disapprove of Robert Mueller's investigation of Russian interference in the 2016 election?

The first two questions generate a binomial response. The final questions has a Likert approach to assess the respondent's opinion. No one question directly answers the question posed. Focusing on the baseless aspect, the first two questions with a binomial response option represent the best approach to evaluate for the baseless criteria of the question.

#### Exploratory Data Analysis.

```
ruusia_involvement = data.frame(anes_data$pid1d, anes_data$turnout18, anes_data$ruusia16, anes_data$coord18,
colnames(ruusia_involvement) = c("party", "voted", "ruusia_1", "ruusia_2")
ruusia_involvement= ruusia_involvement[which(ruusia_involvement$party == c(3)),] # isolate independent voters
```

```
summary(ruusia_involvement$ruusia_1)
```

```
##      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##      1.000   1.000   1.000   1.463   2.000   2.000
```

```
summary(ruusia_involvement$ruusia_2)
```

```
##      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##      1.000   1.000   2.000   1.517   2.000   2.000
```

A particularly interesting feature of the data is that the responses almost completely align to party lines.

```
library("RColorBrewer")
library(ggplot2)
partyIdentified = data.frame(anes_data[which(anes_data$pid1d > 0 & anes_data$ruusia16 > 0 & anes_data$coord18 > 0),])
ruusiaByParty = data.frame( party = partyIdentified$pid1d, ruusia = partyIdentified$ruusia16, coord = partyIdentified$coord18)
ggplot(ruusiaByParty, aes(x = ruusia, fill=factor(party), width=0.5)) + geom_bar() + scale_fill_manual(values=c("#1f77b4", "#d62728", "#2ca02c", "#9467bd", "#8c564b", "#e377c2", "#7f7f7f", "#bcbd22", "#17becf"))
```

Do you think the Russian government interfered in the 2016 election?

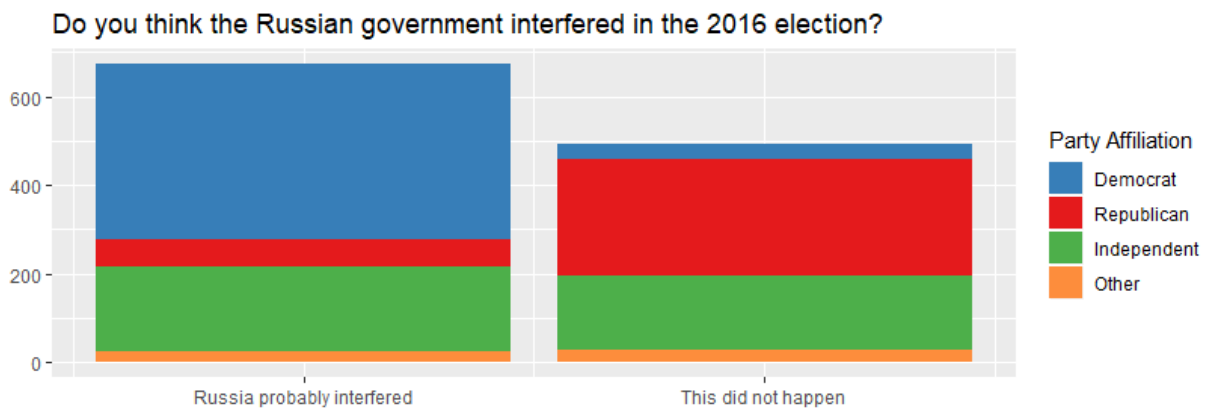
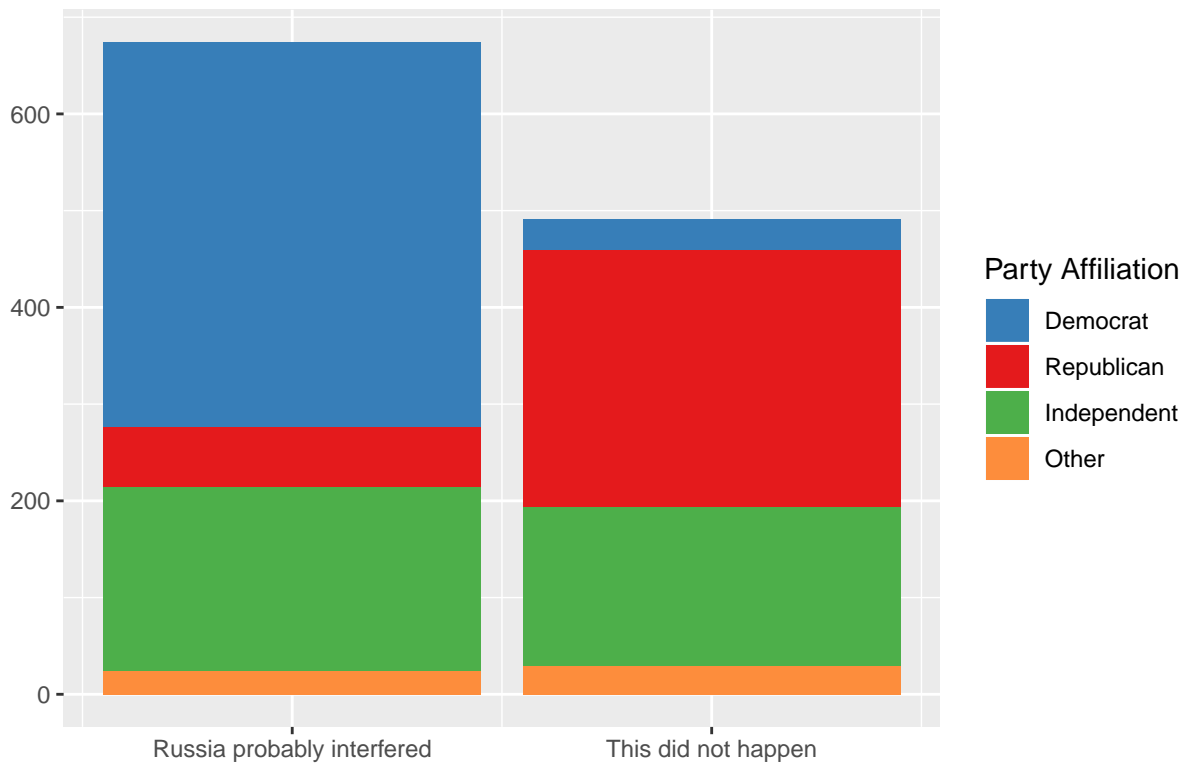


Figure 5: Russia by party

Data for respondents that voted for each of the identified parties - Republican, Democrat, and Independent, is depicted in the table below.

```
library(knitr)
library(stargazer)
```

```
##
## Please cite as:
```

```
## Hlavac, Marek (2018). stargazer: Well-Formatted Regression and Summary Statistics Tables.
```

```
## R package version 5.2.2. https://CRAN.R-project.org/package=stargazer
```

```
Independent_Russia = c(1.463, 1.517)
Democrats_Russia = c(1.056, 1.067)
Republicans_Russia = c(1.812, 1.892)
headers = c("Independent", "Democrat", "Republican")
russia_outcome = data.frame(Independent_Russia, Democrats_Russia, Republicans_Russia)
kable(russia_outcome, caption = "Russia Coordination Perception", col.names = headers)
```

Table 1: Russia Coordination Perception

Independent	Democrat	Republican
1.463	1.056	1.812
1.517	1.067	1.892

The survey respondents consistently aligned to their party affiliation - Democrats aligned to the presence of influence, while Republicans were skewed towards the opinion of no involvement. Independent affiliated respondents roughly split the difference between the two extremes. This reflects that individual responses are directly aligned to their party affiliation.

Given the binomial nature of the response data (interference/no interference), and the intent to identify a majority, a binomial test represents an effective approach to answer the question utilizing the survey data. A binomial test compares the number of successes observed in a given number of trials with a hypothesised probability of success  $p$ .

$$H_0 : p = 0.5$$

$$H_A : p \neq 0.5$$

With this alternative hypothesis, a two-tail test is done, as it is unknown if the surveyed independent voters are skewed towards either the Republican or Democrat party position.

Assumptions for the binomial test include:

- Items are dichotomous and nominal.
- The sample size is significantly less than the population size.
- The sample is a fair representation of the population.
- Sample items are independent.

By assuming that the surveyed independent voters are a fair representation of their party affiliation, all the assumptions are met for the binomial test.

### Analysis.

```
russia16_len = length(russia_involvement$russia_1)
russia16_true = sum(as.numeric(russia_involvement$russia_1) == 1)
binom.test(russia16_true, russia16_len, p = 0.50, alternative = "two.sided", conf.level = 0.95)
```

```
##
## Exact binomial test
##
## data:  russia16_true and russia16_len
```

```
## number of successes = 191, number of trials = 356, p-value = 0.1851
## alternative hypothesis: true probability of success is not equal to 0.5
## 95 percent confidence interval:
##  0.4831926 0.5892288
## sample estimates:
## probability of success
##          0.5365169

coord16_len = length(russia_involvement$russia_2)
coord16_true = sum(as.numeric(russia_involvement$russia_2) == 1)
binom.test(coord16_true, coord16_len, p = 0.5, alternative = "two.sided", conf.level = 0.95)

##
## Exact binomial test
##
## data:  coord16_true and coord16_len
## number of successes = 172, number of trials = 356, p-value = 0.56
## alternative hypothesis: true probability of success is not equal to 0.5
## 95 percent confidence interval:
##  0.4301608 0.5364139
## sample estimates:
## probability of success
##          0.4831461

cohen.d(russia_1 ~ russia_2, data = russia_involvement)

## Warning in cohen.d.formula(russia_1 ~ russia_2, data = russia_involvement):
## Cohercing rhs of formula to factor

##
## Cohen's d
##
## d estimate: -2.358133 (large)
## 95 percent confidence interval:
##      lower      upper
## -2.629642 -2.086624
```

### Outcome.

**Statistical Significance.** The large p-values,  $p = 0.1851$  and  $p = 0.5365$  for each of the binomial survey questions support not rejecting the null hypothesis.

**Practical Significance.** The Cohen's d effect size value,  $d = -2.358$ , indicates that there is a large effect present between the two survey questions.

As for whether a majority of independent voters believe that the federal investigations of Russia election interference are baseless, these two survey questions do not provide a conclusive answer to the question.

#### 4. Was anger or fear more effective at driving increases in voter turnout from 2016 to 2018?

##### Overview.

Voter turnout varies greatly by state. Many factors influence this to include:

- **Electoral Competitiveness.** Voters in the 12 most competitive states tend to turn out at a higher rate than those in the other 39 states and the District of Columbia.
- **Election Type.** Primary elections and off-year state elections consistently have low turn-outs.
- **Voting Laws.** Early voting and accessibility of polling places impact voter turnout.
- **Demographics.** Age, wealth, education, and gender all have identifiable impacts on voter turnout. Amidst all these factors, this question singles out one specifically. It seeks to understand the impact that anger and fear had on voter turnout.

##### Operationalization.

No set of survey questions directly answers this question. To approach it, two distinct parts were considered: identify voters and then identify what makes them fearful or angry. To identify voters, the questions addressing voter turnout in 2016 and 2018 provide the best initial insight on voting respondents.

Below are initial data checks for consistency:

```
summary(anes_data$turnout16)
```

```
##      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##      1.000   1.000   1.000   1.306   2.000   3.000
```

```
summary(anes_data$turnout18)
```

```
##      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##      1.000   1.000   2.000   2.392   4.000   5.000
```

There are no non-responses, only respondents who are not sure if they voted, as per the codebook. Three response options exist for the 2016 election: voted (1), didn't vote (2), and not sure (3). The 2018 question expanded the options to five in order to capture the voting of respondents: in person on 6 Nov (1), in person before 6 Nov (2), by mail (3), didn't vote (4) and not sure (5). Filtering the results for confirmed voters in 2016 and 2018, a net increase of 1 exists between 2016 and 2018. This outcome challenges the assumption in the posed question, namely the premise that voter turnout increased significantly from 2016 to 2018.

```
#get all of our voters from 2016 who are sure they voted
voters16 = anes_data[which(anes_data$turnout16 == 1),]
```

```
#get all of our voters from 2018 who are sure they voted
voters18 = anes_data[which(anes_data$turnout18 < 4),]
nrow(voters18) - nrow(voters16) # difference of voters
```

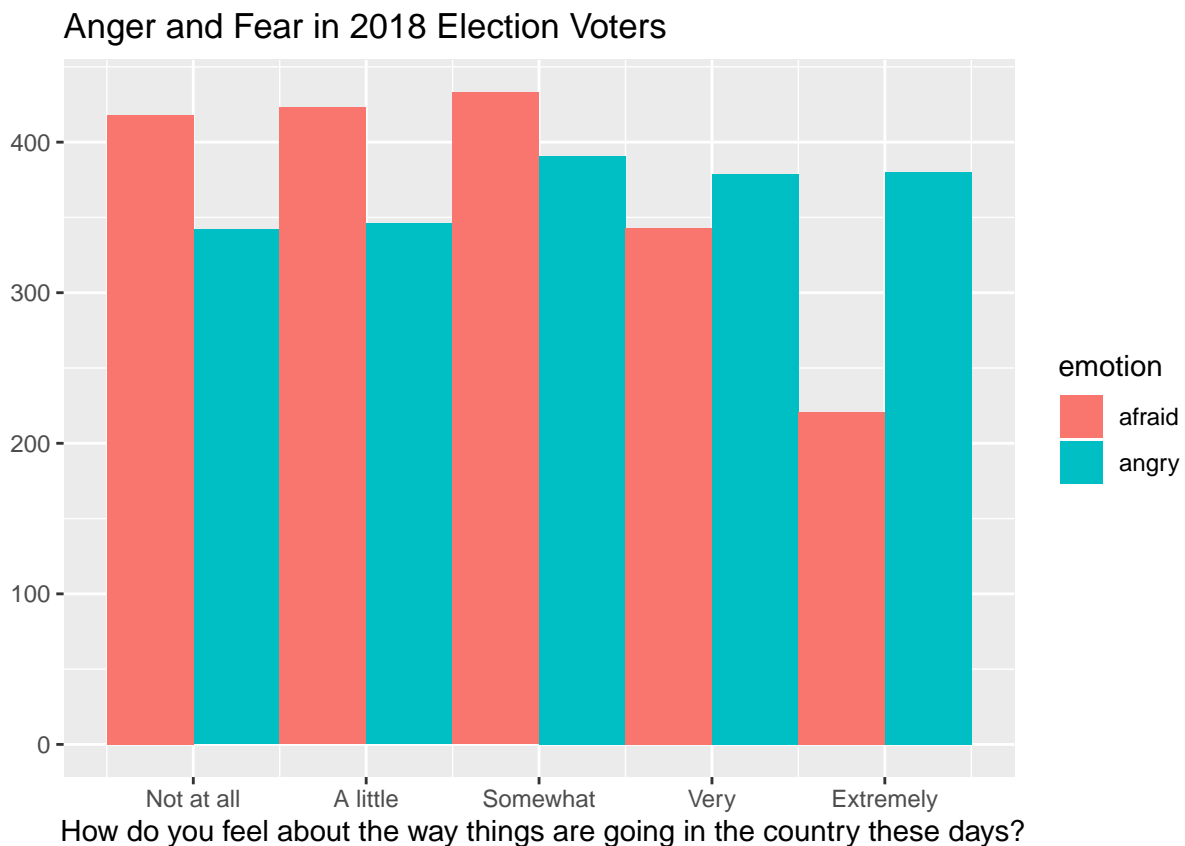
```
## [1] 1
```

A variety of survey questions address fear and anger in respondents. Responses from the global emotion portion of the survey were examined to initially evaluate fear and anger in voters. The overall question posed was: "Generally speaking, how do you feel about the way things are going in the country these days?" 10 different emotions were surveyed on a Likert scale. Responses to two of these provide one indicator for fear and anger, though there is no way to attribute it directly to voter turnout:

- "How angry do you feel?"
- "How afraid do you feel?"

### Exploratory Data Analysis.

```
library(ggplot2)
#get all of our voters who answered both the angry and afraid questions
geVoters18 = voters18[which(as.numeric(voters18$geangry) > 0 & as.numeric(voters18$geafraid) > 0),]
#frame each variable
question4frame = data.frame(emotion = c(rep("angry", nrow(geVoters18)), rep("afraid", nrow(geVoters18))),
#plot it
ggplot(question4frame, aes(x = question4frame$response, fill=emotion), stat="count") + geom_histogram(b
```



We can see that there seems to be more 'very' and 'extreme' responses for anger than for fear and more "Not at all" and "A little" responses for afraid.

### Analysis.

Of the options available, the sign test is quite suited to evaluate which emotion had the most impact on voters. It is a non-parametric test used when dependent samples are ordered in pairs with the bivariate random variables being mutually independent. Its supporting assumptions:

- Data contains non-parametric values.
- Data originates from two samples.
- Data samples are paired, which establishes a dependency between them.

All of these criteria are met recognizing that respondents answered a Likert-scaled question and that the angry and fearful questions were distinct questions. The respondent pairing was also maintained to create the dependency between the data points.

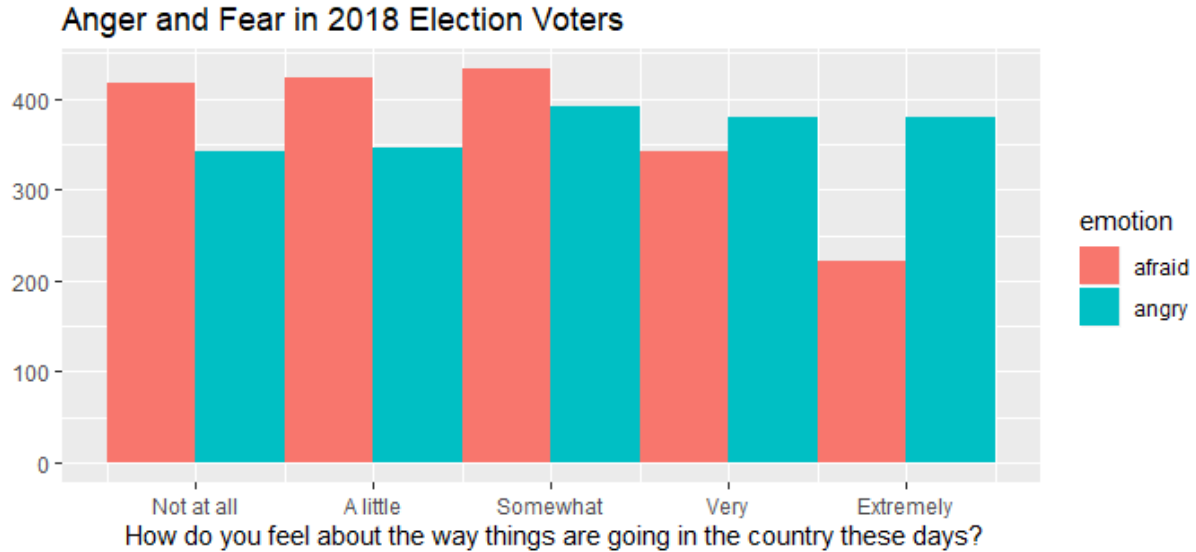


Figure 6: anger vs fear

```
voter_turnout_16_18 = anes_data[which (anes_data$turnout16==1 & anes_data$turnout18 < 4),] # isolate 20
summary(voter_turnout_16_18)
```

```
##                               i..version      caseid
## ANES 2018 Pilot Study main version 20190129:1726  Min.   :  1.0
##                                                    1st Qu.: 566.2
##                                                    Median :1249.0
##                                                    Mean    :1239.9
##                                                    3rd Qu.:1898.0
##                                                    Max.    :2769.0
##
##      weight      weight_spss      form      follow
## Min.   :0.07759  Min.   :0.04503  Min.   :1.000  Min.   :1.000
## 1st Qu.:0.51628  1st Qu.:0.29965  1st Qu.:1.000  1st Qu.:1.000
## Median :0.69520  Median :0.40349  Median :1.000  Median :1.000
## Mean    :0.87494  Mean    :0.50781  Mean    :1.497  Mean    :1.355
## 3rd Qu.:1.00626  3rd Qu.:0.58403  3rd Qu.:2.000  3rd Qu.:2.000
## Max.    :7.00780  Max.    :4.06733  Max.    :2.000  Max.    :4.000
##
##      addtime      reg      whenreg      howreg
## Min.   :1.000  Min.   :-7.000  Min.   :-1.000  Min.   :-1.0000
## 1st Qu.:2.000  1st Qu.: 1.000  1st Qu.: 4.000  1st Qu.: -1.0000
## Median :3.000  Median : 1.000  Median : 4.000  Median : -1.0000
## Mean    :2.576  Mean    : 1.031  Mean    : 3.809  Mean    :-0.8007
## 3rd Qu.:3.000  3rd Qu.: 1.000  3rd Qu.: 4.000  3rd Qu.: -1.0000
## Max.    :3.000  Max.    : 3.000  Max.    : 4.000  Max.    : 6.0000
##
##                               howreg_os      regdiff      turnout18
##                               :  0  Min.   :-1.0000  Min.   :1.000
##                               :1724 1st Qu.: -1.0000  1st Qu.:1.000
## Canã\200\231t remember      :  1  Median :-1.0000  Median :1.000
## General Assistance Office    :  0  Mean    :-0.8691  Mean    :1.756
```

```

## Registered through an application: 0 3rd Qu.: -1.0000 3rd Qu.: 3.000
## someone came to my home : 1 Max. : 5.0000 Max. : 3.000
##
## turnout18ns turnout18w votehard vharder1 vharder2
## Min. : -1 Min. : -1.0000 Min. : 1.000 Min. : 1.000 Min. : 1.000
## 1st Qu.: -1 1st Qu.: -1.0000 1st Qu.: 1.000 1st Qu.: 2.000 1st Qu.: 2.000
## Median : -1 Median : -1.0000 Median : 1.000 Median : 2.000 Median : 2.000
## Mean : -1 Mean : 0.7132 Mean : 1.135 Mean : 1.908 Mean : 1.977
## 3rd Qu.: -1 3rd Qu.: 3.0000 3rd Qu.: 1.000 3rd Qu.: 2.000 3rd Qu.: 2.000
## Max. : -1 Max. : 4.0000 Max. : 5.000 Max. : 2.000 Max. : 2.000
##
## vharder3 vharder4 vharder5 vharder6 vharder7
## Min. : 1.000 Min. : 1.00 Min. : 1.000 Min. : 1.000 Min. : 1.000
## 1st Qu.: 2.000 1st Qu.: 2.00 1st Qu.: 2.000 1st Qu.: 2.000 1st Qu.: 2.000
## Median : 2.000 Median : 2.00 Median : 2.000 Median : 2.000 Median : 2.000
## Mean : 1.982 Mean : 1.98 Mean : 1.983 Mean : 1.991 Mean : 1.918
## 3rd Qu.: 2.000 3rd Qu.: 2.00 3rd Qu.: 2.000 3rd Qu.: 2.000 3rd Qu.: 2.000
## Max. : 2.000 Max. : 2.00 Max. : 2.000 Max. : 2.000 Max. : 2.000
##
## vharder8 vharder9 vharder10 vharder11
## Min. : 1.000 Min. : 1.000 Min. : 1.000 Min. : 1.000
## 1st Qu.: 2.000 1st Qu.: 2.000 1st Qu.: 2.000 1st Qu.: 2.000
## Median : 2.000 Median : 2.000 Median : 2.000 Median : 2.000
## Mean : 1.959 Mean : 1.983 Mean : 1.991 Mean : 1.972
## 3rd Qu.: 2.000 3rd Qu.: 2.000 3rd Qu.: 2.000 3rd Qu.: 2.000
## Max. : 2.000 Max. : 2.000 Max. : 2.000 Max. : 2.000
##
## vharder12
## Min. : 1.000
## 1st Qu.: 1.000
## Median : 1.000
## Mean : 1.224
## 3rd Qu.: 1.000
## Max. : 2.000
##
## vharder11os
## __NA__ : 1677
## : 1
## any nonsense excuse. ..like id for proof : 1
## Ballot not valid, not signed. reported it, got a new one.: 1
## Ballot papers were inserted in an odd confusing way : 1
## Changed the mail Ballot : 1
## (Other) : 44
## waittime triptime house18t house18p
## Min. : -1.000 Min. : -1.0000 Min. : 1.000 Min. : -1.000
## 1st Qu.: -1.000 1st Qu.: -1.0000 1st Qu.: 1.000 1st Qu.: 1.000
## Median : -1.000 Median : -1.0000 Median : 1.000 Median : 1.000
## Mean : -0.686 Mean : -0.9502 Mean : 1.044 Mean : 1.351
## 3rd Qu.: -1.000 3rd Qu.: -1.0000 3rd Qu.: 1.000 3rd Qu.: 2.000
## Max. : 5.000 Max. : 5.0000 Max. : 2.000 Max. : 3.000
##
## senate18t senate18p gov18t gov18p
## Min. : -1.0000 Min. : -1.0000 Min. : -1.0000 Min. : -7.0000
## 1st Qu.: 1.0000 1st Qu.: -1.0000 1st Qu.: 1.0000 1st Qu.: 1.0000

```



```

## Median : 1.0000 Median : 1.0000 Median : 1.0000 Median : 1.0000
## Mean : 0.5435 Mean : 0.7596 Mean : 0.5875 Mean : 0.9171
## 3rd Qu.: 1.0000 3rd Qu.: 2.0000 3rd Qu.: 1.0000 3rd Qu.: 2.0000
## Max. : 2.0000 Max. : 4.0000 Max. : 2.0000 Max. : 3.0000
##
## votestop1 votestop2 votestop_imp votecount
## Min. :-1.0000 Min. :-1.0000 Min. :1.000 Min. :-7.000
## 1st Qu.: -1.0000 1st Qu.: -1.0000 1st Qu.:1.000 1st Qu.: 3.000
## Median : 1.0000 Median : -1.0000 Median :3.000 Median : 3.000
## Mean : 0.8256 Mean : 0.7034 Mean :2.823 Mean : 3.236
## 3rd Qu.: 3.0000 3rd Qu.: 2.0000 3rd Qu.:4.000 3rd Qu.: 4.000
## Max. : 5.0000 Max. : 5.0000 Max. :5.000 Max. : 5.000
##
## votetrust integrity1 integrity2 integrity3
## Min. :1.000 Min. :-1.000 Min. :-7.000 Min. :-1.0000
## 1st Qu.:3.000 1st Qu.: -1.000 1st Qu.: -1.000 1st Qu.: -1.0000
## Median :4.000 Median : 1.000 Median : 1.000 Median : 1.0000
## Mean :3.481 Mean : 1.044 Mean : 0.719 Mean : 0.9461
## 3rd Qu.:4.000 3rd Qu.: 3.000 3rd Qu.: 2.000 3rd Qu.: 1.0000
## Max. :5.000 Max. : 5.000 Max. : 5.000 Max. : 7.0000
##
## integrity4 integrity5 turnout16 turnout16b vote16
## Min. :-1.000 Min. :-1.000 Min. :1 Min. :-1 Min. :-7.00
## 1st Qu.: -1.000 1st Qu.: -1.000 1st Qu.:1 1st Qu.: -1 1st Qu.: 1.00
## Median : 1.000 Median : 1.000 Median :1 Median :-1 Median : 2.00
## Mean : 0.993 Mean : 1.293 Mean :1 Mean :-1 Mean : 1.68
## 3rd Qu.: 2.000 3rd Qu.: 3.000 3rd Qu.:1 3rd Qu.: -1 3rd Qu.: 2.00
## Max. : 7.000 Max. : 7.000 Max. :1 Max. :-1 Max. : 3.00
##
## percent20 meet givefut march1
## Min. : 0.00 Min. :1.000 Min. :1.000 Min. :1.000
## 1st Qu.:100.00 1st Qu.:1.000 1st Qu.:1.000 1st Qu.:2.000
## Median :100.00 Median :2.000 Median :2.000 Median :2.000
## Mean : 98.23 Mean :1.714 Mean :1.649 Mean :5.386
## 3rd Qu.:100.00 3rd Qu.:2.000 3rd Qu.:2.000 3rd Qu.:9.000
## Max. :100.00 Max. :2.000 Max. :2.000 Max. :9.000
##
## march2 online persuade sign give
## Min. :1.000 Min. :1.000 Min. :1.00 Min. :1.000 Min. :1.000
## 1st Qu.:2.000 1st Qu.:1.000 1st Qu.:1.00 1st Qu.:1.000 1st Qu.:1.000
## Median :9.000 Median :1.000 Median :2.00 Median :2.000 Median :2.000
## Mean :5.463 Mean :1.429 Mean :1.53 Mean :1.719 Mean :1.687
## 3rd Qu.:9.000 3rd Qu.:2.000 3rd Qu.:2.00 3rd Qu.:2.000 3rd Qu.:2.000
## Max. :9.000 Max. :2.000 Max. :2.00 Max. :2.000 Max. :2.000
##
## gehope geangry geafraid geproud
## Min. :-7.000 Min. :-7.000 Min. :-7.000 Min. :-7.000
## 1st Qu.: 2.000 1st Qu.: 2.000 1st Qu.: 2.000 1st Qu.: 1.000
## Median : 3.000 Median : 3.000 Median : 3.000 Median : 2.000
## Mean : 2.762 Mean : 3.065 Mean : 2.729 Mean : 2.579
## 3rd Qu.: 4.000 3rd Qu.: 4.000 3rd Qu.: 4.000 3rd Qu.: 4.000
## Max. : 5.000 Max. : 5.000 Max. : 5.000 Max. : 5.000
##
## gebitter gehappy geworry gerelieve

```

```

## Min.      :-7.000    Min.      :-7.000    Min.      :1.00    Min.      :-7.000
## 1st Qu.: 1.000    1st Qu.: 1.000    1st Qu.:2.00    1st Qu.: 1.000
## Median : 2.000    Median : 3.000    Median :3.00    Median : 2.000
## Mean   : 2.523    Mean   : 2.585    Mean   :3.26    Mean   : 2.144
## 3rd Qu.: 4.000    3rd Qu.: 4.000    3rd Qu.:4.00    3rd Qu.: 3.000
## Max.    : 5.000    Max.    : 5.000    Max.    :5.00    Max.    : 5.000
##
##      gedep      gesad      fttrump      ftblack
## Min.      :-7.000    Min.      :-7.000    Min.      : -7.00    Min.      : 0.00
## 1st Qu.: 1.000    1st Qu.: 2.000    1st Qu.: 1.00    1st Qu.: 59.00
## Median : 2.000    Median : 3.000    Median : 16.00    Median : 81.00
## Mean   : 2.379    Mean   : 2.762    Mean   : 43.06    Mean   : 75.62
## 3rd Qu.: 3.000    3rd Qu.: 4.000    3rd Qu.: 91.00    3rd Qu.: 95.00
## Max.    : 5.000    Max.    : 5.000    Max.    :997.00    Max.    :100.00
##
##      ftwhite      fthisp      ftasian      ftgay
## Min.      : -7.00    Min.      : -7.00    Min.      : -7.00    Min.      : -7.00
## 1st Qu.: 52.00    1st Qu.: 55.00    1st Qu.: 53.00    1st Qu.: 50.00
## Median : 76.00    Median : 79.50    Median : 80.00    Median : 70.00
## Mean   : 72.49    Mean   : 73.29    Mean   : 74.23    Mean   : 65.13
## 3rd Qu.: 91.00    3rd Qu.: 94.00    3rd Qu.: 93.00    3rd Qu.: 93.00
## Max.    :100.00    Max.    :100.00    Max.    :100.00    Max.    :100.00
##
##      ftobama      fthrc      ftmetoo      ftrural
## Min.      : -7.00    Min.      : -7.00    Min.      : -7.00    Min.      : 0.00
## 1st Qu.: 8.00    1st Qu.: 2.00    1st Qu.: 16.00    1st Qu.: 51.00
## Median : 74.00    Median : 41.00    Median : 55.00    Median : 77.00
## Mean   : 57.55    Mean   : 41.95    Mean   : 65.66    Mean   : 79.05
## 3rd Qu.: 98.00    3rd Qu.: 77.00    3rd Qu.: 87.00    3rd Qu.: 95.00
## Max.    :100.00    Max.    :100.00    Max.    :997.00    Max.    :997.00
##
##      ftsocialists  ftcapitalists  ftimmig  ftpolice
## Min.      : -7.0    Min.      : -7.00    Min.      : -7.00    Min.      : 0.00
## 1st Qu.: 5.0    1st Qu.: 36.00    1st Qu.: 50.00    1st Qu.: 50.00
## Median : 45.0    Median : 52.00    Median : 69.00    Median : 75.00
## Mean   : 51.2    Mean   : 55.36    Mean   : 63.35    Mean   : 69.13
## 3rd Qu.: 70.0    3rd Qu.: 80.00    3rd Qu.: 88.00    3rd Qu.: 91.00
## Max.    :997.0    Max.    :100.00    Max.    :100.00    Max.    :100.00
## NA's      :3
##      ftjournal      fttrans      ftmuslim      ftmueller
## Min.      : -7.00    Min.      : 0.00    Min.      : 0.00    Min.      : 0.00
## 1st Qu.: 19.00    1st Qu.: 39.00    1st Qu.: 38.00    1st Qu.: 15.00
## Median : 59.00    Median : 55.00    Median : 57.00    Median : 60.00
## Mean   : 54.23    Mean   : 57.53    Mean   : 56.19    Mean   : 76.19
## 3rd Qu.: 88.00    3rd Qu.: 89.00    3rd Qu.: 82.00    3rd Qu.: 96.00
## Max.    :100.00    Max.    :100.00    Max.    :100.00    Max.    :997.00
##
##      ftfbi      ftscotus      ftkavanaugh      ftaltright
## Min.      : -7.00    Min.      : -7.00    Min.      : -7.00    Min.      : -7.00
## 1st Qu.: 45.00    1st Qu.: 46.25    1st Qu.: 5.00    1st Qu.: 1.00
## Median : 65.00    Median : 63.00    Median : 41.00    Median : 10.00
## Mean   : 61.75    Mean   : 62.15    Mean   : 55.26    Mean   : 88.11
## 3rd Qu.: 85.00    3rd Qu.: 82.00    3rd Qu.: 91.00    3rd Qu.: 50.00
## Max.    :100.00    Max.    :100.00    Max.    :997.00    Max.    :997.00

```

```

##                                     NA's   :5      NA's   :15
##      ftantifa      vote20dem      vote20cand      vote20jb
## Min.   : 0.0    Min.   :-7.000    Min.   :-7.000    Min.   :1.000
## 1st Qu.: 2.0    1st Qu.: 1.000    1st Qu.: -1.000    1st Qu.:1.000
## Median : 31.0    Median : 1.000    Median : 2.000    Median :2.000
## Mean   :152.6    Mean   : 1.401    Mean   : 2.217    Mean   :1.694
## 3rd Qu.: 59.0    3rd Qu.: 2.000    3rd Qu.: 5.000    3rd Qu.:2.000
## Max.   :997.0    Max.   : 2.000    Max.   :11.000    Max.   :4.000
## NA's    :54
##      vote20ew      phecon      phhealth      phtax      phimmig
## Min.   :1.00    Min.   :1.000    Min.   :1.000    Min.   :1.00    Min.   : -7.00
## 1st Qu.:1.00    1st Qu.:1.000    1st Qu.:1.000    1st Qu.:1.00    1st Qu.: 1.00
## Median :2.00    Median :2.000    Median :1.000    Median :2.00    Median : 1.00
## Mean   :1.71    Mean   :1.687    Mean   :1.583    Mean   :1.68    Mean   : 1.59
## 3rd Qu.:2.00    3rd Qu.:2.000    3rd Qu.:2.000    3rd Qu.:2.00    3rd Qu.: 2.00
## Max.   :4.00    Max.   :3.000    Max.   :3.000    Max.   :3.00    Max.   : 3.00
##
##      phborder      phforeign      phtrade      phopioid
## Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
## 1st Qu.:1.000    1st Qu.:1.000    1st Qu.:1.000    1st Qu.:1.000
## Median :2.000    Median :2.000    Median :2.000    Median :2.000
## Mean   :1.723    Mean   :1.663    Mean   :1.674    Mean   :1.939
## 3rd Qu.:2.000    3rd Qu.:2.000    3rd Qu.:2.000    3rd Qu.:3.000
## Max.   :3.000    Max.   :3.000    Max.   :3.000    Max.   :3.000
##
##      phenviron      phnatdis      apppres      frnpres
## Min.   :1.000    Min.   :1.000    Min.   :1.000    Min.   :1.000
## 1st Qu.:1.000    1st Qu.:1.000    1st Qu.:2.000    1st Qu.:2.000
## Median :1.000    Median :2.000    Median :6.000    Median :6.000
## Mean   :1.572    Mean   :1.801    Mean   :4.568    Mean   :4.562
## 3rd Qu.:2.000    3rd Qu.:3.000    3rd Qu.:7.000    3rd Qu.:7.000
## Max.   :3.000    Max.   :3.000    Max.   :7.000    Max.   :7.000
##
##      econpres      dthope      dtangry      dtafraid
## Min.   :1.000    Min.   : -7.0000    Min.   : -7.0000    Min.   : -7.0000
## 1st Qu.:1.000    1st Qu.: -1.0000    1st Qu.: -1.0000    1st Qu.: -1.0000
## Median :4.000    Median : 1.0000    Median : 1.0000    Median : 1.0000
## Mean   :4.177    Mean   : 0.7381    Mean   : 0.9195    Mean   : 0.8158
## 3rd Qu.:7.000    3rd Qu.: 2.0000    3rd Qu.: 3.0000    3rd Qu.: 2.0000
## Max.   :7.000    Max.   : 5.0000    Max.   : 5.0000    Max.   : 5.0000
##
##      dtproud      dtbitter      dtcont      dtworry
## Min.   : -1.0000    Min.   : -7.0000    Min.   : -1.0000    Min.   : -7.000
## 1st Qu.: -1.0000    1st Qu.: -1.0000    1st Qu.: -1.0000    1st Qu.: -1.000
## Median : 1.0000    Median : 1.0000    Median : 1.0000    Median : 1.000
## Mean   : 0.6506    Mean   : 0.7497    Mean   : 0.8992    Mean   : 1.023
## 3rd Qu.: 1.0000    3rd Qu.: 2.0000    3rd Qu.: 3.0000    3rd Qu.: 3.000
## Max.   : 5.0000    Max.   : 5.0000    Max.   : 5.0000    Max.   : 5.000
##
##      dtemb      dtshame      dthappy      dtrelieve
## Min.   : -7.000    Min.   : -1.000    Min.   : -1.0000    Min.   : -7.0000
## 1st Qu.: -1.000    1st Qu.: -1.000    1st Qu.: -1.0000    1st Qu.: -1.0000
## Median : 1.000    Median : 1.000    Median : 1.0000    Median : 1.0000
## Mean   : 1.102    Mean   : 1.049    Mean   : 0.6599    Mean   : 0.6124

```

```

## 3rd Qu.: 4.000 3rd Qu.: 3.000 3rd Qu.: 2.0000 3rd Qu.: 1.0000
## Max. : 5.000 Max. : 5.000 Max. : 5.0000 Max. : 5.0000
##
## imhope imangry imafraid improud
## Min. :-7.0000 Min. :-7.0000 Min. :-7.0000 Min. :-7.0000
## 1st Qu.: -1.0000 1st Qu.: -1.0000 1st Qu.: -1.0000 1st Qu.: -1.0000
## Median : -1.0000 Median : -1.0000 Median : -1.0000 Median : -1.0000
## Mean : 0.7671 Mean : 0.4258 Mean : 0.3778 Mean : 0.7433
## 3rd Qu.: 2.0000 3rd Qu.: 1.0000 3rd Qu.: 1.0000 3rd Qu.: 2.0000
## Max. : 5.0000 Max. : 5.0000 Max. : 5.0000 Max. : 5.0000
##
## imbitter imcont imworry imdisgust
## Min. :-7.0000 Min. :-7.0000 Min. :-7.0000 Min. :-7.0000
## 1st Qu.: -1.0000 1st Qu.: -1.0000 1st Qu.: -1.0000 1st Qu.: -1.0000
## Median : -1.0000 Median : -1.0000 Median : -1.0000 Median : -1.0000
## Mean : 0.3134 Mean : 0.3181 Mean : 0.5614 Mean : 0.3992
## 3rd Qu.: 1.0000 3rd Qu.: 1.0000 3rd Qu.: 2.0000 3rd Qu.: 1.0000
## Max. : 5.0000 Max. : 5.0000 Max. : 5.0000 Max. : 5.0000
##
## imsick imhappy imrelieve russia16
## Min. :-7.0000 Min. :-7.00 Min. :-7.0000 Min. :-7.000
## 1st Qu.: -1.0000 1st Qu.: -1.00 1st Qu.: -1.0000 1st Qu.: 1.000
## Median : -1.0000 Median : -1.00 Median : -1.0000 Median : 1.000
## Mean : 0.3482 Mean : 0.73 Mean : 0.4311 Mean : 1.381
## 3rd Qu.: 1.0000 3rd Qu.: 2.00 3rd Qu.: 1.0000 3rd Qu.: 2.000
## Max. : 5.0000 Max. : 5.00 Max. : 5.0000 Max. : 2.000
##
## muellerinv coord16 econnow econ12mo
## Min. :1.000 Min. :1.000 Min. :1.000 Min. :1.000
## 1st Qu.:1.000 1st Qu.:1.000 1st Qu.:1.250 1st Qu.:2.000
## Median :3.000 Median :1.000 Median :3.000 Median :3.000
## Mean :3.461 Mean :1.437 Mean :2.677 Mean :3.085
## 3rd Qu.:6.000 3rd Qu.:2.000 3rd Qu.:4.000 3rd Qu.:4.000
## Max. :7.000 Max. :2.000 Max. :5.000 Max. :5.000
##
## improve1 finpar1 finpar2 improve2
## Min. :-1.000 Min. :-1.000 Min. :-1.000 Min. :-1.000
## 1st Qu.: -1.000 1st Qu.: -1.000 1st Qu.: -1.000 1st Qu.: -1.000
## Median : 1.000 Median : 1.000 Median : -1.000 Median : -1.000
## Mean : 1.838 Mean : 1.571 Mean : 1.759 Mean : 1.885
## 3rd Qu.: 5.000 3rd Qu.: 4.000 3rd Qu.: 5.000 3rd Qu.: 5.000
## Max. : 7.000 Max. : 7.000 Max. : 7.000 Max. : 7.000
##
## finworry lcself lcd lcr
## Min. :1.000 Min. :-7.000 Min. :-7.00 Min. :-7.000
## 1st Qu.:2.000 1st Qu.: 2.000 1st Qu.: 1.00 1st Qu.: 5.000
## Median :2.000 Median : 4.000 Median : 2.00 Median : 6.000
## Mean :2.503 Mean : 3.928 Mean : 2.15 Mean : 5.806
## 3rd Qu.:3.000 3rd Qu.: 6.000 3rd Qu.: 3.00 3rd Qu.: 7.000
## Max. :5.000 Max. : 7.000 Max. : 7.00 Max. : 7.000
##
## amount_dir amount_ind direct1 direct2
## Min. :1.000 Min. :1.000 Min. :-7.000 Min. :-7.000
## 1st Qu.:1.000 1st Qu.:1.000 1st Qu.: -1.000 1st Qu.: -1.000

```

```

## Median :2.000 Median :1.000 Median :-1.000 Median : 1.000
## Mean :1.503 Mean :1.495 Mean : 1.238 Mean : 1.408
## 3rd Qu.:2.000 3rd Qu.:2.000 3rd Qu.: 4.000 3rd Qu.: 4.000
## Max. :2.000 Max. :2.000 Max. : 5.000 Max. : 5.000
##
## indirect1 indirect2 corrupt corrupt_dt
## Min. :-7.000 Min. :-7.0000 Min. :-7.000 Min. :1.000
## 1st Qu.: -1.000 1st Qu.: -1.0000 1st Qu.: 2.000 1st Qu.:1.000
## Median : -1.000 Median : 1.0000 Median : 3.000 Median :3.000
## Mean : 0.664 Mean : 0.8789 Mean : 3.089 Mean :2.846
## 3rd Qu.: 2.000 3rd Qu.: 3.0000 3rd Qu.: 4.000 3rd Qu.:4.000
## Max. : 5.000 Max. : 5.0000 Max. : 5.000 Max. :7.000
##
## harass harassstr disc_selfsex sexadvance
## Min. :-7.000 Min. :-1.000 Min. :-7.000 Min. :1.000
## 1st Qu.: 1.000 1st Qu.: 3.000 1st Qu.: 1.000 1st Qu.:1.000
## Median : 2.000 Median : 3.000 Median : 2.000 Median :2.000
## Mean : 1.487 Mean : 3.349 Mean : 2.076 Mean :2.148
## 3rd Qu.: 2.000 3rd Qu.: 4.000 3rd Qu.: 3.000 3rd Qu.:3.000
## Max. : 2.000 Max. : 5.000 Max. : 5.000 Max. :5.000
##
## sexharass disc_selfrac whiteid whitework
## Min. :1.000 Min. :1.000 Min. :-7.000 Min. :-7.000
## 1st Qu.:1.000 1st Qu.:1.000 1st Qu.: 1.000 1st Qu.: 1.000
## Median :2.000 Median :1.000 Median : 1.000 Median : 2.000
## Mean :1.649 Mean :1.694 Mean : 1.581 Mean : 1.823
## 3rd Qu.:2.000 3rd Qu.:2.000 3rd Qu.: 3.000 3rd Qu.: 3.000
## Max. :2.000 Max. :5.000 Max. : 5.000 Max. : 5.000
##
## whitejob immignum immigrpol birthright
## Min. :-7.000 Min. :-7.000 Min. :-7.000 Min. :-7.000
## 1st Qu.: 1.000 1st Qu.: 3.000 1st Qu.: 1.000 1st Qu.: 1.000
## Median : 2.000 Median : 4.000 Median : 3.000 Median : 4.000
## Mean : 2.196 Mean : 4.061 Mean : 2.456 Mean : 4.126
## 3rd Qu.: 3.000 3rd Qu.: 5.000 3rd Qu.: 3.000 3rd Qu.: 7.000
## Max. : 5.000 Max. : 7.000 Max. : 4.000 Max. : 7.000
##
## wall diversity illimcrime illimschool
## Min. :1.000 Min. :1.000 Min. :-7.000 Min. :1.000
## 1st Qu.:1.000 1st Qu.:1.000 1st Qu.: 2.000 1st Qu.:4.000
## Median :5.000 Median :2.000 Median : 3.000 Median :5.000
## Mean :4.284 Mean :2.815 Mean : 2.913 Mean :5.068
## 3rd Qu.:7.000 3rd Qu.:4.000 3rd Qu.: 4.000 3rd Qu.:7.000
## Max. :7.000 Max. :7.000 Max. : 7.000 Max. :7.000
##
## illimecon imigcit ice famsep
## Min. :-7.000 Min. :-7.000 Min. :1.000 Min. :-7.00
## 1st Qu.: 3.000 1st Qu.: 2.000 1st Qu.:2.000 1st Qu.: 4.00
## Median : 4.000 Median : 3.000 Median :4.000 Median : 7.00
## Mean : 4.591 Mean : 3.619 Mean :4.032 Mean : 5.18
## 3rd Qu.: 7.000 3rd Qu.: 6.000 3rd Qu.:6.000 3rd Qu.: 7.00
## Max. : 7.000 Max. : 7.000 Max. :7.000 Max. : 7.00
##
## acaapprove acarepeal acains loseins

```

##	Min.	:-7.000	Min.	:1.000	Min.	:1.000	Min.	:1.000
##	1st Qu.:	1.000	1st Qu.:	1.000	1st Qu.:	3.000	1st Qu.:	1.000
##	Median	: 3.000	Median	:5.000	Median	:4.000	Median	:1.000
##	Mean	: 3.846	Mean	:4.329	Mean	:3.929	Mean	:2.004
##	3rd Qu.:	7.000	3rd Qu.:	7.000	3rd Qu.:	4.000	3rd Qu.:	3.000
##	Max.	: 7.000	Max.	:7.000	Max.	:7.000	Max.	:5.000
##								
##	costins		richpoor		post1		post2	
##	Min.	:1.000	Min.	:1.000	Min.	:-7.0000	Min.	:-1.0000
##	1st Qu.:	3.000	1st Qu.:	1.000	1st Qu.:	-1.0000	1st Qu.:	-1.0000
##	Median	:4.000	Median	:2.000	Median	:-1.0000	Median	:-1.0000
##	Mean	:3.621	Mean	:2.043	Mean	: 0.4693	Mean	: 0.4762
##	3rd Qu.:	5.000	3rd Qu.:	3.000	3rd Qu.:	2.0000	3rd Qu.:	2.0000
##	Max.	:5.000	Max.	:7.000	Max.	: 4.0000	Max.	: 4.0000
##								
##	post3		post4		work		taxecon	
##	Min.	:-7.000	Min.	:-7.0000	Min.	:1.000	Min.	:1.000
##	1st Qu.:	-1.000	1st Qu.:	-1.0000	1st Qu.:	1.000	1st Qu.:	2.000
##	Median	:-1.000	Median	:-1.0000	Median	:1.000	Median	:4.000
##	Mean	: 0.814	Mean	: 0.7572	Mean	:1.381	Mean	:3.771
##	3rd Qu.:	2.750	3rd Qu.:	2.0000	3rd Qu.:	2.000	3rd Qu.:	6.000
##	Max.	: 4.000	Max.	: 4.0000	Max.	:2.000	Max.	:7.000
##								
##	taxfam		taxapproval		rr1		rr2	
##	Min.	:1.000	Min.	:1.000	Min.	:-7.000	Min.	:1.000
##	1st Qu.:	3.000	1st Qu.:	2.000	1st Qu.:	1.000	1st Qu.:	2.000
##	Median	:4.000	Median	:4.000	Median	: 2.000	Median	:3.000
##	Mean	:3.696	Mean	:4.059	Mean	: 2.693	Mean	:2.926
##	3rd Qu.:	4.000	3rd Qu.:	7.000	3rd Qu.:	4.000	3rd Qu.:	4.000
##	Max.	:7.000	Max.	:7.000	Max.	: 5.000	Max.	:5.000
##								
##	rr3		rr4		emp_concern1		emp_concern2	
##	Min.	:-7.000	Min.	:-7.000	Min.	:-7.0000	Min.	:-7.0000
##	1st Qu.:	2.000	1st Qu.:	2.000	1st Qu.:	-1.0000	1st Qu.:	-1.0000
##	Median	: 3.000	Median	: 3.000	Median	: 1.0000	Median	:-1.0000
##	Mean	: 3.114	Mean	: 3.149	Mean	: 0.7943	Mean	: 0.9351
##	3rd Qu.:	4.000	3rd Qu.:	5.000	3rd Qu.:	3.0000	3rd Qu.:	3.0000
##	Max.	: 5.000	Max.	: 5.000	Max.	: 5.0000	Max.	: 5.0000
##								
##	emp_persp		emp_place		emp_adv1		emp_adv2	
##	Min.	:1.000	Min.	:-7.000	Min.	:-1.0000	Min.	:-7.0000
##	1st Qu.:	2.000	1st Qu.:	2.000	1st Qu.:	-1.0000	1st Qu.:	-1.0000
##	Median	:2.000	Median	: 2.000	Median	: 1.0000	Median	:-1.0000
##	Mean	:2.534	Mean	: 2.426	Mean	: 0.6634	Mean	: 0.5759
##	3rd Qu.:	3.000	3rd Qu.:	3.000	3rd Qu.:	2.0000	3rd Qu.:	2.0000
##	Max.	:5.000	Max.	: 5.000	Max.	: 5.0000	Max.	: 5.0000
##								
##	russia		dprk		israel		mexico	
##	Min.	:-7.0000	Min.	:-7.0000	Min.	:-7.0000	Min.	:-7.0000
##	1st Qu.:	-1.0000	1st Qu.:	-1.0000	1st Qu.:	-1.0000	1st Qu.:	-1.0000
##	Median	:-1.0000	Median	:-1.0000	Median	:-1.0000	Median	:-1.0000
##	Mean	: 0.7671	Mean	: 0.7509	Mean	: 0.5997	Mean	: 0.4525
##	3rd Qu.:	3.0000	3rd Qu.:	3.0000	3rd Qu.:	2.0000	3rd Qu.:	2.0000
##	Max.	: 3.0000	Max.	: 3.0000	Max.	: 3.0000	Max.	: 3.0000

```

##
##      china      canada      germany      saudi
## Min.   :-7.0000 Min.   :-7.0000 Min.   :-7.0000 Min.   :-7.0000
## 1st Qu.: -1.0000 1st Qu.: -1.0000 1st Qu.: -1.0000 1st Qu.: -1.0000
## Median : -1.0000 Median : -1.0000 Median : -1.0000 Median : -1.0000
## Mean   : 0.6165 Mean   : 0.3169 Mean   : 0.3754 Mean   : 0.7995
## 3rd Qu.: 2.0000 3rd Qu.: 2.0000 3rd Qu.: 2.0000 3rd Qu.: 3.0000
## Max.    : 3.0000 Max.    : 3.0000 Max.    : 3.0000 Max.    : 3.0000
##
##      warm      warmcause      warmdo      warmus
## Min.   :-1.0000 Min.    :1.000 Min.   :-7.000 Min.   :-7.000
## 1st Qu.: -1.0000 1st Qu.:1.000 1st Qu.: 1.000 1st Qu.: 2.000
## Median : 1.0000 Median :2.000 Median : 1.000 Median : 3.000
## Mean   : 0.1222 Mean   :1.813 Mean   : 1.621 Mean   : 3.293
## 3rd Qu.: 1.0000 3rd Qu.:3.000 3rd Qu.: 2.000 3rd Qu.: 5.000
## Max.    : 2.0000 Max.    :3.000 Max.    : 3.000 Max.    : 5.000
##
##      warmcom      warmyou      violence1      violence2
## Min.   :-7.000 Min.    :1.000 Min.    :1.000 Min.   :-7.000
## 1st Qu.: 2.000 1st Qu.:2.000 1st Qu.:1.000 1st Qu.: 1.000
## Median : 3.000 Median :3.000 Median :2.000 Median : 1.000
## Mean   : 2.966 Mean   :3.116 Mean   :1.929 Mean   : 1.242
## 3rd Qu.: 4.000 3rd Qu.:5.000 3rd Qu.:3.000 3rd Qu.: 1.000
## Max.    : 5.000 Max.    :5.000 Max.    :7.000 Max.    : 5.000
##
##      trade_order      freetrade      tariff_work      tariff_con
## Min.    :1.000 Min.   :-7.000 Min.   :-7.000 Min.   :-7.000
## 1st Qu.:2.000 1st Qu.: 1.000 1st Qu.: 2.000 1st Qu.: 3.000
## Median :2.000 Median : 2.000 Median : 4.000 Median : 5.000
## Mean   :2.527 Mean   : 2.648 Mean   : 4.344 Mean   : 4.732
## 3rd Qu.:4.000 3rd Qu.: 4.000 3rd Qu.: 6.000 3rd Qu.: 6.000
## Max.    :4.000 Max.    : 7.000 Max.    : 7.000 Max.    : 7.000
##
##      knowopioid      opioiddo      guncheck      gunsar
## Min.    :1.000 Min.    :1.000 Min.   :-7.000 Min.   :-7.000
## 1st Qu.:1.000 1st Qu.:1.000 1st Qu.: 1.000 1st Qu.: 1.000
## Median :2.000 Median :2.000 Median : 1.000 Median : 2.000
## Mean   :1.564 Mean   :2.542 Mean   : 2.096 Mean   : 3.192
## 3rd Qu.:2.000 3rd Qu.:4.000 3rd Qu.: 3.000 3rd Qu.: 6.000
## Max.    :2.000 Max.    :7.000 Max.    : 7.000 Max.    : 7.000
##
##      gunteach      strlead      sd1      sd2
## Min.    :1.000 Min.   :-1.000 Min.   :-1.000 Min.   :-1.000
## 1st Qu.:2.000 1st Qu.: -1.000 1st Qu.: -1.000 1st Qu.: -1.000
## Median :5.000 Median : 1.000 Median : 1.000 Median : 1.000
## Mean   :4.552 Mean   : 1.333 Mean   : 1.422 Mean   : 1.682
## 3rd Qu.:7.000 3rd Qu.: 4.000 3rd Qu.: 4.000 3rd Qu.: 5.000
## Max.    :7.000 Max.    : 5.000 Max.    : 5.000 Max.    : 5.000
##
##      sd3      sd4      sd5      sd6
## Min.   :-1.000 Min.   :-7.000 Min.   :-1.000 Min.   :-1.000
## 1st Qu.: -1.000 1st Qu.: -1.000 1st Qu.: -1.000 1st Qu.: -1.000
## Median : 1.000 Median : 1.000 Median : 1.000 Median : 1.000
## Mean   : 1.738 Mean   : 1.786 Mean   : 1.716 Mean   : 1.595

```

```

## 3rd Qu.: 5.000    3rd Qu.: 5.000    3rd Qu.: 5.000    3rd Qu.: 4.000
## Max.   : 5.000    Max.   : 5.000    Max.   : 5.000    Max.   : 5.000
##
##      strpres      dishonest      media1      media2
## Min.   :-7.00    Min.   :-1.0000    Min.   :1.000    Min.   :-7.000
## 1st Qu.: -1.00    1st Qu.: -1.0000    1st Qu.:3.000    1st Qu.: 1.000
## Median :-1.00    Median :-1.0000    Median :4.000    Median : 3.000
## Mean   : 1.59    Mean   : 0.8181    Mean   :3.913    Mean   : 2.544
## 3rd Qu.: 4.00    3rd Qu.: 2.0000    3rd Qu.:5.000    3rd Qu.: 4.000
## Max.   : 7.00    Max.   : 7.0000    Max.   :5.000    Max.   : 5.000
##
##      media3      trustmedia      media4      media4a
## Min.   :-7.000    Min.   :1.000    Min.   :-7.000    Min.   :-7.000
## 1st Qu.: 2.000    1st Qu.:1.000    1st Qu.: 1.000    1st Qu.: -1.000
## Median : 4.000    Median :3.000    Median : 2.000    Median : 2.000
## Mean   : 3.322    Mean   :2.636    Mean   : 2.042    Mean   : 0.916
## 3rd Qu.: 5.000    3rd Qu.:4.000    3rd Qu.: 3.000    3rd Qu.: 2.000
## Max.   : 5.000    Max.   :5.000    Max.   : 5.000    Max.   : 3.000
##
##      media5      mediaviol      selfcensor      rural1
## Min.   :-7.000    Min.   :1.00    Min.   :1.000    Min.   :-1.0000
## 1st Qu.: 2.000    1st Qu.:2.00    1st Qu.:1.000    1st Qu.: -1.0000
## Median : 3.000    Median :3.00    Median :2.000    Median : 1.0000
## Mean   : 2.756    Mean   :3.03    Mean   :2.344    Mean   : 0.8911
## 3rd Qu.: 4.000    3rd Qu.:4.00    3rd Qu.:3.000    3rd Qu.: 3.0000
## Max.   : 5.000    Max.   :5.00    Max.   :5.000    Max.   : 5.0000
##
##      rural2      rural3      impeach1      impeach2
## Min.   :-7.0000    Min.   :-7.000    Min.   :1.000    Min.   :1.000
## 1st Qu.: -1.0000    1st Qu.: 4.000    1st Qu.:1.000    1st Qu.:1.000
## Median :-1.0000    Median : 5.000    Median :4.000    Median :3.000
## Mean   : 0.7937    Mean   : 4.575    Mean   :3.981    Mean   :3.874
## 3rd Qu.: 2.0000    3rd Qu.: 6.000    3rd Qu.:7.000    3rd Qu.:7.000
## Max.   : 5.0000    Max.   : 7.000    Max.   :7.000    Max.   :7.000
##
##                                     pk_cjus      pk_cjus_correct
## chief justice                      :189    Min.   :0.0000
## chief justice of the supreme court:186    1st Qu.:0.0000
## supreme court justice              :170    Median :0.5000
## supreme court                      :122    Mean   :0.5713
## don't know                         : 87    3rd Qu.:1.0000
##                                   : 53    Max.   :1.0000
## (Other)                           :919
##
##                pk_germ      pk_germ_correct      pk_sen
## chancellor of germany      :349    Min.   :0.0000    Min.   :-7.000
## german chancellor          :230    1st Qu.:1.0000    1st Qu.: 4.000
## prime minister of germany: 85    Median :1.0000    Median : 6.000
## don't know                  : 61    Mean   :0.7625    Mean   : 5.548
## president of germany       : 52    3rd Qu.:1.0000    3rd Qu.: 6.000
##                             : 44    Max.   :1.0000    Max.   :99.000
## (Other)                     :905
##
##      pk_spend      pk_geer      pk_alaska      pid7x
## Min.   :-7.000    Min.   : -7    Min.   : -7    Min.   :-7.000
## 1st Qu.: 1.000    1st Qu.:1896    1st Qu.:1865    1st Qu.: 1.000

```



```

## Median : 2.000 Median :1950 Median :1869 Median : 3.000
## Mean : 2.195 Mean :1615 Mean :1715 Mean : 3.611
## 3rd Qu.: 4.000 3rd Qu.:1996 3rd Qu.:1945 3rd Qu.: 6.000
## Max. : 4.000 Max. :2018 Max. :2018 Max. : 7.000
##
## pid1d pid2d pid1r
## Min. :-7.0000 __NA__ :1711 Min. :-7.000
## 1st Qu.: -1.0000 Libertarian : 2 1st Qu.: -1.000
## Median : 0.0000 : 1 Median : -1.000
## Mean : 0.4496 American : 1 Mean : 0.478
## 3rd Qu.: 2.0000 constitution party : 1 3rd Qu.: 2.000
## Max. : 4.0000 democratic socialist: 1 Max. : 4.000
## (Other) : 9
## pid2r pidstr pidlean dem_activduty
## __NA__ :1700 Min. :-7.0000 Min. :-7.0000 Min. :1.000
## conservative: 3 1st Qu.: -1.0000 1st Qu.: -1.0000 1st Qu.:3.000
## Conservative: 3 Median : 1.0000 Median : -1.0000 Median :3.000
## Libertarian : 2 Mean : 0.5365 Mean : -0.0533 Mean :2.809
## Socialist : 2 3rd Qu.: 1.0000 3rd Qu.: 1.0000 3rd Qu.:3.000
## : 1 Max. : 2.0000 Max. : 3.0000 Max. :3.000
## (Other) : 15
## milyears milyears2 milyears_topcode milyears2_topcode
## Min. :-3 Min. :-3 Min. :-7.0000 Min. :-1
## 1st Qu.: -3 1st Qu.: -3 1st Qu.: -1.0000 1st Qu.: -1
## Median : -3 Median : -3 Median : -1.0000 Median : -1
## Mean : -3 Mean : -3 Mean : -0.9473 Mean : -1
## 3rd Qu.: -3 3rd Qu.: -3 3rd Qu.: -1.0000 3rd Qu.: -1
## Max. : -3 Max. : -3 Max. :25.0000 Max. : -1
##
## milyr_1 milyr_2 milyr_3 milyr_4
## Min. :-1.0000 Min. :-1.0000 Min. :-1.0000 Min. :-1.0000
## 1st Qu.: -1.0000 1st Qu.: -1.0000 1st Qu.: -1.0000 1st Qu.: -1.0000
## Median : -1.0000 Median : -1.0000 Median : -1.0000 Median : -1.0000
## Mean : -0.5041 Mean : -0.5214 Mean : -0.5759 Mean : -0.5805
## 3rd Qu.: -1.0000 3rd Qu.: -1.0000 3rd Qu.: -1.0000 3rd Qu.: -1.0000
## Max. : 2.0000 Max. : 2.0000 Max. : 2.0000 Max. : 2.0000
##
## milyr_5 milyr_6 combat hospital
## Min. :-1.0000 Min. :-1.0000 Min. :-7.0000 Min. :1.000
## 1st Qu.: -1.0000 1st Qu.: -1.0000 1st Qu.: -1.0000 1st Qu.:1.000
## Median : -1.0000 Median : -1.0000 Median : -1.0000 Median :2.000
## Mean : -0.5406 Mean : -0.5203 Mean : -0.5359 Mean :1.666
## 3rd Qu.: -1.0000 3rd Qu.: -1.0000 3rd Qu.: -1.0000 3rd Qu.:2.000
## Max. : 2.0000 Max. : 2.0000 Max. : 2.0000 Max. :2.000
##
## marital spouseeth sp_w sp_b
## Min. :-1.0000 Min. :-1.0000 Min. :-1.0000 Min. :-1.0000
## 1st Qu.: -1.0000 1st Qu.: -1.0000 1st Qu.: -1.0000 1st Qu.: -1.0000
## Median : 1.0000 Median : -1.0000 Median : -1.0000 Median : -1.0000
## Mean : 0.6483 Mean : 0.1495 Mean : -0.1727 Mean : 0.1414
## 3rd Qu.: 1.0000 3rd Qu.: 2.0000 3rd Qu.: 1.0000 3rd Qu.: 2.0000
## Max. : 5.0000 Max. : 2.0000 Max. : 2.0000 Max. : 2.0000
##
## sp_ai sp_asian sp_pi sp_gender

```

```

## Min.      :-1.000    Min.      :-1.0000    Min.      :-1.000    Min.      :-7.00000
## 1st Qu.: -1.000    1st Qu.: -1.0000    1st Qu.: -1.000    1st Qu.: -1.00000
## Median : -1.000    Median : -1.0000    Median : -1.000    Median : -1.00000
## Mean   :  0.168    Mean   :  0.1669    Mean   :  0.175    Mean   : -0.03245
## 3rd Qu.:  2.000    3rd Qu.:  2.0000    3rd Qu.:  2.000    3rd Qu.:  1.00000
## Max.   :  2.000    Max.   :  2.0000    Max.   :  2.000    Max.   :  3.00000
##
##      nonserious      honest      pid7      birthyr      gender
## Min.      :1.000    Min.      :1.000    Min.      :-4      Min.      :1927    Min.      :1.000
## 1st Qu.: 1.000    1st Qu.: 5.000    1st Qu.: -4      1st Qu.: 1952    1st Qu.: 1.000
## Median : 1.000    Median : 5.000    Median : -4      Median : 1961    Median : 2.000
## Mean   : 1.369    Mean   : 4.872    Mean   : -4      Mean   : 1963    Mean   : 1.528
## 3rd Qu.: 1.000    3rd Qu.: 5.000    3rd Qu.: -4      3rd Qu.: 1974    3rd Qu.: 2.000
## Max.   : 5.000    Max.   : 5.000    Max.   : -4      Max.   : 2000    Max.   : 2.000
##
##      educ      marstat      child18      employ
## Min.      :1.00    Min.      :1.000    Min.      :1.000    Min.      :1.000
## 1st Qu.: 3.00    1st Qu.: 1.000    1st Qu.: 2.000    1st Qu.: 1.000
## Median : 4.00    Median : 1.000    Median : 2.000    Median : 4.000
## Mean   : 4.07    Mean   : 2.459    Mean   : 1.802    Mean   : 3.441
## 3rd Qu.: 5.00    3rd Qu.: 4.000    3rd Qu.: 2.000    3rd Qu.: 5.000
## Max.   : 6.00    Max.   : 6.000    Max.   : 2.000    Max.   : 9.000
##
##
##                                     employ_t
## __NA__                                     :1723
## Disabled work program                       :  0
## long term disabled                         :  1
## Transitional Leave without pay             :  1
## Unpaid director of local [REDACTED SOCIAL SERVICE ORGANIZATION]:  1
## Work related injury, surgery, recovery,not working right now :  0
##
##      faminc_new      region      votereg      ideo5
## Min.      : 1.00    Min.      :1.000    Min.      :1.000    Min.      :1.000
## 1st Qu.:  4.00    1st Qu.: 2.000    1st Qu.: 1.000    1st Qu.: 2.000
## Median :  8.00    Median : 3.000    Median : 1.000    Median : 3.000
## Mean   :17.58    Mean   : 2.718    Mean   : 1.024    Mean   : 3.074
## 3rd Qu.:11.00    3rd Qu.: 4.000    3rd Qu.: 1.000    3rd Qu.: 4.000
## Max.   :97.00    Max.   : 4.000    Max.   : 3.000    Max.   : 6.000
##
##      newsint      presvote16post
## Min.      :1.000    Min.      :-7.000
## 1st Qu.: 1.000    1st Qu.:  1.000
## Median : 1.000    Median :  2.000
## Mean   : 1.478    Mean   :  2.008
## 3rd Qu.: 2.000    3rd Qu.:  2.000
## Max.   : 7.000    Max.   :  7.000
##
##
##                                     presvote16post_t pew_bornagain
##                                     :  1      Min.      :1.000
## __NA__                                     :1725    1st Qu.: 1.000
## Did not vote because HATED both options:  0      Median : 2.000
##                                     Mean   : 1.729
##                                     3rd Qu.: 2.000
##                                     Max.   : 2.000
##

```

```

##
##   pew_religimp    pew_churatd    pew_prayer    religpew
##   Min.   :-7.000    Min.    :1.000    Min.   :-7.000    Min.   :-7.000
##   1st Qu.: 1.000    1st Qu.:2.000    1st Qu.: 1.000    1st Qu.: 1.000
##   Median : 2.000    Median :5.000    Median : 3.000    Median : 2.000
##   Mean   : 2.239    Mean   :4.116    Mean   : 3.493    Mean   : 4.098
##   3rd Qu.: 3.000    3rd Qu.:6.000    3rd Qu.: 6.000    3rd Qu.:10.000
##   Max.    : 4.000    Max.    :7.000    Max.    : 7.000    Max.    :12.000
##
##
##           religpew_t    religpew_protestant
##   __NA__                :1706    Min.   :-7.00
##   Christian              :   4    1st Qu.: 3.00
##   Baptist                :   3    Median :98.00
##   Methodist              :   2    Mean   :59.62
##   Bible believing Evangelical: 1    3rd Qu.:98.00
##   christian               :   1    Max.    :98.00
##   (Other)                :   9
##
##           religpew_protestant_t    immigrant    inputstate
##   __NA__                :1725    Min.   :1.000    Min.   :-7.00
##   Evangelical Friends/Quaker: 1    1st Qu.:4.000    1st Qu.:12.00
##                                     Median :5.000    Median :26.00
##                                     Mean   :4.385    Mean   :26.37
##                                     3rd Qu.:5.000    3rd Qu.:41.00
##                                     Max.    :5.000    Max.    :56.00
##
##
##           race    race_other    pdl_inputzip    pdl_region
##   Min.   :-7.000    __NA__:1726    -3, restricted access:1726    Min.   :1.000
##   1st Qu.: 1.000                                     1st Qu.:2.000
##   Median : 1.000                                     Median :3.000
##   Mean   : 1.471                                     Mean   :2.718
##   3rd Qu.: 1.000                                     3rd Qu.:4.000
##   Max.    : 7.000                                     Max.    :4.000
##
##
##           pdl_cassregcountyname    acaapprove_skp    acains_skp
##   -3, restricted access:1726    Min.   :0.000000    Min.   :0.000000
##                                     1st Qu.:0.000000    1st Qu.:0.000000
##                                     Median :0.000000    Median :0.000000
##                                     Mean   :0.005214    Mean   :0.004635
##                                     3rd Qu.:0.000000    3rd Qu.:0.000000
##                                     Max.    :2.000000    Max.    :1.000000
##
##
##   acarepeal_skp    addtime_skp    apppres_skp    birthright_skp
##   Min.   :0.000000    Min.   :0.000000    Min.   :0.000000    Min.   :0.000000
##   1st Qu.:0.000000    1st Qu.:0.000000    1st Qu.:0.000000    1st Qu.:0.000000
##   Median :0.000000    Median :0.000000    Median :0.000000    Median :0.000000
##   Mean   :0.004056    Mean   :0.001738    Mean   :0.0005794    Mean   :0.002897
##   3rd Qu.:0.000000    3rd Qu.:0.000000    3rd Qu.:0.000000    3rd Qu.:0.000000
##   Max.    :1.000000    Max.    :1.000000    Max.    :1.000000    Max.    :2.000000
##
##
##   coord16_skp    corrupt_dt_skp    corrupt_skp    costins_skp
##   Min.   :0.000000    Min.   :0.000000    Min.   :0.000000    Min.   :0.000000
##   1st Qu.:0.000000    1st Qu.:0.000000    1st Qu.:0.000000    1st Qu.:0.000000
##   Median :0.000000    Median :0.000000    Median :0.000000    Median :0.000000
##   Mean   :0.001738    Mean   :0.001159    Mean   :0.004635    Mean   :0.004635

```

## 3rd Qu.:0.000000	3rd Qu.:0.000000	3rd Qu.:0.000000	3rd Qu.:0.000000
## Max. :1.000000	Max. :1.000000	Max. :2.000000	Max. :1.000000
##			
## direct1_skp	direct2_skp	disc_selfrace_skp	disc_selfsex_skp
## Min. :0.000000	Min. :0.000000	Min. :0.000000	Min. :0.000000
## 1st Qu.:0.000000	1st Qu.:0.000000	1st Qu.:0.000000	1st Qu.:0.000000
## Median :0.000000	Median :0.000000	Median :0.000000	Median :0.000000
## Mean :0.004056	Mean :0.005214	Mean :0.001738	Mean :0.004056
## 3rd Qu.:0.000000	3rd Qu.:0.000000	3rd Qu.:0.000000	3rd Qu.:0.000000
## Max. :2.000000	Max. :2.000000	Max. :1.000000	Max. :2.000000
##			
## diversity_skp	dt_grid_skp	econ_grid_skp	econpres_skp
## Min. :0.000000	Min. :0.0000	Min. :0.000000	Min. :0.000000
## 1st Qu.:0.000000	1st Qu.:0.0000	1st Qu.:0.000000	1st Qu.:0.000000
## Median :0.000000	Median :0.0000	Median :0.000000	Median :0.000000
## Mean :0.001159	Mean :0.0197	Mean :0.01796	Mean :0.005794
## 3rd Qu.:0.000000	3rd Qu.:0.0000	3rd Qu.:0.000000	3rd Qu.:0.000000
## Max. :1.000000	Max. :2.0000	Max. :1.000000	Max. :1.000000
##			
## emp_adv1_skp	emp_adv2_skp	emp_concern1_skp	emp_concern2_skp
## Min. :0.000000	Min. :0.000000	Min. :0.000000	Min. :0.000000
## 1st Qu.:0.000000	1st Qu.:0.000000	1st Qu.:0.000000	1st Qu.:0.000000
## Median :0.000000	Median :0.000000	Median :0.000000	Median :0.000000
## Mean :0.002318	Mean :0.004635	Mean :0.001738	Mean :0.001159
## 3rd Qu.:0.000000	3rd Qu.:0.000000	3rd Qu.:0.000000	3rd Qu.:0.000000
## Max. :1.000000	Max. :2.000000	Max. :2.000000	Max. :2.000000
##			
## emp_persp_skp	emp_place_skp	famsep_skp	finpar1_skp
## Min. :0.000000	Min. :0.000000	Min. :0.000000	Min. :0.000000
## 1st Qu.:0.000000	1st Qu.:0.000000	1st Qu.:0.000000	1st Qu.:0.000000
## Median :0.000000	Median :0.000000	Median :0.000000	Median :0.000000
## Mean :0.008111	Mean :0.01101	Mean :0.005794	Mean :0.001159
## 3rd Qu.:0.000000	3rd Qu.:0.000000	3rd Qu.:0.000000	3rd Qu.:0.000000
## Max. :1.000000	Max. :2.000000	Max. :2.000000	Max. :1.000000
##			
## finpar2_skp	finworry_skp	follow_skp	fp2_grid_skp
## Min. :0.000000	Min. :0.000000	Min. :0.000000	Min. :0.0000
## 1st Qu.:0.000000	1st Qu.:0.000000	1st Qu.:0.000000	1st Qu.:0.0000
## Median :0.000000	Median :0.000000	Median :0.000000	Median :0.0000
## Mean :0.004056	Mean :0.001159	Mean :0.001738	Mean :0.0168
## 3rd Qu.:0.000000	3rd Qu.:0.000000	3rd Qu.:0.000000	3rd Qu.:0.0000
## Max. :1.000000	Max. :1.000000	Max. :1.000000	Max. :2.0000
##			
## freetrade_skp	frnpres_skp	ftaltright_skp	ftantifa_skp
## Min. :0.000000	Min. :0.000000	Min. :0.000000	Min. :0.0000
## 1st Qu.:0.000000	1st Qu.:0.000000	1st Qu.:0.000000	1st Qu.:0.0000
## Median :0.000000	Median :0.000000	Median :0.000000	Median :0.0000
## Mean :0.004635	Mean :0.007532	Mean :0.04751	Mean :0.1066
## 3rd Qu.:0.000000	3rd Qu.:0.000000	3rd Qu.:0.000000	3rd Qu.:0.0000
## Max. :2.000000	Max. :1.000000	Max. :2.000000	Max. :3.0000
##			
## ftasian_skp	ftblack_skp	ftcapitalists_skp	ftfbi_skp
## Min. :0.000000	Min. :0.000000	Min. :0.000000	Min. :0.000000
## 1st Qu.:0.000000	1st Qu.:0.000000	1st Qu.:0.000000	1st Qu.:0.000000

## Median :0.000000	Median :0.000000	Median :0.000000	Median :0.000000
## Mean :0.006953	Mean :0.003476	Mean :0.01796	Mean :0.005214
## 3rd Qu.:0.000000	3rd Qu.:0.000000	3rd Qu.:0.000000	3rd Qu.:0.000000
## Max. :2.000000	Max. :1.000000	Max. :2.000000	Max. :2.000000
##			
## ftgay_skp	fthisp_skp	fthrc_skp	ftimmig_skp
## Min. :0.000000	Min. :0.000000	Min. :0.000000	Min. :0.000000
## 1st Qu.:0.000000	1st Qu.:0.000000	1st Qu.:0.000000	1st Qu.:0.000000
## Median :0.000000	Median :0.000000	Median :0.000000	Median :0.000000
## Mean :0.006953	Mean :0.004056	Mean :0.01333	Mean :0.009849
## 3rd Qu.:0.000000	3rd Qu.:0.000000	3rd Qu.:0.000000	3rd Qu.:0.000000
## Max. :2.000000	Max. :2.000000	Max. :2.000000	Max. :2.000000
##			
## ftjournal_skp	ftkavanaugh_skp	ftmetoo_skp	ftmueller_skp
## Min. :0.000000	Min. :0.000000	Min. :0.000000	Min. :0.000000
## 1st Qu.:0.000000	1st Qu.:0.000000	1st Qu.:0.000000	1st Qu.:0.000000
## Median :0.000000	Median :0.000000	Median :0.000000	Median :0.000000
## Mean :0.00927	Mean :0.01391	Mean :0.01564	Mean :0.02723
## 3rd Qu.:0.000000	3rd Qu.:0.000000	3rd Qu.:0.000000	3rd Qu.:0.000000
## Max. :2.000000	Max. :2.000000	Max. :2.000000	Max. :2.000000
##			
## ftmuslim_skp	ftobama_skp	ftpolice_skp	ftrrural_skp
## Min. :0.000000	Min. :0.000000	Min. :0.000000	Min. :0.000000
## 1st Qu.:0.000000	1st Qu.:0.000000	1st Qu.:0.000000	1st Qu.:0.000000
## Median :0.000000	Median :0.000000	Median :0.000000	Median :0.000000
## Mean :0.008111	Mean :0.01159	Mean :0.003476	Mean :0.002318
## 3rd Qu.:0.000000	3rd Qu.:0.000000	3rd Qu.:0.000000	3rd Qu.:0.000000
## Max. :1.000000	Max. :2.000000	Max. :1.000000	Max. :1.000000
##			
## ftscotus_skp	ftsocialists_skp	fttrans_skp	fttrump_skp
## Min. :0.000000	Min. :0.000000	Min. :0.000000	Min. :0.000000
## 1st Qu.:0.000000	1st Qu.:0.000000	1st Qu.:0.000000	1st Qu.:0.000000
## Median :0.000000	Median :0.000000	Median :0.000000	Median :0.000000
## Mean :0.002318	Mean :0.02028	Mean :0.007532	Mean :0.09618
## 3rd Qu.:0.000000	3rd Qu.:0.000000	3rd Qu.:0.000000	3rd Qu.:0.000000
## Max. :2.000000	Max. :2.000000	Max. :1.000000	Max. :2.000000
##			
## ftwhite_skp	ge_grid_skp	give_skp	givefut_skp
## Min. :0.000000	Min. :0.000000	Min. :0.000000	Min. :0.000000
## 1st Qu.:0.000000	1st Qu.:0.000000	1st Qu.:0.000000	1st Qu.:0.000000
## Median :0.000000	Median :0.000000	Median :0.000000	Median :0.000000
## Mean :0.004635	Mean :0.03013	Mean :0.008111	Mean :0.005794
## 3rd Qu.:0.000000	3rd Qu.:0.000000	3rd Qu.:0.000000	3rd Qu.:0.000000
## Max. :2.000000	Max. :2.000000	Max. :1.000000	Max. :1.000000
##			
## gov18p_skp	gov18t_skp	guncheck_skp	gunsar_skp
## Min. :0.000000	Min. :0.000000	Min. :0.000000	Min. :0.000000
## 1st Qu.:0.000000	1st Qu.:0.000000	1st Qu.:0.000000	1st Qu.:0.000000
## Median :0.000000	Median :0.000000	Median :0.000000	Median :0.000000
## Mean :0.002897	Mean :0.001738	Mean :0.01101	Mean :0.004056
## 3rd Qu.:0.000000	3rd Qu.:0.000000	3rd Qu.:0.000000	3rd Qu.:0.000000
## Max. :2.000000	Max. :1.000000	Max. :2.000000	Max. :2.000000
##			
## gunteach_skp	harass_skp	harassstr_skp	house18p_skp

```

## Min. :0.000000 Min. :0.000000 Min. :0.000000 Min. :0.000000
## 1st Qu.:0.000000 1st Qu.:0.000000 1st Qu.:0.000000 1st Qu.:0.000000
## Median :0.000000 Median :0.000000 Median :0.000000 Median :0.000000
## Mean :0.005214 Mean :0.007532 Mean :0.002318 Mean :0.002897
## 3rd Qu.:0.000000 3rd Qu.:0.000000 3rd Qu.:0.000000 3rd Qu.:0.000000
## Max. :1.000000 Max. :2.000000 Max. :1.000000 Max. :1.000000
##
## house18t_skp howreg_skp ice_skp illimcrime_skp
## Min. :0.000000 Min. :0 Min. :0.000000 Min. :0.000000
## 1st Qu.:0.000000 1st Qu.:0 1st Qu.:0.000000 1st Qu.:0.000000
## Median :0.000000 Median :0 Median :0.000000 Median :0.000000
## Mean :0.004056 Mean :0 Mean :0.004635 Mean :0.003476
## 3rd Qu.:0.000000 3rd Qu.:0 3rd Qu.:0.000000 3rd Qu.:0.000000
## Max. :1.000000 Max. :0 Max. :1.000000 Max. :2.000000
##
## illimecon_skp illimschool_skp im_grid_skp imigcit_skp
## Min. :0.00000 Min. :0.000000 Min. :0.00000 Min. :0.000000
## 1st Qu.:0.00000 1st Qu.:0.000000 1st Qu.:0.00000 1st Qu.:0.000000
## Median :0.00000 Median :0.000000 Median :0.00000 Median :0.000000
## Mean :0.01101 Mean :0.004056 Mean :0.02433 Mean :0.004056
## 3rd Qu.:0.00000 3rd Qu.:0.000000 3rd Qu.:0.00000 3rd Qu.:0.000000
## Max. :2.00000 Max. :1.000000 Max. :2.00000 Max. :3.000000
##
## immignum_skp immigpol_skp improve1_skp improve2_skp
## Min. :0.000000 Min. :0.000000 Min. :0.000000 Min. :0.000000
## 1st Qu.:0.000000 1st Qu.:0.000000 1st Qu.:0.000000 1st Qu.:0.000000
## Median :0.000000 Median :0.000000 Median :0.000000 Median :0.000000
## Mean :0.003476 Mean :0.004056 Mean :0.001738 Mean :0.003476
## 3rd Qu.:0.000000 3rd Qu.:0.000000 3rd Qu.:0.000000 3rd Qu.:0.000000
## Max. :2.000000 Max. :2.000000 Max. :1.000000 Max. :1.000000
##
## indirect1_skp indirect2_skp integrity1_skp integrity2_skp
## Min. :0.000000 Min. :0.00000 Min. :0.000000 Min. :0.000000
## 1st Qu.:0.000000 1st Qu.:0.00000 1st Qu.:0.000000 1st Qu.:0.000000
## Median :0.000000 Median :0.00000 Median :0.000000 Median :0.000000
## Mean :0.003476 Mean :0.00927 Mean :0.001738 Mean :0.004635
## 3rd Qu.:0.000000 3rd Qu.:0.00000 3rd Qu.:0.000000 3rd Qu.:0.000000
## Max. :2.000000 Max. :2.00000 Max. :1.000000 Max. :2.000000
##
## integrity3_skp integrity4_skp integrity5_skp knowopioid_skp
## Min. :0 Min. :0.000000 Min. :0.000000 Min. :0.000000
## 1st Qu.:0 1st Qu.:0.000000 1st Qu.:0.000000 1st Qu.:0.000000
## Median :0 Median :0.000000 Median :0.000000 Median :0.000000
## Mean :0 Mean :0.002318 Mean :0.003476 Mean :0.002318
## 3rd Qu.:0 3rd Qu.:0.000000 3rd Qu.:0.000000 3rd Qu.:0.000000
## Max. :0 Max. :1.000000 Max. :1.000000 Max. :1.000000
##
## lc_grid_skp loseins_skp march1_skp march2_skp
## Min. :0.00000 Min. :0.000000 Min. :0.000000 Min. :0.000000
## 1st Qu.:0.00000 1st Qu.:0.000000 1st Qu.:0.000000 1st Qu.:0.000000
## Median :0.00000 Median :0.000000 Median :0.000000 Median :0.000000
## Mean :0.02433 Mean :0.001159 Mean :0.002897 Mean :0.006373
## 3rd Qu.:0.00000 3rd Qu.:0.000000 3rd Qu.:0.000000 3rd Qu.:0.000000
## Max. :2.00000 Max. :1.000000 Max. :1.000000 Max. :1.000000

```

```

##
##      meet_skp      muellerinv_skp      online_skp      opioiddo_skp
## Min.      :0.000000 Min.      :0.000000 Min.      :0.000000 Min.      :0.000000
## 1st Qu.:0.000000 1st Qu.:0.000000 1st Qu.:0.000000 1st Qu.:0.000000
## Median :0.000000 Median :0.000000 Median :0.000000 Median :0.000000
## Mean      :0.002897 Mean      :0.001159 Mean      :0.004635 Mean      :0.0005794
## 3rd Qu.:0.000000 3rd Qu.:0.000000 3rd Qu.:0.000000 3rd Qu.:0.000000
## Max.      :1.000000 Max.      :1.000000 Max.      :1.000000 Max.      :1.000000
##
## percent20_skp      persuade_skp      phe_grid_skp      post1_skp
## Min.      :0.000000 Min.      :0.000000 Min.      :0.0000 Min.      :0.000000
## 1st Qu.:0.000000 1st Qu.:0.000000 1st Qu.:0.0000 1st Qu.:0.000000
## Median :0.000000 Median :0.000000 Median :0.0000 Median :0.000000
## Mean      :0.002318 Mean      :0.005794 Mean      :0.0168 Mean      :0.003476
## 3rd Qu.:0.000000 3rd Qu.:0.000000 3rd Qu.:0.0000 3rd Qu.:0.000000
## Max.      :1.000000 Max.      :1.000000 Max.      :2.0000 Max.      :2.000000
##
##      post2_skp      post3_skp      post4_skp      reg_skp
## Min.      :0.000000 Min.      :0.000000 Min.      :0.000000 Min.      :0.000000
## 1st Qu.:0.000000 1st Qu.:0.000000 1st Qu.:0.000000 1st Qu.:0.000000
## Median :0.000000 Median :0.000000 Median :0.000000 Median :0.000000
## Mean      :0.001738 Mean      :0.004056 Mean      :0.001738 Mean      :0.006373
## 3rd Qu.:0.000000 3rd Qu.:0.000000 3rd Qu.:0.000000 3rd Qu.:0.000000
## Max.      :1.000000 Max.      :2.000000 Max.      :2.000000 Max.      :2.000000
##
##      regdiff_skp      richpoor_skp      rr_grid_skp      russia16_skp
## Min.      :0      Min.      :0.000000 Min.      :0.00000 Min.      :0.000000
## 1st Qu.:0      1st Qu.:0.000000 1st Qu.:0.00000 1st Qu.:0.000000
## Median :0      Median :0.000000 Median :0.00000 Median :0.000000
## Mean      :0      Mean      :0.001738 Mean      :0.01217 Mean      :0.004635
## 3rd Qu.:0      3rd Qu.:0.000000 3rd Qu.:0.00000 3rd Qu.:0.000000
## Max.      :0      Max.      :1.000000 Max.      :2.00000 Max.      :2.000000
##
##      senate18p_skp      senate18t_skp      sexadvance_skp      sexharass_skp
## Min.      :0.000000 Min.      :0.000000 Min.      :0.000000 Min.      :0.000000
## 1st Qu.:0.000000 1st Qu.:0.000000 1st Qu.:0.000000 1st Qu.:0.000000
## Median :0.000000 Median :0.000000 Median :0.000000 Median :0.000000
## Mean      :0.001159 Mean      :0.001738 Mean      :0.004635 Mean      :0.0005794
## 3rd Qu.:0.000000 3rd Qu.:0.000000 3rd Qu.:0.000000 3rd Qu.:0.000000
## Max.      :1.000000 Max.      :1.000000 Max.      :1.000000 Max.      :1.000000
##
##      sign_skp      tariff_con_skp      tariff_work_skp      taxapproval_skp
## Min.      :0.000000 Min.      :0.000000 Min.      :0.000000 Min.      :0.000000
## 1st Qu.:0.000000 1st Qu.:0.000000 1st Qu.:0.000000 1st Qu.:0.000000
## Median :0.000000 Median :0.000000 Median :0.000000 Median :0.000000
## Mean      :0.004056 Mean      :0.009849 Mean      :0.006953 Mean      :0.004635
## 3rd Qu.:0.000000 3rd Qu.:0.000000 3rd Qu.:0.000000 3rd Qu.:0.000000
## Max.      :1.000000 Max.      :2.000000 Max.      :2.000000 Max.      :2.000000
##
##      taxecon_skp      taxfam_skp      triptime_skp      turnout16_skp
## Min.      :0      Min.      :0.000000 Min.      :0      Min.      :0.000000
## 1st Qu.:0      1st Qu.:0.000000 1st Qu.:0      1st Qu.:0.000000
## Median :0      Median :0.000000 Median :0      Median :0.000000
## Mean      :0      Mean      :0.005214 Mean      :0      Mean      :0.004635

```

```

## 3rd Qu.:0      3rd Qu.:0.000000      3rd Qu.:0      3rd Qu.:0.000000
## Max. :0      Max. :1.000000      Max. :0      Max. :1.000000
##
## turnout18_skp      turnout18ns_skp turnout18when_skp vharder_skp
## Min. :0.0000000      Min. :0      Min. : -9      Min. :0.000000
## 1st Qu.:0.0000000      1st Qu.:0      1st Qu.: -9      1st Qu.:0.000000
## Median :0.0000000      Median :0      Median : -9      Median :0.000000
## Mean :0.0005794      Mean :0      Mean : -9      Mean :0.004635
## 3rd Qu.:0.0000000      3rd Qu.:0      3rd Qu.: -9      3rd Qu.:0.000000
## Max. :1.0000000      Max. :0      Max. : -9      Max. :2.000000
##
## violence1_skp violence2_skp      vote16_skp      vote20cand_skp
## Min. :0      Min. :0.000000      Min. :0.000000      Min. :0.000000
## 1st Qu.:0      1st Qu.:0.000000      1st Qu.:0.000000      1st Qu.:0.000000
## Median :0      Median :0.000000      Median :0.000000      Median :0.000000
## Mean :0      Mean :0.002897      Mean :0.002897      Mean :0.04809
## 3rd Qu.:0      3rd Qu.:0.000000      3rd Qu.:0.000000      3rd Qu.:0.000000
## Max. :0      Max. :2.000000      Max. :2.000000      Max. :2.000000
##
## vote20dem_skp      vote20ew_skp      vote20jb_skp      votecount_skp
## Min. :0.000000      Min. :0.000000      Min. :0.0000000      Min. :0.000000
## 1st Qu.:0.000000      1st Qu.:0.000000      1st Qu.:0.0000000      1st Qu.:0.000000
## Median :0.000000      Median :0.000000      Median :0.0000000      Median :0.000000
## Mean :0.007532      Mean :0.006953      Mean :0.0005794      Mean :0.001738
## 3rd Qu.:0.000000      3rd Qu.:0.000000      3rd Qu.:0.0000000      3rd Qu.:0.000000
## Max. :2.000000      Max. :1.000000      Max. :1.0000000      Max. :2.000000
##
## votehard_skp      votestop_skp      votetrust_skp      waittime_skp
## Min. :0.0000000      Min. :0.000000      Min. :0.000000      Min. :0.0000000
## 1st Qu.:0.0000000      1st Qu.:0.000000      1st Qu.:0.000000      1st Qu.:0.0000000
## Median :0.0000000      Median :0.000000      Median :0.000000      Median :0.0000000
## Mean :0.0005794      Mean :0.004056      Mean :0.004056      Mean :0.0005794
## 3rd Qu.:0.0000000      3rd Qu.:0.000000      3rd Qu.:0.000000      3rd Qu.:0.0000000
## Max. :1.0000000      Max. :1.000000      Max. :1.000000      Max. :1.0000000
##
## wall_skp      warm_skp      warmcause_skp      warmcom_skp
## Min. :0.000000      Min. :0.000000      Min. :0.000000      Min. :0.000000
## 1st Qu.:0.000000      1st Qu.:0.000000      1st Qu.:0.000000      1st Qu.:0.000000
## Median :0.000000      Median :0.000000      Median :0.000000      Median :0.000000
## Mean :0.005794      Mean :0.003476      Mean :0.002897      Mean :0.008691
## 3rd Qu.:0.000000      3rd Qu.:0.000000      3rd Qu.:0.000000      3rd Qu.:0.000000
## Max. :1.000000      Max. :1.000000      Max. :1.000000      Max. :2.000000
##
## warmdo_skp      warmus_skp      warmyou_skp      whenreg_skp
## Min. :0.00000      Min. :0.000000      Min. :0.000000      Min. :0.000000
## 1st Qu.:0.00000      1st Qu.:0.000000      1st Qu.:0.000000      1st Qu.:0.000000
## Median :0.00000      Median :0.000000      Median :0.000000      Median :0.000000
## Mean :0.00927      Mean :0.002897      Mean :0.001738      Mean :0.001738
## 3rd Qu.:0.00000      3rd Qu.:0.000000      3rd Qu.:0.000000      3rd Qu.:0.000000
## Max. :2.00000      Max. :2.000000      Max. :1.000000      Max. :1.000000
##
## whiteid_skp      whitejob_skp      whitework_skp      work_skp
## Min. :0.000000      Min. :0.000000      Min. :0.000000      Min. :0.000000
## 1st Qu.:0.000000      1st Qu.:0.000000      1st Qu.:0.000000      1st Qu.:0.000000

```



```

## Median :0.000000 Median :0.000000 Median :0.000000 Median :0.000000
## Mean :0.009849 Mean :0.005794 Mean :0.005214 Mean :0.001159
## 3rd Qu.:0.000000 3rd Qu.:0.000000 3rd Qu.:0.000000 3rd Qu.:0.000000
## Max. :2.000000 Max. :2.000000 Max. :2.000000 Max. :1.000000
##
## dishonest_skp impeach1_skp impeach2_skp media1_skp
## Min. :0.000000 Min. :0.000000 Min. :0.000000 Min. :0.000000
## 1st Qu.:0.000000 1st Qu.:0.000000 1st Qu.:0.000000 1st Qu.:0.000000
## Median :0.000000 Median :0.000000 Median :0.000000 Median :0.000000
## Mean :0.001738 Mean :0.003476 Mean :0.002318 Mean :0.003476
## 3rd Qu.:0.000000 3rd Qu.:0.000000 3rd Qu.:0.000000 3rd Qu.:0.000000
## Max. :1.000000 Max. :1.000000 Max. :1.000000 Max. :1.000000
##
## media2_skp media3_skp media4_skp media4a_skp
## Min. :0.000000 Min. :0.000000 Min. :0.000000 Min. :0.000000
## 1st Qu.:0.000000 1st Qu.:0.000000 1st Qu.:0.000000 1st Qu.:0.000000
## Median :0.000000 Median :0.000000 Median :0.000000 Median :0.000000
## Mean :0.002897 Mean :0.004635 Mean :0.005214 Mean :0.002897
## 3rd Qu.:0.000000 3rd Qu.:0.000000 3rd Qu.:0.000000 3rd Qu.:0.000000
## Max. :2.000000 Max. :2.000000 Max. :2.000000 Max. :2.000000
##
## media5_skp mediaviol_skp pk_alaska_skp pk_cjus_skp
## Min. :0.000000 Min. :0.000000 Min. :0.0000 Min. :0.000
## 1st Qu.:0.000000 1st Qu.:0.000000 1st Qu.:0.0000 1st Qu.:0.000
## Median :0.000000 Median :0.000000 Median :0.0000 Median :0.000
## Mean :0.001738 Mean :0.005794 Mean :0.1964 Mean :0.106
## 3rd Qu.:0.000000 3rd Qu.:0.000000 3rd Qu.:0.0000 3rd Qu.:0.000
## Max. :2.000000 Max. :1.000000 Max. :2.0000 Max. :2.000
##
## pk_geer_skp pk_germ_skp pk_sen_skp pk_spend_skp
## Min. :0.0000 Min. :0.000000 Min. :0.000000 Min. :0.000000
## 1st Qu.:0.0000 1st Qu.:0.000000 1st Qu.:0.000000 1st Qu.:0.000000
## Median :0.0000 Median :0.000000 Median :0.000000 Median :0.000000
## Mean :0.4305 Mean :0.06663 Mean :0.01622 Mean :0.006373
## 3rd Qu.:1.0000 3rd Qu.:0.000000 3rd Qu.:0.000000 3rd Qu.:0.000000
## Max. :2.0000 Max. :2.000000 Max. :2.000000 Max. :2.000000
##
## rural1_skp rural2_skp rural3_skp sd_grid_skp
## Min. :0.0000000 Min. :0.000000 Min. :0.000000 Min. :0.000000
## 1st Qu.:0.0000000 1st Qu.:0.000000 1st Qu.:0.000000 1st Qu.:0.000000
## Median :0.0000000 Median :0.000000 Median :0.000000 Median :0.000000
## Mean :0.0005794 Mean :0.007532 Mean :0.008111 Mean :0.009849
## 3rd Qu.:0.0000000 3rd Qu.:0.000000 3rd Qu.:0.000000 3rd Qu.:0.000000
## Max. :1.0000000 Max. :2.000000 Max. :2.000000 Max. :2.000000
##
## selfcensor_skp strlead_skp strpres_skp trustmedia_skp
## Min. :0.000000 Min. :0.000000 Min. :0.000000 Min. :0.000000
## 1st Qu.:0.000000 1st Qu.:0.000000 1st Qu.:0.000000 1st Qu.:0.000000
## Median :0.000000 Median :0.000000 Median :0.000000 Median :0.000000
## Mean :0.001738 Mean :0.001738 Mean :0.002897 Mean :0.004635
## 3rd Qu.:0.000000 3rd Qu.:0.000000 3rd Qu.:0.000000 3rd Qu.:0.000000
## Max. :1.000000 Max. :1.000000 Max. :2.000000 Max. :1.000000
##
## combat_skp dem_activduty_skp honest_skp hospital_skp

```

```

## Min. :0.000000 Min. :0.000000 Min. :0.000000 Min. :0.000000
## 1st Qu.:0.000000 1st Qu.:0.000000 1st Qu.:0.000000 1st Qu.:0.000000
## Median :0.000000 Median :0.000000 Median :0.000000 Median :0.000000
## Mean :0.001738 Mean :0.002318 Mean :0.001738 Mean :0.001738
## 3rd Qu.:0.000000 3rd Qu.:0.000000 3rd Qu.:0.000000 3rd Qu.:0.000000
## Max. :2.000000 Max. :1.000000 Max. :1.000000 Max. :1.000000
##
## marital_skp milyears2_skp milyears_skp milyr_skp
## Min. :0.0000000 Min. :0 Min. :0.000000 Min. :0
## 1st Qu.:0.0000000 1st Qu.:0 1st Qu.:0.000000 1st Qu.:0
## Median :0.0000000 Median :0 Median :0.000000 Median :0
## Mean :0.0005794 Mean :0 Mean :0.001159 Mean :0
## 3rd Qu.:0.0000000 3rd Qu.:0 3rd Qu.:0.000000 3rd Qu.:0
## Max. :1.0000000 Max. :0 Max. :2.000000 Max. :0
##
## nonserious_skp pid1d_skp pid1r_skp pidlean_skp
## Min. :0 Min. :0.000000 Min. :0.000000 Min. :0.000000
## 1st Qu.:0 1st Qu.:0.000000 1st Qu.:0.000000 1st Qu.:0.000000
## Median :0 Median :0.000000 Median :0.000000 Median :0.000000
## Mean :0 Mean :0.001159 Mean :0.001738 Mean :0.001738
## 3rd Qu.:0 3rd Qu.:0.000000 3rd Qu.:0.000000 3rd Qu.:0.000000
## Max. :0 Max. :2.000000 Max. :2.000000 Max. :2.000000
##
## pidstr_skp sp_gender_skp sp_multi_skp spouseeth_skp
## Min. :0.000000 Min. :0.000000 Min. :0.000000 Min. :0.000000
## 1st Qu.:0.000000 1st Qu.:0.000000 1st Qu.:0.000000 1st Qu.:0.000000
## Median :0.000000 Median :0.000000 Median :0.000000 Median :0.000000
## Mean :0.001159 Mean :0.001159 Mean :0.006953 Mean :0.001159
## 3rd Qu.:0.000000 3rd Qu.:0.000000 3rd Qu.:0.000000 3rd Qu.:0.000000
## Max. :2.000000 Max. :2.000000 Max. :2.000000 Max. :1.000000
##
## turnout18w_skp follow_page_timing addtime_page_timing reg_page_timing
## Min. :0 Min. : 1.307 Min. : 1.496 Min. : 0.874
## 1st Qu.:0 1st Qu.: 6.220 1st Qu.: 3.510 1st Qu.: 3.042
## Median :0 Median : 9.344 Median : 4.439 Median : 4.013
## Mean :0 Mean : 23.180 Mean : 6.691 Mean : 11.313
## 3rd Qu.:0 3rd Qu.: 14.042 3rd Qu.: 5.737 3rd Qu.: 5.533
## Max. :0 Max. :12258.434 Max. :1342.627 Max. :10216.023
##
## whenreg_page_timing howreg_page_timing regdiff_page_timing
## Min. : 0.000 Min. : 0.0000 Min. : 0.0000
## 1st Qu.: 4.560 1st Qu.: 0.0000 1st Qu.: 0.0000
## Median : 5.853 Median : 0.0000 Median : 0.0000
## Mean : 7.421 Mean : 0.7628 Mean : 0.2898
## 3rd Qu.: 7.710 3rd Qu.: 0.0000 3rd Qu.: 0.0000
## Max. :214.432 Max. :159.9930 Max. :26.8530
##
## turnout18_page_timing turnout18ns_page_timing turnout18w_page_timing
## Min. : 0.998 Min. :0 Min. : 0.000
## 1st Qu.: 6.614 1st Qu.:0 1st Qu.: 0.000
## Median : 9.422 Median :0 Median : 0.000
## Mean : 16.033 Mean :0 Mean : 4.514
## 3rd Qu.: 13.725 3rd Qu.:0 3rd Qu.: 7.101
## Max. :2212.877 Max. :0 Max. :154.880

```

```

##
## votehard_page_timing vharder_page_timing waittime_page_timing
## Min. : 0.794 Min. : 1.96 Min. : 0.000
## 1st Qu.: 3.967 1st Qu.: 16.11 1st Qu.: 0.000
## Median : 5.133 Median : 23.90 Median : 0.000
## Mean : 8.995 Mean : 69.09 Mean : 0.912
## 3rd Qu.: 6.774 3rd Qu.: 34.54 3rd Qu.: 0.000
## Max. :2886.175 Max. :43113.48 Max. :267.607
##
## triptime_page_timing house18t_page_timing house18p_page_timing
## Min. : 0.0000 Min. : 0.980 Min. : 0.000
## 1st Qu.: 0.0000 1st Qu.: 5.849 1st Qu.: 2.513
## Median : 0.0000 Median : 8.616 Median : 3.638
## Mean : 0.1667 Mean : 11.510 Mean : 4.895
## 3rd Qu.: 0.0000 3rd Qu.: 12.656 3rd Qu.: 5.444
## Max. :78.6570 Max. :276.313 Max. :142.388
##
## senate18t_page_timing senate18p_page_timing gov18t_page_timing
## Min. : 0.000 Min. : 0.000 Min. : 0.000
## 1st Qu.: 1.336 1st Qu.: 0.000 1st Qu.: 1.742
## Median : 3.784 Median : 2.069 Median : 3.709
## Mean : 5.008 Mean : 2.779 Mean : 5.034
## 3rd Qu.: 6.026 3rd Qu.: 3.133 3rd Qu.: 5.639
## Max. :371.383 Max. :406.365 Max. :773.190
##
## gov18p_page_timing votestop_page_timing votecount_page_timing
## Min. : 0.000 Min. : 2.111 Min. : 1.072
## 1st Qu.: 1.195 1st Qu.: 11.488 1st Qu.: 6.792
## Median : 2.121 Median : 15.713 Median : 9.498
## Mean : 2.486 Mean : 19.808 Mean : 16.933
## 3rd Qu.: 3.036 3rd Qu.: 21.848 3rd Qu.: 13.893
## Max. :238.971 Max. :446.159 Max. :3012.820
##
## votetrust_page_timing integrity1_page_timing integrity2_page_timing
## Min. : 1.024 Min. : 0.000 Min. : 0.000
## 1st Qu.: 5.127 1st Qu.: 0.000 1st Qu.: 0.000
## Median : 6.617 Median : 1.627 Median : 1.397
## Mean : 8.757 Mean : 6.019 Mean : 6.070
## 3rd Qu.: 8.783 3rd Qu.: 7.801 3rd Qu.: 6.991
## Max. :288.391 Max. :802.034 Max. :1055.551
##
## integrity3_page_timing integrity4_page_timing integrity5_page_timing
## Min. : 0.000 Min. : 0.000 Min. : 0.000
## 1st Qu.: 0.000 1st Qu.: 0.000 1st Qu.: 0.000
## Median : 1.616 Median : 1.391 Median : 1.397
## Mean : 8.301 Mean : 7.376 Mean : 9.524
## 3rd Qu.: 10.608 3rd Qu.: 10.004 3rd Qu.: 9.508
## Max. :814.172 Max. :1063.519 Max. :1285.144
##
## turnout16_page_timing vote16_page_timing percent20_page_timing
## Min. : 0.866 Min. : 0.789 Min. : 2.855
## 1st Qu.: 6.541 1st Qu.: 2.475 1st Qu.: 7.127
## Median : 8.970 Median : 3.409 Median : 9.428
## Mean : 14.655 Mean : 5.789 Mean : 12.082

```

```

## 3rd Qu.: 12.164      3rd Qu.:  4.722      3rd Qu.: 12.360
## Max.    :2850.341    Max.    :1125.336    Max.    :1370.957
##
## meet_page_timing   givefut_page_timing march1_page_timing march2_page_timing
## Min.    :  1.034    Min.    :  0.817    Min.    :  0.000    Min.    :  0.000
## 1st Qu.:  5.790    1st Qu.:  4.096    1st Qu.:  0.000    1st Qu.:  0.000
## Median :  8.089    Median :  5.616    Median :  1.388    Median :  0.000
## Mean    : 15.546    Mean    :  9.054    Mean    :  3.599    Mean    :  4.686
## 3rd Qu.: 11.318    3rd Qu.:  7.870    3rd Qu.:  4.940    3rd Qu.:  4.941
## Max.    :5420.006    Max.    :1129.488    Max.    :506.355    Max.    :1136.423
##
## online_page_timing persuade_page_timing sign_page_timing give_page_timing
## Min.    :  0.778    Min.    :  0.802    Min.    :  0.897    Min.    :  0.761
## 1st Qu.:  4.035    1st Qu.:  4.202    1st Qu.:  4.285    1st Qu.:  3.819
## Median :  5.899    Median :  5.920    Median :  6.064    Median :  5.535
## Mean    : 11.540    Mean    :  9.768    Mean    :  8.150    Mean    :  8.361
## 3rd Qu.:  8.134    3rd Qu.:  8.391    3rd Qu.:  8.468    3rd Qu.:  8.259
## Max.    :3561.692    Max.    :2125.465    Max.    :739.787    Max.    :1037.368
##
## ge_grid_page_timing fttrump_page_timing ftblack_page_timing
## Min.    :  4.14     Min.    :  1.650    Min.    :  1.045
## 1st Qu.: 31.72     1st Qu.:  7.097    1st Qu.:  4.035
## Median : 43.09     Median : 10.551    Median :  5.670
## Mean    :108.91     Mean    :13.912    Mean    :  7.919
## 3rd Qu.: 58.20     3rd Qu.:15.816    3rd Qu.:  8.643
## Max.    :82447.00    Max.    :733.709    Max.    :249.950
##
## ftwhite_page_timing fthisp_page_timing ftasian_page_timing ftgay_page_timing
## Min.    :  1.121    Min.    :  1.260    Min.    :  1.250    Min.    :  1.057
## 1st Qu.:  4.360    1st Qu.:  3.787    1st Qu.:  3.853    1st Qu.:  3.880
## Median :  6.329    Median :  5.268    Median :  5.506    Median :  5.426
## Mean    :  8.560    Mean    :  7.275    Mean    :  7.340    Mean    :  7.473
## 3rd Qu.:  9.549    3rd Qu.:  7.916    3rd Qu.:  8.219    3rd Qu.:  8.239
## Max.    :249.051    Max.    :270.274    Max.    :147.432    Max.    :228.566
##
## ftobama_page_timing fthrc_page_timing ftmetoo_page_timing ftrural_page_timing
## Min.    :  1.091    Min.    :  1.077    Min.    :  0.975    Min.    :  1.034
## 1st Qu.:  4.003    1st Qu.:  3.716    1st Qu.:  4.108    1st Qu.:  4.444
## Median :  5.295    Median :  4.996    Median :  5.779    Median :  6.305
## Mean    :  9.001    Mean    :  7.432    Mean    :  9.541    Mean    :11.735
## 3rd Qu.:  7.865    3rd Qu.:  7.327    3rd Qu.:  8.322    3rd Qu.:  9.062
## Max.    :2410.656    Max.    :758.653    Max.    :2116.006    Max.    :5633.957
##
## ftsocialists_page_timing ftcapitalists_page_timing ftimmig_page_timing
## Min.    :  0.960     Min.    :  1.127     Min.    :  0.997
## 1st Qu.:  4.050     1st Qu.:  4.101     1st Qu.:  4.019
## Median :  5.596     Median :  5.761     Median :  5.854
## Mean    :  7.985     Mean    :  9.999     Mean    :  8.643
## 3rd Qu.:  8.316     3rd Qu.:  8.564     3rd Qu.:  9.303
## Max.    :392.080     Max.    :1631.001     Max.    :916.507
##
## ftpolice_page_timing ftjournal_page_timing fttrans_page_timing
## Min.    :  1.014     Min.    :  0.979     Min.    :  1.392
## 1st Qu.:  4.083     1st Qu.:  3.862     1st Qu.:  4.064

```

```

## Median : 5.659      Median : 5.329      Median : 5.595
## Mean   : 7.852      Mean   : 6.786      Mean   : 7.784
## 3rd Qu.: 8.213      3rd Qu.: 7.620      3rd Qu.: 8.264
## Max.   :650.031     Max.   :108.412     Max.   :285.856
##
## ftmuslim_page_timing ftmueller_page_timing ftfbi_page_timing
## Min.    : 1.094      Min.    : 1.065      Min.    : 1.104
## 1st Qu.: 3.855      1st Qu.: 4.530      1st Qu.: 4.258
## Median : 5.455      Median : 5.946      Median : 5.741
## Mean    : 8.172      Mean    : 8.182      Mean    : 8.528
## 3rd Qu.: 8.384      3rd Qu.: 8.673      3rd Qu.: 8.206
## Max.    :1007.539    Max.    :354.714     Max.    :741.442
##
## ftscotus_page_timing ftkavanaugh_page_timing ftaltright_page_timing
## Min.    : 1.018      Min.    : 1.004      Min.    : 0.896
## 1st Qu.: 4.205      1st Qu.: 4.466      1st Qu.: 4.761
## Median : 6.131      Median : 6.133      Median : 6.766
## Mean    : 8.880      Mean    : 8.047      Mean    : 13.159
## 3rd Qu.: 9.306      3rd Qu.: 8.471      3rd Qu.: 10.275
## Max.    :593.294     Max.    :599.447     Max.    :5940.172
##
## ftantifa_page_timing vote20dem_page_timing vote20cand_page_timing
## Min.    : 1.059      Min.    : 1.260      Min.    : 0.000
## 1st Qu.: 4.543      1st Qu.: 4.473      1st Qu.: 0.000
## Median : 6.625      Median : 6.230      Median : 7.858
## Mean    : 15.868     Mean    : 12.411     Mean    : 13.863
## 3rd Qu.: 10.467     3rd Qu.: 9.104      3rd Qu.: 16.590
## Max.    :7537.940    Max.    :6692.012    Max.    :1131.333
##
## vote20jb_page_timing vote20ew_page_timing phe_grid_page_timing
## Min.    : 0.974      Min.    : 0.939      Min.    : 2.637
## 1st Qu.: 5.694      1st Qu.: 3.577      1st Qu.: 19.613
## Median : 7.603      Median : 5.319      Median : 27.331
## Mean    : 12.033     Mean    : 7.377      Mean    : 45.126
## 3rd Qu.: 10.288     3rd Qu.: 7.589      3rd Qu.: 37.883
## Max.    :1210.768    Max.    :694.558     Max.    :6402.474
##
## apppres_page_timing frnpres_page_timing econpres_page_timing
## Min.    : 1.046      Min.    : 0.747      Min.    : 0.846
## 1st Qu.: 5.753      1st Qu.: 4.488      1st Qu.: 3.453
## Median : 7.726      Median : 6.261      Median : 5.046
## Mean    : 12.107     Mean    : 14.272     Mean    : 9.312
## 3rd Qu.: 10.570     3rd Qu.: 8.534      3rd Qu.: 7.055
## Max.    :2498.643    Max.    :4739.843    Max.    :2057.479
##
## dt_grid_page_timing im_grid_page_timing russial6_page_timing
## Min.    : 0.000      Min.    : 0.00      Min.    : 0.826
## 1st Qu.: 0.000      1st Qu.: 0.00      1st Qu.: 4.799
## Median : 6.364      Median : 0.00      Median : 6.822
## Mean    : 29.093     Mean    : 38.59      Mean    : 14.399
## 3rd Qu.: 41.078     3rd Qu.: 46.94      3rd Qu.: 9.612
## Max.    :5331.594    Max.    :4606.86     Max.    :7086.158
##
## muellerinv_page_timing coord16_page_timing econ_grid_page_timing

```

```

## Min. : 1.025      Min. : 0.914      Min. : 1.495
## 1st Qu.: 5.876      1st Qu.: 4.524      1st Qu.: 11.279
## Median : 8.022      Median : 6.292      Median : 15.700
## Mean : 12.087      Mean : 8.650      Mean : 24.677
## 3rd Qu.: 11.018      3rd Qu.: 8.730      3rd Qu.: 22.002
## Max. :1108.383      Max. :535.742      Max. :3816.570
##
## improve1_page_timing finpar1_page_timing finpar2_page_timing
## Min. : 0.000      Min. : 0.000      Min. : 0.000
## 1st Qu.: 0.000      1st Qu.: 0.000      1st Qu.: 0.000
## Median : 2.786      Median : 1.800      Median : 0.000
## Mean : 9.322      Mean : 8.535      Mean : 7.962
## 3rd Qu.: 10.454      3rd Qu.: 9.513      3rd Qu.: 10.306
## Max. :2007.881      Max. :1474.913      Max. :715.897
##
## improve2_page_timing finworry_page_timing lc_grid_page_timing
## Min. : 0.000      Min. : 0.943      Min. : 1.386
## 1st Qu.: 0.000      1st Qu.: 5.586      1st Qu.: 14.139
## Median : 0.000      Median : 7.644      Median : 19.661
## Mean : 7.856      Mean : 15.586      Mean : 28.299
## 3rd Qu.: 8.843      3rd Qu.: 10.049      3rd Qu.: 28.165
## Max. :1553.568      Max. :4754.196      Max. :4381.075
##
## direct1_page_timing direct2_page_timing indirect1_page_timing
## Min. : 0.00      Min. : 0.000      Min. : 0.000
## 1st Qu.: 0.00      1st Qu.: 0.000      1st Qu.: 0.000
## Median : 0.00      Median : 1.916      Median : 0.000
## Mean : 12.42      Mean : 9.749      Mean : 7.408
## 3rd Qu.: 15.22      3rd Qu.: 14.794      3rd Qu.: 8.813
## Max. :3339.36      Max. :529.998      Max. :636.815
##
## indirect2_page_timing corrupt_page_timing corrupt_dt_page_timing
## Min. : 0.000      Min. : 1.055      Min. : 0.842
## 1st Qu.: 0.000      1st Qu.: 5.470      1st Qu.: 5.916
## Median : 2.232      Median : 7.525      Median : 7.981
## Mean : 6.487      Mean : 11.885      Mean : 13.753
## 3rd Qu.: 8.079      3rd Qu.: 10.294      3rd Qu.: 11.289
## Max. :1178.735      Max. :2365.891      Max. :2503.018
##
## harass_page_timing harassstr_page_timing disc_selfsex_page_timing
## Min. : 1.352      Min. : 0.000      Min. : 0.968
## 1st Qu.: 11.259      1st Qu.: 3.680      1st Qu.: 5.336
## Median : 16.238      Median : 4.981      Median : 7.151
## Mean : 23.917      Mean : 7.792      Mean : 13.469
## 3rd Qu.: 23.851      3rd Qu.: 7.056      3rd Qu.: 9.993
## Max. :2324.231      Max. :557.525      Max. :3993.699
##
## sexadvance_page_timing sexharass_page_timing disc_selfrace_page_timing
## Min. : 0.908      Min. : 1.054      Min. : 0.884
## 1st Qu.: 4.829      1st Qu.: 3.989      1st Qu.: 5.152
## Median : 6.389      Median : 5.122      Median : 6.722
## Mean : 8.325      Mean : 7.179      Mean : 9.121
## 3rd Qu.: 8.755      3rd Qu.: 6.814      3rd Qu.: 9.090
## Max. :301.004      Max. :412.214      Max. :903.077

```

```

##
## whiteid_page_timing whitework_page_timing whitejob_page_timing
## Min. : 0.000 Min. : 0.000 Min. : 0.761
## 1st Qu.: 3.090 1st Qu.: 3.808 1st Qu.: 6.362
## Median : 5.665 Median : 7.316 Median : 8.857
## Mean : 7.545 Mean : 8.670 Mean : 13.369
## 3rd Qu.: 8.653 3rd Qu.: 11.245 3rd Qu.: 12.224
## Max. :1441.456 Max. :190.235 Max. :1805.242
##
## immignum_page_timing immigpol_page_timing birthright_page_timing
## Min. : 0.943 Min. : 0.901 Min. : 1.023
## 1st Qu.: 8.154 1st Qu.: 13.548 1st Qu.: 9.482
## Median : 11.166 Median : 20.323 Median : 13.197
## Mean : 17.981 Mean : 31.247 Mean : 35.972
## 3rd Qu.: 15.389 3rd Qu.: 30.073 3rd Qu.: 19.634
## Max. :2059.459 Max. :3759.458 Max. :13331.901
##
## wall_page_timing diversity_page_timing illimcrime_page_timing
## Min. : 0.914 Min. : 0.972 Min. : 0.984
## 1st Qu.: 5.273 1st Qu.: 8.704 1st Qu.: 6.416
## Median : 6.991 Median : 12.079 Median : 8.540
## Mean : 10.114 Mean : 23.473 Mean : 19.184
## 3rd Qu.: 9.089 3rd Qu.: 17.375 3rd Qu.: 12.123
## Max. :1736.997 Max. :3162.183 Max. :6977.630
##
## illimschool_page_timing illimecon_page_timing imigcit_page_timing
## Min. : 0.937 Min. : 0.865 Min. : 0.904
## 1st Qu.: 6.729 1st Qu.: 4.723 1st Qu.: 8.162
## Median : 9.257 Median : 6.544 Median : 11.262
## Mean : 12.630 Mean : 15.991 Mean : 14.936
## 3rd Qu.: 13.153 3rd Qu.: 9.072 3rd Qu.: 16.051
## Max. :508.097 Max. :4235.260 Max. :602.596
##
## ice_page_timing famsep_page_timing acaapprove_page_timing
## Min. : 0.778 Min. : 0.832 Min. : 0.769
## 1st Qu.: 6.256 1st Qu.: 5.034 1st Qu.: 5.063
## Median : 8.564 Median : 7.058 Median : 6.622
## Mean : 13.057 Mean : 14.524 Mean : 9.615
## 3rd Qu.: 11.968 3rd Qu.: 10.541 3rd Qu.: 8.712
## Max. :1439.637 Max. :2877.701 Max. :760.308
##
## acarepeal_page_timing acains_page_timing loseins_page_timing
## Min. : 0.857 Min. : 0.840 Min. : 0.888
## 1st Qu.: 4.007 1st Qu.: 5.249 1st Qu.: 4.583
## Median : 5.452 Median : 7.098 Median : 5.899
## Mean : 8.722 Mean : 10.011 Mean : 17.927
## 3rd Qu.: 7.564 3rd Qu.: 9.351 3rd Qu.: 7.935
## Max. :1249.042 Max. :2273.636 Max. :17301.297
##
## costins_page_timing richpoor_page_timing post1_page_timing post2_page_timing
## Min. : 0.882 Min. : 0.809 Min. : 0.00 Min. : 0.000
## 1st Qu.: 3.639 1st Qu.: 7.290 1st Qu.: 0.00 1st Qu.: 0.000
## Median : 4.795 Median : 9.754 Median : 0.00 Median : 0.000
## Mean : 7.801 Mean : 12.643 Mean : 11.71 Mean : 7.426

```

```

## 3rd Qu.: 6.356      3rd Qu.: 13.599      3rd Qu.: 18.17      3rd Qu.: 8.537
## Max. :1428.349      Max. :259.127      Max. :1728.63      Max. :1046.401
##
## post3_page_timing post4_page_timing work_page_timing taxecon_page_timing
## Min. : 0.000      Min. : 0.000      Min. : 0.000      Min. : 0.685
## 1st Qu.: 0.000      1st Qu.: 0.000      1st Qu.: 0.000      1st Qu.: 8.348
## Median : 0.000      Median : 0.000      Median : 3.651      Median : 11.246
## Mean : 8.079      Mean : 4.434      Mean : 5.406      Mean : 20.825
## 3rd Qu.: 12.825      3rd Qu.: 6.059      3rd Qu.: 8.935      3rd Qu.: 15.851
## Max. :335.579      Max. :530.756      Max. :192.337      Max. :4520.361
##
## taxfam_page_timing taxapproval_page_timing rr_grid_page_timing
## Min. : 0.718      Min. : 0.764      Min. : 2.15
## 1st Qu.: 5.133      1st Qu.: 4.471      1st Qu.: 25.37
## Median : 7.234      Median : 6.011      Median : 36.70
## Mean : 10.902      Mean : 9.850      Mean : 68.16
## 3rd Qu.: 10.179      3rd Qu.: 8.236      3rd Qu.: 49.52
## Max. :938.987      Max. :2508.377      Max. :17709.69
##
## emp_concern1_page_timing emp_concern2_page_timing emp_persp_page_timing
## Min. : 0.000      Min. : 0.000      Min. : 0.78
## 1st Qu.: 0.000      1st Qu.: 0.000      1st Qu.: 5.38
## Median : 2.068      Median : 0.000      Median : 7.75
## Mean : 7.969      Mean : 7.733      Mean : 56.55
## 3rd Qu.: 10.754      3rd Qu.: 10.369      3rd Qu.: 10.95
## Max. :795.048      Max. :1326.190      Max. :74363.05
##
## emp_place_page_timing emp_adv1_page_timing emp_adv2_page_timing
## Min. : 0.662      Min. : 0.000      Min. : 0.000
## 1st Qu.: 5.455      1st Qu.: 0.000      1st Qu.: 0.000
## Median : 7.495      Median : 1.268      Median : 0.000
## Mean : 13.755      Mean : 20.163      Mean : 4.712
## 3rd Qu.: 10.099      3rd Qu.: 7.589      3rd Qu.: 7.455
## Max. :5649.601      Max. :19879.485      Max. :261.814
##
## fp2_grid_page_timing warm_page_timing warmcause_page_timing
## Min. : 0.00      Min. : 0.000      Min. : 0.702
## 1st Qu.: 0.00      1st Qu.: 0.000      1st Qu.: 5.436
## Median : 0.00      Median : 1.974      Median : 8.139
## Mean : 18.44      Mean : 7.542      Mean : 18.777
## 3rd Qu.: 29.66      3rd Qu.: 10.793      3rd Qu.: 11.350
## Max. :703.64      Max. :442.154      Max. :10711.775
##
## warmdo_page_timing warmus_page_timing warmcom_page_timing warmyou_page_timing
## Min. : 0.761      Min. : 0.689      Min. : 0.685      Min. : 0.507
## 1st Qu.: 4.736      1st Qu.: 5.830      1st Qu.: 4.791      1st Qu.: 3.628
## Median : 6.630      Median : 7.820      Median : 6.947      Median : 4.977
## Mean : 10.656      Mean : 11.130      Mean : 12.521      Mean : 7.397
## 3rd Qu.: 9.194      3rd Qu.: 10.700      3rd Qu.: 9.787      3rd Qu.: 6.728
## Max. :1448.797      Max. :446.178      Max. :4229.499      Max. :770.438
##
## violence1_page_timing violence2_page_timing freetrade_page_timing
## Min. : 0.811      Min. : 0.78      Min. : 0.826
## 1st Qu.: 6.651      1st Qu.: 6.35      1st Qu.: 6.810

```



```

## Median : 8.674      Median : 8.52      Median : 9.437
## Mean : 14.152      Mean : 32.44      Mean : 14.923
## 3rd Qu.: 11.753      3rd Qu.: 12.04      3rd Qu.: 13.920
## Max. :1516.507      Max. :34712.64      Max. :2100.862
##
## tariff_work_page_timing tariff_con_page_timing knowopioid_page_timing
## Min. : 0.819      Min. : 0.855      Min. : 1.054
## 1st Qu.: 6.386      1st Qu.: 6.487      1st Qu.: 5.321
## Median : 9.195      Median : 8.876      Median : 7.834
## Mean : 13.422      Mean : 16.072      Mean : 11.484
## 3rd Qu.: 13.373      3rd Qu.: 13.273      3rd Qu.: 11.178
## Max. :957.392      Max. :2927.664      Max. :1467.176
##
## opioiddo_page_timing guncheck_page_timing gunsar_page_timing
## Min. : 0.860      Min. : 0.735      Min. : 0.784
## 1st Qu.: 5.828      1st Qu.: 5.854      1st Qu.: 5.323
## Median : 8.153      Median : 8.134      Median : 7.410
## Mean : 17.263      Mean : 27.378      Mean : 11.824
## 3rd Qu.: 11.808      3rd Qu.: 12.047      3rd Qu.: 11.136
## Max. :3722.984      Max. :14692.384      Max. :1251.593
##
## gunteach_page_timing strlead_page_timing sd_grid_page_timing
## Min. : 0.789      Min. : 0.000      Min. : 0.00
## 1st Qu.: 4.944      1st Qu.: 0.000      1st Qu.: 0.00
## Median : 6.600      Median : 0.964      Median : 4.05
## Mean : 9.486      Mean : 7.145      Mean : 30.79
## 3rd Qu.: 8.868      3rd Qu.: 10.001      3rd Qu.: 36.84
## Max. :654.251      Max. :754.060      Max. :3159.53
##
## strpres_page_timing dishonest_page_timing medial_page_timing
## Min. : 0.000      Min. : 0.000      Min. : 0.749
## 1st Qu.: 0.000      1st Qu.: 0.000      1st Qu.: 8.657
## Median : 0.000      Median : 0.000      Median : 12.084
## Mean : 9.597      Mean : 8.758      Mean : 23.331
## 3rd Qu.: 13.631      3rd Qu.: 7.943      3rd Qu.: 18.056
## Max. :809.113      Max. :5260.174      Max. :2430.936
##
## media2_page_timing media3_page_timing trustmedia_page_timing
## Min. : 0.837      Min. : 0.763      Min. : 0.808
## 1st Qu.: 4.458      1st Qu.: 6.087      1st Qu.: 5.517
## Median : 6.131      Median : 8.416      Median : 7.405
## Mean : 11.703      Mean : 12.637      Mean : 12.266
## 3rd Qu.: 8.557      3rd Qu.: 12.310      3rd Qu.: 10.105
## Max. :2676.076      Max. :1291.698      Max. :1412.037
##
## media4_page_timing media4a_page_timing media5_page_timing
## Min. : 0.751      Min. : 0.000      Min. : 0.826
## 1st Qu.: 6.708      1st Qu.: 0.000      1st Qu.: 6.045
## Median : 9.071      Median : 9.435      Median : 8.017
## Mean : 14.648      Mean : 12.117      Mean : 13.604
## 3rd Qu.: 12.360      3rd Qu.: 16.766      3rd Qu.: 10.905
## Max. :1541.586      Max. :382.759      Max. :1909.929
##
## mediaviol_page_timing selfcensor_page_timing rural1_page_timing

```

```

## Min. : 0.783      Min. : 0.799      Min. : 0.000
## 1st Qu.: 4.993     1st Qu.: 6.721     1st Qu.: 0.000
## Median : 6.410     Median : 8.717     Median : 1.308
## Mean : 9.738       Mean : 14.763      Mean : 5.793
## 3rd Qu.: 8.688     3rd Qu.: 11.761    3rd Qu.: 8.508
## Max. :1117.741     Max. :2420.451     Max. :388.451
##
## rural2_page_timing rural3_page_timing impeach1_page_timing
## Min. : 0.000      Min. : 0.843      Min. : 0.706
## 1st Qu.: 0.000     1st Qu.: 7.492     1st Qu.: 6.655
## Median : 0.000     Median : 10.062    Median : 8.798
## Mean : 6.141       Mean : 15.557      Mean : 11.781
## 3rd Qu.: 9.121     3rd Qu.: 14.128    3rd Qu.: 12.187
## Max. :524.666      Max. :1258.709     Max. :485.797
##
## impeach2_page_timing pk_cjus_page_timing pk_germ_page_timing
## Min. : 0.790      Min. : 1.083      Min. : 0.545
## 1st Qu.: 7.088     1st Qu.: 13.143    1st Qu.: 10.434
## Median : 9.775     Median : 20.041    Median : 16.148
## Mean : 17.525      Mean : 28.958      Mean : 23.611
## 3rd Qu.: 13.347    3rd Qu.: 31.471    3rd Qu.: 26.571
## Max. :3918.575     Max. :2129.744     Max. :565.663
##
## pk_sen_page_timing pk_spend_page_timing pk_geer_page_timing
## Min. : 0.725      Min. : 0.928      Min. : 0.667
## 1st Qu.: 6.717     1st Qu.: 9.337     1st Qu.: 8.648
## Median : 10.025     Median : 13.110     Median : 14.373
## Mean : 16.605       Mean : 19.360       Mean : 24.061
## 3rd Qu.: 16.196     3rd Qu.: 19.380     3rd Qu.: 26.035
## Max. :532.640      Max. :1515.115     Max. :1391.151
##
## pk_alaska_page_timing pidld_page_timing pidlr_page_timing pidstr_page_timing
## Min. : 0.489      Min. : 0.00      Min. : 0.000      Min. : 0.000
## 1st Qu.: 8.572     1st Qu.: 0.00      1st Qu.: 0.000     1st Qu.: 0.000
## Median : 15.261     Median : 0.00      Median : 0.000     Median : 0.000
## Mean : 22.408       Mean : 1.79       Mean : 1.619       Mean : 1.303
## 3rd Qu.: 26.498     3rd Qu.: 0.00      3rd Qu.: 0.000     3rd Qu.: 2.342
## Max. :1345.491     Max. :707.66      Max. :392.277     Max. :81.845
##
## pidlean_page_timing dem_activduty_page_timing milyears_page_timing
## Min. : 0.0000      Min. : 0.988      Min. : 0.0000
## 1st Qu.: 0.0000     1st Qu.: 4.377     1st Qu.: 0.0000
## Median : 0.0000     Median : 6.112     Median : 0.0000
## Mean : 0.6643       Mean : 9.934       Mean : 0.0841
## 3rd Qu.: 0.0000     3rd Qu.: 9.009     3rd Qu.: 0.0000
## Max. :77.0590      Max. :1730.212     Max. :15.8950
##
## milyears2_page_timing milyr_page_timing combat_page_timing
## Min. :0           Min. : 0.000      Min. : 0.000
## 1st Qu.:0          1st Qu.: 0.000     1st Qu.: 0.000
## Median :0          Median : 0.000     Median : 0.000
## Mean :0           Mean : 1.963       Mean : 1.496
## 3rd Qu.:0          3rd Qu.: 0.000     3rd Qu.: 0.000
## Max. :0           Max. :51.531       Max. :540.284

```

```

##
## hospital_page_timing marital_page_timing spouseeth_page_timing
## Min. : 0.847 Min. : 0.000 Min. : 0.000
## 1st Qu.: 6.377 1st Qu.: 0.000 1st Qu.: 0.000
## Median : 8.668 Median : 1.562 Median : 0.000
## Mean : 15.899 Mean : 2.347 Mean : 1.773
## 3rd Qu.: 12.392 3rd Qu.: 3.653 3rd Qu.: 3.038
## Max. :6999.764 Max. :156.988 Max. :95.205
##
## sp_multi_page_timing sp_gender_page_timing nonserious_page_timing
## Min. : 0.000 Min. : 0.000 Min. : 0.911
## 1st Qu.: 0.000 1st Qu.: 0.000 1st Qu.: 9.306
## Median : 0.000 Median : 0.000 Median : 12.586
## Mean : 2.523 Mean : 1.839 Mean : 18.753
## 3rd Qu.: 4.178 3rd Qu.: 3.399 3rd Qu.: 17.162
## Max. :68.602 Max. :54.394 Max. :3143.043
##
## honest_page_timing ord_gehope ord_geangry ord_geafraid
## Min. : 0.901 Min. : 1.000 Min. : 1.000 Min. : 1.000
## 1st Qu.: 4.275 1st Qu.: 3.000 1st Qu.: 3.000 1st Qu.: 3.000
## Median : 5.479 Median : 5.000 Median : 6.000 Median : 6.000
## Mean : 6.758 Mean : 5.408 Mean : 5.603 Mean : 5.555
## 3rd Qu.: 7.102 3rd Qu.: 8.000 3rd Qu.: 8.000 3rd Qu.: 8.000
## Max. :487.190 Max. :10.000 Max. :10.000 Max. :10.000
##
## ord_geproud ord_gebitter ord_gehappy ord_geworry
## Min. : 1.00 Min. : 1.000 Min. : 1.000 Min. : 1.000
## 1st Qu.: 3.00 1st Qu.: 3.000 1st Qu.: 3.000 1st Qu.: 3.000
## Median : 5.00 Median : 5.000 Median : 5.000 Median : 6.000
## Mean : 5.45 Mean : 5.364 Mean : 5.499 Mean : 5.588
## 3rd Qu.: 8.00 3rd Qu.: 8.000 3rd Qu.: 8.000 3rd Qu.: 8.000
## Max. :10.00 Max. :10.000 Max. :10.000 Max. :10.000
##
## ord_gerelieve ord_gedep ord_gesad ord_ftblack
## Min. : 1.000 Min. : 1.000 Min. : 1.000 Min. : 1.00
## 1st Qu.: 3.000 1st Qu.: 3.000 1st Qu.: 3.000 1st Qu.: 6.00
## Median : 6.000 Median : 6.000 Median : 6.000 Median :11.00
## Mean : 5.525 Mean : 5.517 Mean : 5.491 Mean :11.33
## 3rd Qu.: 8.000 3rd Qu.: 8.000 3rd Qu.: 8.000 3rd Qu.:17.00
## Max. :10.000 Max. :10.000 Max. :10.000 Max. :22.00
##
## ord_ftwhite ord_fthisp ord_ftasian ord_ftgay ord_ftobama
## Min. : 1.00 Min. : 1.00 Min. : 1.00 Min. : 1.0 Min. : 1.00
## 1st Qu.: 6.00 1st Qu.: 6.00 1st Qu.: 6.00 1st Qu.: 6.0 1st Qu.: 6.00
## Median :12.00 Median :12.00 Median :12.00 Median :11.0 Median :12.00
## Mean :11.64 Mean :11.55 Mean :11.52 Mean :11.5 Mean :11.47
## 3rd Qu.:17.00 3rd Qu.:17.00 3rd Qu.:17.00 3rd Qu.:17.0 3rd Qu.:17.00
## Max. :22.00 Max. :22.00 Max. :22.00 Max. :22.0 Max. :22.00
##
## ord_fthrc ord_ftmetoo ord_ftrural ord_ftsocialists
## Min. : 1.0 Min. : 1.00 Min. : 1.00 Min. : 1.00
## 1st Qu.: 6.0 1st Qu.: 6.25 1st Qu.: 6.00 1st Qu.: 6.00
## Median :11.0 Median :12.00 Median :12.00 Median :12.00
## Mean :11.4 Mean :11.83 Mean :11.59 Mean :11.55

```

```

## 3rd Qu.:17.0 3rd Qu.:17.00 3rd Qu.:17.00 3rd Qu.:17.00
## Max. :22.0 Max. :22.00 Max. :22.00 Max. :22.00
##
## ord_ftcapitalists ord_ftimmig ord_ftpolice ord_ftjournal
## Min. : 1.00 Min. : 1.00 Min. : 1.00 Min. : 1.00
## 1st Qu.: 6.00 1st Qu.: 6.00 1st Qu.: 6.00 1st Qu.: 6.00
## Median :11.00 Median :12.00 Median :12.00 Median :11.00
## Mean :11.41 Mean :11.52 Mean :11.48 Mean :11.41
## 3rd Qu.:17.00 3rd Qu.:17.00 3rd Qu.:17.00 3rd Qu.:17.00
## Max. :22.00 Max. :22.00 Max. :22.00 Max. :22.00
##
## ord_fttrans ord_ftmuslim ord_ftmueller ord_ftfbi
## Min. : 1.00 Min. : 1.00 Min. : 1.00 Min. : 1.00
## 1st Qu.: 6.00 1st Qu.: 6.00 1st Qu.: 6.00 1st Qu.: 6.00
## Median :11.00 Median :11.00 Median :11.00 Median :12.00
## Mean :11.43 Mean :11.45 Mean :11.51 Mean :11.45
## 3rd Qu.:17.00 3rd Qu.:17.00 3rd Qu.:17.00 3rd Qu.:17.00
## Max. :22.00 Max. :22.00 Max. :22.00 Max. :22.00
##
## ord_ftscotus ord_ftkavanaugh ord_ftaltright ord_ftantifa
## Min. : 1.00 Min. : 1.00 Min. : 1.00 Min. : 1.00
## 1st Qu.: 6.00 1st Qu.: 6.00 1st Qu.: 5.00 1st Qu.: 6.00
## Median :11.00 Median :12.00 Median :11.00 Median :12.00
## Mean :11.39 Mean :11.66 Mean :11.23 Mean :11.69
## 3rd Qu.:17.00 3rd Qu.:17.00 3rd Qu.:17.00 3rd Qu.:17.00
## Max. :22.00 Max. :22.00 Max. :22.00 Max. :22.00
##
## ord_vote20cand_1 ord_vote20cand_2 ord_vote20cand_3 ord_vote20cand_4
## Min. :-1.000 Min. :-1.000 Min. :-1.00 Min. :-1.000
## 1st Qu.:-1.000 1st Qu.:-1.000 1st Qu.:-1.00 1st Qu.:-1.000
## Median : 2.000 Median : 2.000 Median : 2.00 Median : 2.000
## Mean : 3.029 Mean : 3.116 Mean : 3.18 Mean : 3.087
## 3rd Qu.: 7.000 3rd Qu.: 7.000 3rd Qu.: 7.00 3rd Qu.: 7.000
## Max. :11.000 Max. :11.000 Max. :11.00 Max. :11.000
##
## ord_vote20cand_5 ord_vote20cand_6 ord_vote20cand_7 ord_vote20cand_8
## Min. :-1.000 Min. :-1.000 Min. :-1.00 Min. :-1.000
## 1st Qu.:-1.000 1st Qu.:-1.000 1st Qu.:-1.00 1st Qu.:-1.000
## Median : 2.000 Median : 2.000 Median : 2.00 Median : 2.000
## Mean : 3.069 Mean : 3.136 Mean : 3.16 Mean : 3.077
## 3rd Qu.: 7.000 3rd Qu.: 7.000 3rd Qu.: 7.00 3rd Qu.: 7.000
## Max. :11.000 Max. :11.000 Max. :11.00 Max. :11.000
##
## ord_vote20cand_9 ord_vote20cand_10 ord_vote20cand_11 ord_dthope
## Min. :-1.000 Min. :-1.000 Min. :-1.000 Min. :-1.000
## 1st Qu.:-1.000 1st Qu.:-1.000 1st Qu.:-1.000 1st Qu.:-1.000
## Median : 2.000 Median : 2.000 Median : 2.000 Median : 1.000
## Mean : 3.172 Mean : 3.129 Mean : 3.171 Mean : 2.546
## 3rd Qu.: 7.000 3rd Qu.: 7.000 3rd Qu.: 7.000 3rd Qu.: 6.000
## Max. :11.000 Max. :11.000 Max. :11.000 Max. :11.000
##
## ord_dtangry ord_dtafraid ord_dtproud ord_dtbitter
## Min. :-1.000 Min. :-1.000 Min. :-1.000 Min. :-1.000
## 1st Qu.:-1.000 1st Qu.:-1.000 1st Qu.:-1.000 1st Qu.:-1.000

```

```

## Median : 1.000 Median : 1.000 Median : 1.000 Median : 1.000
## Mean : 2.604 Mean : 2.509 Mean : 2.477 Mean : 2.454
## 3rd Qu.: 6.000 3rd Qu.: 6.000 3rd Qu.: 6.000 3rd Qu.: 6.000
## Max. :11.000 Max. :11.000 Max. :11.000 Max. :11.000
##
## ord_dtcont ord_dtworry ord_dtemb ord_dtshame
## Min. :-1.00 Min. :-1.000 Min. :-1.000 Min. :-1.000
## 1st Qu.: -1.00 1st Qu.: -1.000 1st Qu.: -1.000 1st Qu.: -1.000
## Median : 1.00 Median : 1.000 Median : 1.000 Median : 1.000
## Mean : 2.57 Mean : 2.499 Mean : 2.556 Mean : 2.465
## 3rd Qu.: 6.00 3rd Qu.: 6.000 3rd Qu.: 6.000 3rd Qu.: 6.000
## Max. :11.00 Max. :11.000 Max. :11.000 Max. :11.000
##
## ord_dthappy ord_dtretrieve ord_imhope ord_imangry
## Min. :-1.000 Min. :-1.000 Min. :-1.000 Min. :-1.000
## 1st Qu.: -1.000 1st Qu.: -1.000 1st Qu.: -1.000 1st Qu.: -1.000
## Median : 1.000 Median : 1.000 Median : -1.000 Median : -1.000
## Mean : 2.489 Mean : 2.553 Mean : 2.451 Mean : 2.417
## 3rd Qu.: 6.000 3rd Qu.: 6.000 3rd Qu.: 6.000 3rd Qu.: 6.000
## Max. :11.000 Max. :11.000 Max. :11.000 Max. :11.000
##
## ord_imafraid ord_improud ord_imbitter ord_imcont
## Min. :-1.00 Min. :-1.000 Min. :-1.000 Min. :-1.000
## 1st Qu.: -1.00 1st Qu.: -1.000 1st Qu.: -1.000 1st Qu.: -1.000
## Median : -1.00 Median : -1.000 Median : -1.000 Median : -1.000
## Mean : 2.64 Mean : 2.417 Mean : 2.454 Mean : 2.467
## 3rd Qu.: 6.00 3rd Qu.: 6.000 3rd Qu.: 6.000 3rd Qu.: 6.000
## Max. :11.00 Max. :11.000 Max. :11.000 Max. :11.000
##
## ord_imworry ord_imdisgust ord_imsick ord_imhappy
## Min. :-1.000 Min. :-1.00 Min. :-1.000 Min. :-1.000
## 1st Qu.: -1.000 1st Qu.: -1.00 1st Qu.: -1.000 1st Qu.: -1.000
## Median : -1.000 Median : -1.00 Median : -1.000 Median : -1.000
## Mean : 2.489 Mean : 2.51 Mean : 2.518 Mean : 2.407
## 3rd Qu.: 6.000 3rd Qu.: 6.00 3rd Qu.: 6.000 3rd Qu.: 6.000
## Max. :11.000 Max. :11.00 Max. :11.000 Max. :11.000
##
## ord_imrelieve rand_votestop rand_march ft_rand
## Min. :-1.000 Min. :1.00 Min. :1.000 Min. :1.000
## 1st Qu.: -1.000 1st Qu.:1.00 1st Qu.:1.000 1st Qu.:1.000
## Median : -1.000 Median :1.00 Median :1.000 Median :2.000
## Mean : 2.507 Mean :1.48 Mean :1.494 Mean :1.525
## 3rd Qu.: 6.000 3rd Qu.:2.00 3rd Qu.:2.000 3rd Qu.:2.000
## Max. :11.000 Max. :2.00 Max. :2.000 Max. :2.000
##
## rand_improve rand_lc rand_direct rand_ind rand_emp
## Min. :1.000 Min. :0 Min. :1.000 Min. :1.000 Min. :1.000
## 1st Qu.:1.000 1st Qu.:0 1st Qu.:1.000 1st Qu.:1.000 1st Qu.:1.000
## Median :1.000 Median :0 Median :2.000 Median :2.000 Median :1.000
## Mean :1.493 Mean :0 Mean :1.505 Mean :1.519 Mean :1.492
## 3rd Qu.:2.000 3rd Qu.:0 3rd Qu.:2.000 3rd Qu.:2.000 3rd Qu.:2.000
## Max. :2.000 Max. :0 Max. :2.000 Max. :2.000 Max. :2.000
##
## rand_climate rand_rural rand_pk rand_pid

```

```
## Min. :1.000 Min. :1.000 Min. :0.0000 Min. :1.000
## 1st Qu.:1.000 1st Qu.:1.000 1st Qu.:0.0000 1st Qu.:1.000
## Median :1.000 Median :1.000 Median :0.0000 Median :1.000
## Mean :1.491 Mean :1.491 Mean :0.4913 Mean :1.495
## 3rd Qu.:2.000 3rd Qu.:2.000 3rd Qu.:1.0000 3rd Qu.:2.000
## Max. :2.000 Max. :2.000 Max. :1.0000 Max. :2.000
##
## starttime endtime duration
## 12/10/2018 17:19:31: 3 12/10/2018 18:03:19: 3 Min. : 586
## 12/10/2018 17:39:19: 3 12/10/2018 18:48:29: 3 1st Qu.: 1713
## 12/10/2018 17:56:34: 3 12/10/2018 18:57:56: 3 Median : 2294
## 12/10/2018 18:39:09: 3 12/10/2018 19:16:55: 3 Mean : 11849
## 12/10/2018 16:36:31: 2 12/10/2018 17:13:06: 2 3rd Qu.: 3452
## 12/10/2018 16:40:13: 2 12/10/2018 17:19:56: 2 Max. :690880
## (Other) :1710 (Other) :1710
## optintimestamp completes
## : 307 Min. : 1.00
## 10/3/18 : 9 1st Qu.: 54.25
## 10/31/06: 8 Median : 165.00
## 10/1/18 : 5 Mean : 200.50
## 10/28/18: 5 3rd Qu.: 294.75
## 10/5/18 : 5 Max. :1176.00
## (Other) :1387
```

The null hypothesis for the sign test is that the median of the paired differences is equal to zero. The alternative hypothesis for two-sided analysis is that the median of the paired differences is not equal to zero.

```
angry = voter_turnout_16_18$geangry #create vector for angry responses
afraid = voter_turnout_16_18$geafraid # create vector for afraid responses
voter_emotions = data.frame(angry,afraid)
```

```
library(BSDA)
```

```
## Warning: package 'BSDA' was built under R version 3.6.3
```

```
## Loading required package: lattice
```

```
##
```

```
## Attaching package: 'BSDA'
```

```
## The following object is masked from 'package:datasets':
```

```
##
```

```
## Orange
```

```
SIGN.test(voter_emotions$angry, voter_emotions$afraid, md = 0, alternative = "two.sided", conf.level = 0.95)
```

```
##
```

```
## Dependent-samples Sign-Test
```

```
##
```

```
## data: voter_emotions$angry and voter_emotions$afraid
```

```
## S = 647, p-value = 2.22e-16
```

```
## alternative hypothesis: true median difference is not equal to 0
## 95 percent confidence interval:
##  0 0
## sample estimates:
## median of x-y
##          0
##
## Achieved and Interpolated Confidence Intervals:
##
##               Conf.Level L.E.pt U.E.pt
## Lower Achieved CI      0.9488      0      0
## Interpolated CI       0.9500      0      0
## Upper Achieved CI      0.9543      0      0
```

```
cor(voter_emotions$angry, voter_emotions$afraid, method = "spearman")
```

```
## [1] 0.6360283
```

### Outcome.

**Statistical significance.** The sign test p-value of 2.22e-16 indicates that we can reject our null hypothesis that the median value of fear and anger for 2018 election voters is zero. The correlation does indicate that there is a fairly strong positive correlation between anger and fear for the voters surveyed.

Recognizing that the sign test is a particularly weak test, we re-evaluated with the Wilcoxon sign-rank test to include more collected data. When evaluating the question using the Wilcoxon signed-rank test with the  $H_0 : \mu_0 = 0$  and  $H_A : \mu_0 \neq 0$ , a similar result occurs. The p-value also supports rejecting the null hypothesis that the difference in means is equal to zero.

```
wilcox.test(voter_emotions$angry, voter_emotions$afraid, alternative = "two.sided", mu = 0, paired = TRUE)
```

```
##
## Wilcoxon signed rank test with continuity correction
##
## data: voter_emotions$angry and voter_emotions$afraid
## V = 330128, p-value < 2.2e-16
## alternative hypothesis: true location shift is not equal to 0
```

### Practical significance.

```
mean_angry = mean(voter_emotions$angry)
sd_angry = sd(voter_emotions$angry)
zscale_angry = scale(voter_emotions$angry)[,1]
summary(zscale_angry)
```

```
##      Min.   1st Qu.   Median     Mean  3rd Qu.     Max.
## -7.05868 -0.74719 -0.04591  0.00000  0.65536  1.35664
```

```
angry_effect = 0.6614/sqrt(length(voter_emotions$angry))
print(angry_effect)
```

```
## [1] 0.01592003
```

```
mean_afraid = mean(voter_emotions$afraid)
sd_afraid = sd(voter_emotions$afraid)
zscale_afraid = scale(voter_emotions$afraid) [,1]
summary(zscale_afraid)
```

```
##      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
## -7.2584 -0.5438  0.2023  0.0000  0.9484  1.6944
```

```
afraid_effect = 0.9662/sqrt(length(voter_emotions$afraid))
print(afraid_effect)
```

```
## [1] 0.02325662
```

Assessing the practical significance using the normal approximation,  $r$ , the effect size of the angry and afraid values indicates a small practical significance exists.

```
library(knitr)
angryeffect = c(angry_effect, mean_angry)
afraideffect = c(afraid_effect, mean_afraid)
headers = c("Angry", "Afraid")
ge_outcome = data.frame(angryeffect, afraideffect)
kable(ge_outcome, caption = "Angry & Afraid Effect Size & Means", col.names = headers)
```

Table 2: Angry & Afraid Effect Size & Means

Angry	Afraid
0.015920	0.0232566
3.065469	2.7288528

The original question asks whether fear or anger was more effective in increasing voter turnout from 2016 to 2018. From our analysis, we can't confirm that there was an increase in voters between the two elections. Also, the effect size analysis on fear and anger were small, indicating little practical significance. Identifying what motivates an increase in voter turnout is a uniquely complex issue. What our results do support is that when evaluating the mean values of fear and anger recorded on the Likert scale for 2016 and 2018 voters, anger had a 0.34 higher mean value than fear, with both values falling around the 'Somewhat' point on the scale.



## 5. Does household income affect how much attention respondents pay to politics and public affairs?

### Overview.

For our self-selected question we chose to focus on whether household income affects how closely respondents followed politics.

### Operationalization.

Respondents were asked for household income using the question “Thinking back over the last year, what was your family’s annual income?”, this is encoded as `faminc_new`

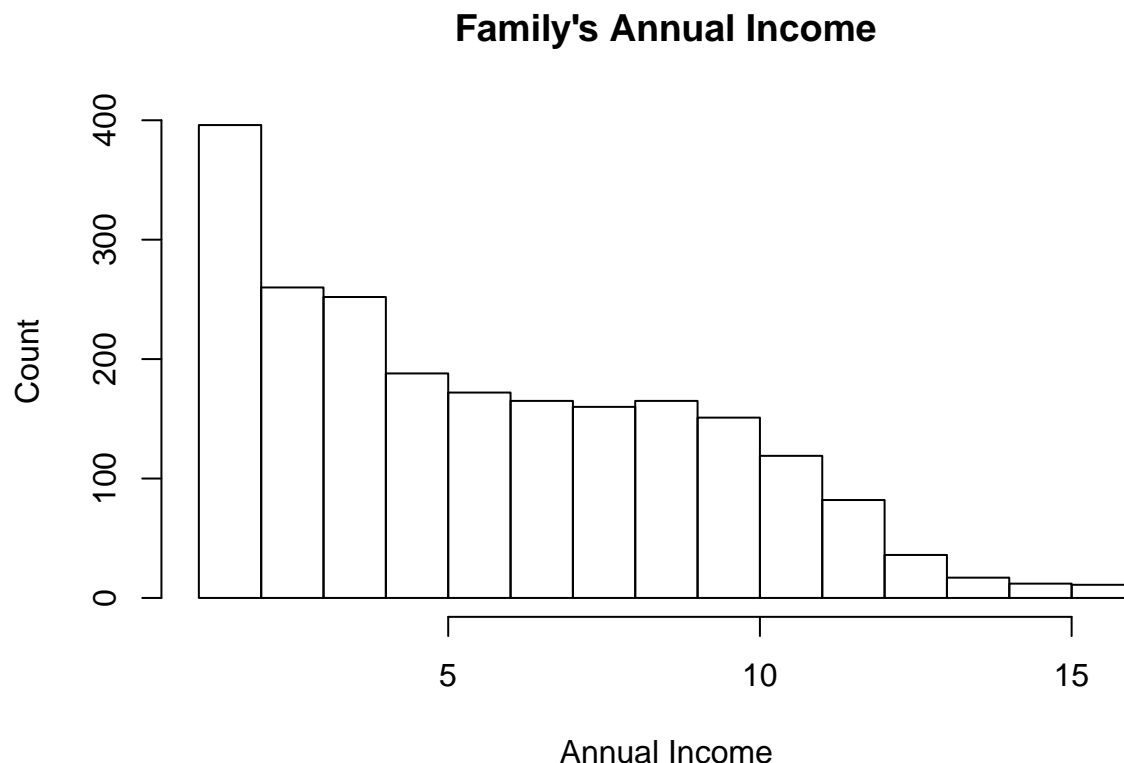
### Exploratory Data Analysis.

“Decline to answer” is encoded as a 97, so we’ll want to remove those rows in order to use `faminc_new`.

```
summary(anes_data$faminc_new)
```

```
##      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.   \n##      1.00   3.00   6.00  17.44  10.00   97.00
```

```
hist(anes_data$faminc_new[anes_data$faminc_new < 20], main = "Family's Annual Income", xlab = "Annual Income")
```



```
validWealthRespondents = anes_data[which(as.numeric(anes_data$faminc_new) > 0 & as.numeric(anes_data$faminc_new) < 20), ]
```

The scale is not perfectly metric, a ‘3’ corresponds to a family income between \$20,000 and \$29,000 but an 11 indicates a family income between \$120,000 - \$149,999.

Respondents were also asked how closely they followed politics on the following scale:

Most of the time [1] Some of the time [2] Only now and then [3] Hardly at all [4]

This variable is a Likert scale, so we'll need to ensure that we treat them both as non-metric.

### Analysis.

We can compare the means of our wealth respondents and our entire survey to see whether the two groups differ dramatically:

```
# t.test(anes_data$follow, validWealthRespondents$follow)
```

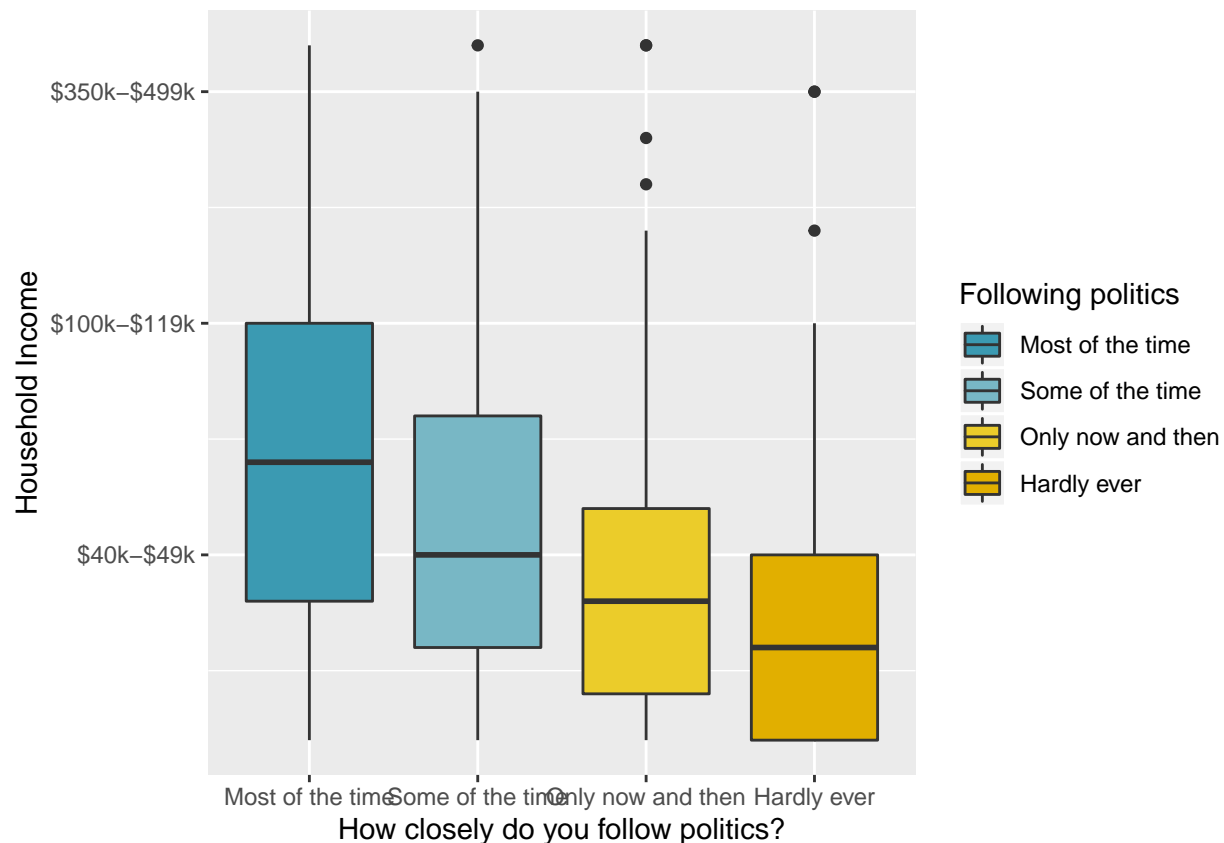
This shows a p-value = 0.6272, so we cannot reject the null hypothesis that these two groups show no difference in means.

We can now begin to look at whether there is a difference in the household income levels for those who answered that they follow politics most of the time and those that answered that they hardly ever do. We get an intuition for this by graphing it:

```
library(wesanderson)
```

```
## Warning: package 'wesanderson' was built under R version 3.6.3
```

```
q5frame = data.frame(validWealthRespondents)
ggplot(q5frame, aes(x=factor(q5frame$follow), y=q5frame$faminc_new, fill=factor(q5frame$follow))) +
  geom_boxplot() +
  scale_fill_manual(values = wes_palette("Zissou1", n = 4), name="Following politics", labels = c("Most", "Some", "Only", "Hardly")) +
  xlab("How closely do you follow politics?") +
  scale_x_discrete(labels = c("Most of the time", "Some of the time", "Only now and then", "Hardly ever")) +
  scale_y_continuous(name="Household Income", labels=c("$40k-$49k", "$100k-$119k", "$350k-$499k"), break...
```



The median family income for those who report following politics “closely” “most of the time” does appear to be higher than those that report following it “hardly ever”.

Since neither the family income nor the following politics responses are metric we should examine a possible relationship between these two variables using the Wilcoxon test. We’ll isolate respondents who claimed to follow politics “most of the time” and those who claimed they followed politics “hardly ever” and see whether the two are different from our whole sample set.

```
activeWithWealth = validWealthRespondents[which(as.numeric(validWealthRespondents$follow) == 1),]
inActiveWithWealth = validWealthRespondents[which(as.numeric(validWealthRespondents$follow) == 4),]
```

First we can look at whether the wealth levels for our “most of the time” respondents differ from all of our wealth respondents:

$$- H_0 : E(Followers) = E(All). - H_A : E(Followers) \neq E(All)$$

```
wilcox.test(activeWithWealth$faminc_new, validWealthRespondents$faminc_new, conf.int=TRUE )
```

```
##
## Wilcoxon rank sum test with continuity correction
##
## data: activeWithWealth$faminc_new and validWealthRespondents$faminc_new
## W = 1539600, p-value = 8.303e-16
## alternative hypothesis: true location shift is not equal to 0
## 95 percent confidence interval:
```

```
## 0.999972 1.000039
## sample estimates:
## difference in location
## 1
```

With a p-value = 8.303e-16 this appears to be statistically significant.

Next we can look at whether the wealth levels for our “most of the time” respondents differ from all of our wealth respondents:

- $H_0 : E(Nonfollowers) = E(All)$ .
- $H_A : E(Nonfollowers) \neq E(All)$

```
wilcox.test(inActiveWithWealth$faminc_new, validWealthRespondents$faminc_new, conf.int=TRUE )
```

```
##
## Wilcoxon rank sum test with continuity correction
##
## data: inActiveWithWealth$faminc_new and validWealthRespondents$faminc_new
## W = 103509, p-value < 2.2e-16
## alternative hypothesis: true location shift is not equal to 0
## 95 percent confidence interval:
## -2.999953 -1.999942
## sample estimates:
## difference in location
## -2.000001
```

### Outcome.

**Statistical significance.** This also appears statistically significant, with a p-value < 2.2e-16.

Since the means of both groups differ significantly from the means of the larger population that answered the question we can explore whether there is a correlation between the family income and the self-reported following of politics:

```
# 5 - validWealthRespondents$follow to invert the scale so that less interest is a 1 and more interest
cor(validWealthRespondents$faminc_new, 5 - validWealthRespondents$follow, method = "spearman")
```

```
## [1] 0.3465463
```

**Practical Significance.** The values for Spearman’s Rank-Order Correlation,  $r_s$ , can take on the values from +1 to -1.  $r_s$  has the following associations:

- +1: perfect association of ranks
- 0: no association between the ranks
- -1: perfect negative association of ranks.

The  $r_s$  value obtained from this test was 0.35 which is a weak monotonically increasing relationship. Because of the sample size and p-value obtained, we believe that this indicates a correlation between family income of the respondents and the closeness with which they follow politics.