

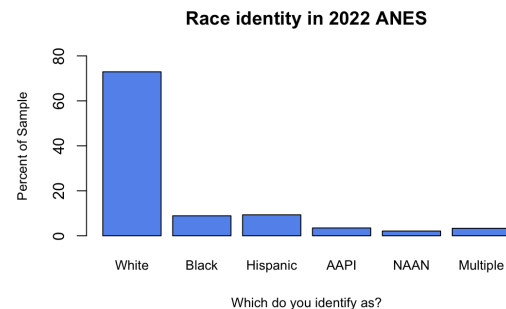
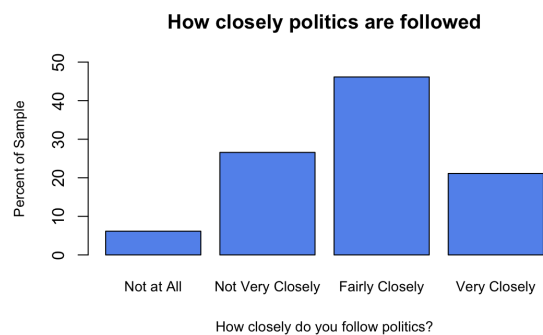
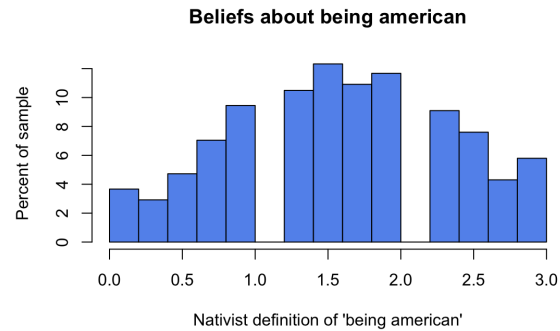
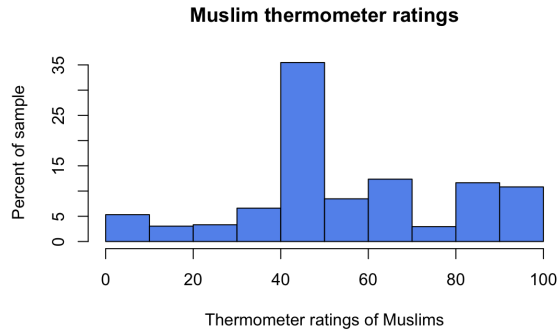
ANES Analysis: Muslim Thermometer

Variable	Variable Name	Range	Variable type
Y = Muslim thermometer	muslimtherm	0-100	semi-continous; discrete
X1 = Nativists beliefs	beingamerican	0-3	semi-continous; discrete
X2 = Following politics	follow	1-4	ordinal
X3 = Party affiliation	pid7	1-7	ordinal
X4 = Race identity	raceidentity	1-6	factor-level

Why these variables? These variables were selected due to their gathered representation of islamophobia and the public's feelings toward Muslims. Nativist beliefs (beingamerican) are tied in and vary with how much a person follows politics (follow) and what politics they follow (party affiliation). Party affiliations tend to have racial factors in their following as well.

Variable	Mean (sd)	Median (iqr)
Muslim thermometer	58.57 (24.64)	50 (25)
Nativism Scale	1.64 (0.77)	1.5 (1.25)

The Muslim feeling thermometer suggests that on average, individuals viewed Muslims neither favorably nor unfavorably in the 2022 ANES; however, it is also clear that there is some variability around the mean estimate of 58.57. The standard deviation is about half the size of the mean implying that there is a range of responses regarding Muslims. Regarding the median, we see that it is lower than the mean. Around half of the 2022 ANES respondents rated Muslims below 50, and half over 50; given this, it is clear that this data exhibits normal symmetric distribution. The mean of Y is 58.57. The standard deviation is 24.64. The median is 50. The IQR is 1.25. The mean is bigger than the median. This means Y is right-skewed.

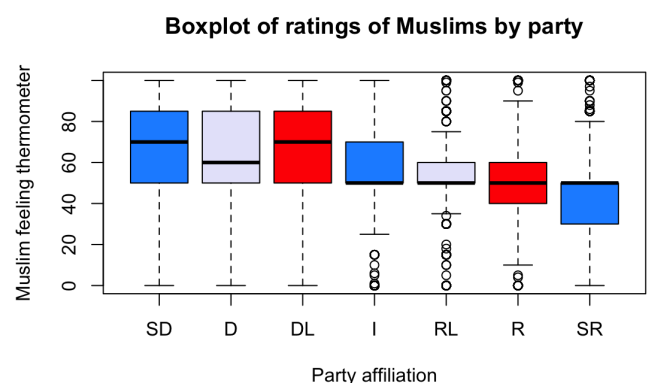
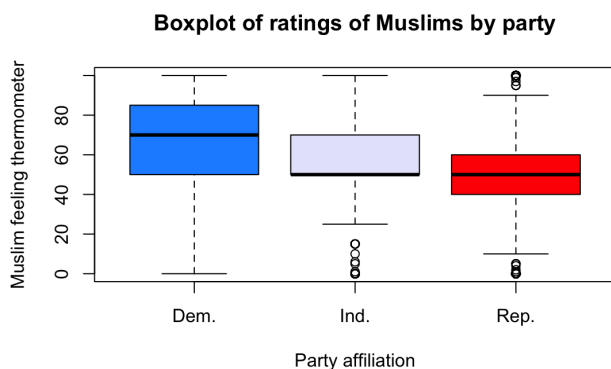


In the upper left panel, a histogram for the Muslim feeling thermometer is given. Evaluations of Muslims exhibit a roughly symmetrical graph, meaning people view Muslims from a general perspective (neither favorable nor unfavorable). Roughly 35 percent of respondents rate Muslims between 40 and 50. Roughly 50% of respondents view Muslims favorably (over 50) and roughly 50% view Muslims unfavorably (under 50), solidifying the claim that the Muslim feeling thermometer is roughly normally distributed.

The upper right panel displays a histogram for a scale item that measures nativist definitions of what being an American is. This scale is designed of how truly American the following statements are: To have been born in the United States; To have American ancestry; To be able to speak English and To follow America's customs and traditions. This scale implies higher scores mean a high endorsement of each of the statements, thus making it a survey on nativist definitions of being American. When looking at the distribution of the graph, the large grouping of scores in the center implies that respondents agree with some, but not all statements. Nevertheless, the distribution of the graph is roughly symmetric suggesting that there are both high-nativist and low-nativist endorsers.

The bottom left panel shows a bar plot measuring how closely respondents followed politics. What is shown is that around 65% said they follow politics "fairly" or "very" closely. Only a little over 5%, a very small number of people, said they don't follow politics.

The bottom right panel provides the distribution of racial identification in the 2020 ANES. Clear suggestions show that those who identify as white are most dominant at around 73%. Roughly 9% of the sample of non-white respondents identify as black, and around 9% identify as Hispanic. While only 3.5% identify as Asian or Pacific Islander. Altogether making up 22% of the sample.

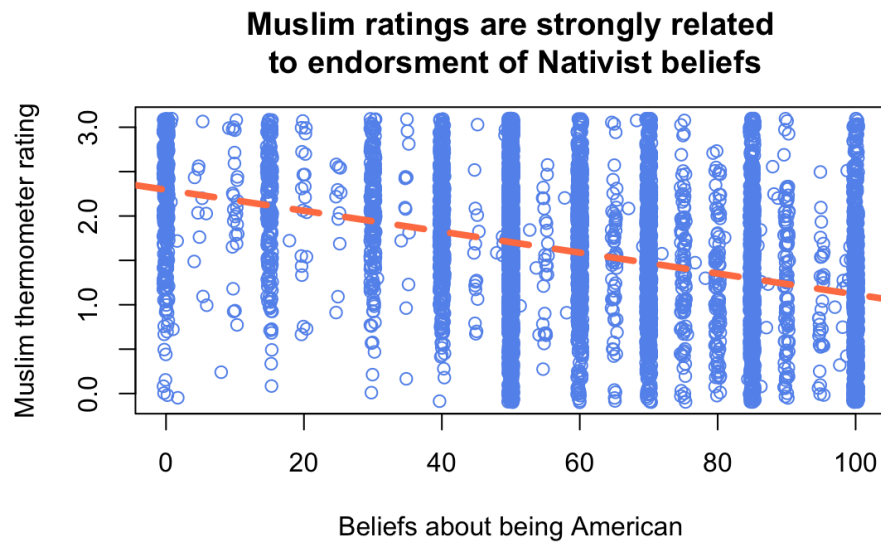


The right-left panel gives the boxplots of the Muslimfeeling thermometer over levels of party identification. Boxes in blue denote Democrats (strong, not strong, leaners); the **lavender** box denotes independents; the red boxes denote Republicans (strong, not strong, leaners). Clearly: there exists massive polarization of Muslim thermometer ratings by the party. The boxplot shows higher values for The democrat's ratings which all have the same lower quartile and they all provide some evidence of negative skewness. In short, Democrats of all types exhibit a high, over 50 evaluations of Muslims. Regarding Republicans, the opposite story holds; however, it is also clear that the ratings go down from leaner to strong republicans. In short strong republican exhibit a lower evaluation of the Muslims.

This departs from Democrats for whom for most, ratings, about 75% exceed 50 (on the 101-point scale). For Republican leaners and not-strong Republicans, 75 percent of them are willing to rate Muslims below 600. While this is clearly unfavorable, this implies greater variation among Republicans in their ratings of Muslims. For strong Republicans, however, over 75% of them rate Muslims at around 45 or lower. In short, ratings are polarized. For Independents, ratings are generally not that inclined in either direction, but there exists a little indication of variability as 75% rate Muslims Above 50, this is shown by looking at the quartiles.

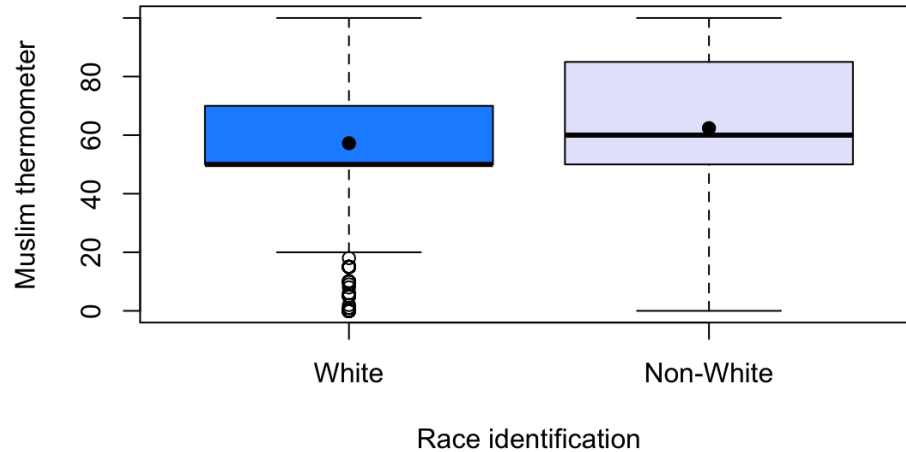
The left panel gives the box plots for a three-level measure of partisanship. Here, all Democrats were combined and all Republicans are combined. This plot more clearly shows the stark

differences in Muslim ratings associated with partisanship. This simplified plot thus better illustrates the pattern of ratings by the party.



This plot is a scatter plot (with jitter) showing the relationship between the endorsement of nativist definitions of what being an American means (displayed on the x-axis) and Muslim feeling thermometer ratings (displayed on the y-axis). The red dashed line shows the linear association between these two variables. It is clear that greater endorsement of nativist definitions of being an American is associated with decreased favorability toward Muslims. There is some variation in this relationship, however, as seen by the large number of respondents who score highly on the nativism scale *also* rating Muslims very highly. Nevertheless, there seems to be a negative association between nativist beliefs and favorability toward Muslims.

Boxplot of feelings about muslims by race



In looking at the relationship between race identification and Muslim thermometer, there seems to be an equal view between these two races about Muslims. This is because the lower quartiles which are roughly the same show that 75% of both races rate Muslims roughly 50 or better. Looking at the medians though, the non-Whites have a higher median and also a Higher third quartile which shows that their evaluation is greater than their white counterparts. Also, the whites show some very strong negative extremities shown by those indicated outliers. The mean estimates are closer together although the one for nonwhites is larger. Overall, racial identification seems to play a role in whether one would favor Muslims or not. The ratings for non-Whites are considerably higher in this case.

R Code:

```
rm(list=ls(all=TRUE))
options(scipen = 999) # turns of scientific notations like 1e+40

#-----

#Setting working directory
setwd("~/Documents/MyPol51")

#-----

#Reading in the current version of the data
therms<-read.csv("anes2020v2.csv")

#-----

#Summary statistics for survey items
summary(therms)

#-----

#Variable names
colnames(therms)

#-----

#Univariates
mean(therms$muslim_therm, na.rm=TRUE)
sd(therms$muslim_therm, na.rm=TRUE)
median(therms$muslim_therm, na.rm=TRUE)
IQR(therms$muslim_therm, na.rm=TRUE)

#-----

#Step 5 Task: Univariate plots

#Percent histogram of Muslim thermometer
trumphist_info <- hist(therms$muslim_therm, plot = FALSE)      # Store output of hist function
trumphist_info$density <- trumphist_info$counts /      # Compute density values
  sum(trumphist_info$counts) * 100

plot(trumphist_info, freq = FALSE,
```

```
xlab="Thermometer ratings of Muslims",  
ylab="Percent of sample",  
main="Muslim thermometer ratings",  
col="cornflowerblue")
```

#Histogram of being american

```
nathist_info <- hist(therms$beingamerican, plot = FALSE)      # Store output of hist function  
nathist_info$density <- nathist_info$counts /      # Compute density values  
sum(nathist_info$counts) * 100
```

```
plot(nathist_info, freq = FALSE,  
     xlab="Nativist definition of 'being american'",  
     ylab="Percent of sample",  
     main="Beliefs about being american",  
     col="cornflowerblue")
```

#Barplot percent for follow politics

```
follow_table<-table(therms$follow)  
follow_percent<-follow_table/sum(follow_table)*100  
follow_percent
```

```
barplot(follow_percent,  
       main="How closely politics are followed",  
       xlab="How closely do you follow politics?",  
       ylab="Percent of Sample",  
       ylim=c(0,50),  
       names.arg=c("Not at All", "Not Very Closely", "Fairly Closely",  
                    "Very Closely"),  
       cex.lab=.85,  
       cex.names=.85,  
       col=c("cornflowerblue"))
```

#Barplot of Racial Identity

```
race_table<-table(therms$raceidentity)  
race_percent<-race_table/sum(race_table)*100  
race_percent
```

```
barplot(race_percent,  
       main="Race identity in 2022 ANES",  
       xlab="Which do you identify as?",  
       ylab="Percent of Sample",  
       ylim=c(0,80),  
       names.arg=c("White", "Black", "Hispanic",
```

```
      "AAPI", "NAAN", "Multiple"),
cex.lab=.85,
cex.names=.85,
col=c("cornflowerblue"))
```

```
#-----
```

```
#Boxplots
```

```
therms$p7<-factor((therms$pid7),
  levels = c(1,2,3,4,5,6,7),
  labels = c("SD", "D", "DL", "I", "RL", "R", "SR"))
```

```
therms$pid3<-factor(therms$pid7,
  levels = c(1,2,3,4,5,6,7),
  labels = c("Dem.", "Dem.",
    "Dem.", "Ind.", "Rep.", "Rep.", "Rep."))
```

```
#3 level plot
```

```
boxplot(therms$muslim_therm~therms$pid3,
  xlab="Party affiliation",
  ylab="Muslim feeling thermometer",
  main="Boxplot of ratings of Muslims by party",
  col=c("dodgerblue", "lavender", "red"))
```

```
#7 level plot
```

```
boxplot(therms$muslim_therm~therms$p7,
  xlab="Party affiliation",
  ylab="Muslim feeling thermometer",
  main="Boxplot of ratings of Muslims by party",
  col=c("dodgerblue", "lavender", "red"))
```

```
#-----
```

```
#Scatterplots
```

```
reg<-lm(therms$beingamerican~therms$muslim_therm)
```

```
#Summarizing the object so we can visualize the output
summary(reg)
```

```
plot(jitter(therms$muslim_therm, factor=2), jitter(therms$beingamerican, factor=6),
  xlab="Beliefs about being American",
  ylab="Muslim thermometer rating",
```



```
main="Muslim ratings are strongly related\n to endorsment of Nativist beliefs",  
col="cornflowerblue")
```

```
#This code will insert the regression line  
abline(reg, col="coral", lwd=4, lty=2)
```

```
#-----
```

```
#Step 11: Create two-level variable and boxplot
```

```
table(therms$raceidentity)
```

```
therms$race_factor<-factor(therms$raceidentity,  
  levels = c(1,2,3,4,5,6),  
  labels = c("White", "Non-White",  
             "Non-White", "Non-White", "Non-White", "Non-White"))
```

```
#made new variable to seperate race  
table(therms$race_factor)
```

```
meansM<-mean(therms$muslim_therm[therms$race_factor=="White"], na.rm=TRUE)  
meansF<-mean(therms$muslim_therm[therms$race_factor=="Non-White"], na.rm=TRUE)
```

```
boxplot(therms$muslim_therm~therms$race_factor,  
  xlab="Race identification",  
  ylab="Muslim thermometer",  
  main="Boxplot of feelings about muslims by race",  
  col=c("dodgerblue", "lavender", "red"))  
points(c(meansM,meansF), col=c("black", "black"),pch=19)
```