SARFRAZ_FINAL_310

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defining independent and dependent variables

```
### defining independent and dependent variables ###
##Biden Feeling Thermometer - DEPENDENT VARIABLE
anes$biden.ft <- anes$V201151

anes$biden.ft[anes$biden.ft %in% c(-9,-4,998)] <- NA
summary(anes$biden.ft)
```

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.    NA's
##    0.00   15.00   55.00   49.24   85.00  100.00     220
```

```
##BLM Movement Feeling Thermometer - INDEPENDENT VARIABLE
anes$blm.ft <- anes$V202174

anes$blm.ft[anes$blm.ft %in% c(-9,-7,-6,-5,-4,998,999)] <- NA
summary(anes$blm.ft)
```

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.    NA's
##     0.0    15.0    60.0    53.3    85.0   100.0     936
```

```
### creating new variables for difference of means
#blm.ft
anes$blm.ft.category <- NA
anes$blm.ft.category[anes$blm.ft>=50] <- 1
anes$blm.ft.category[anes$blm.ft<50] <- 0

#blm.support
anes$blm.support<- NA
anes$blm.support[anes$blm.ft>=50] <- 1
anes$blm.support[is.na(anes$blm.support)] <- 0
# unique(anes$blm.support)

#blm.notsupport
anes$blm.notsupport<- NA
anes$blm.notsupport[anes$blm.ft<50] <- 1
anes$blm.notsupport[is.na(anes$blm.notsupport)] <- 0
# unique(anes$blm.support)
```

```
##Trump Feeling Thermometer - INDEPENDENT VARIABLE
anes$trump.ft <- anes$V201152

anes$trump.ft[anes$trump.ft %in% c(-9,-7,-6,-5,-4,998,999)] <- NA
summary(anes$trump.ft)
```

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.    NA's
##    0.00    0.00   30.00   40.44   85.00  100.00     232
```

```
##Respondent liberal/conservative placement - INDEPENDENT VARIABLE
anes$respondent.LC.placement <- anes$V201200

anes$respondent.LC.placement[anes$respondent.LC.placement %in% c(-9,-8,99)] <- NA
summary(anes$respondent.LC.placement)
```

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.    NA's
##   1.000   3.000   4.000   4.091   6.000   7.000    1224
```

```
#table(anes$respondent.LC.placement)

anes %>%
  filter(respondent.LC.placement == 4) %>%
  nrow() #1818 rows are being removed, converted to NA
```

```
## [1] 1818
```

```
### creating new variables for difference of means
anes$liberal<- NA
anes$liberal[anes$respondent.LC.placement %in% c(1,2,3)] <- 1
anes$liberal[!(anes$respondent.LC.placement %in% c(1,2,3))] <- 0

anes$moderate<- NA
anes$moderate[anes$respondent.LC.placement %in% c(4)] <- 1
anes$moderate[!(anes$respondent.LC.placement %in% c(4))] <- 0

anes$conservative<- NA
anes$conservative[anes$respondent.LC.placement %in% c(5,6,7)] <- 1
anes$conservative[!(anes$respondent.LC.placement %in% c(5,6,7))] <- 0

##Respondent race/ethnicity - INDEPENDENT VARIABLE
anes$respondent.race <- anes$V201549x

anes$respondent.race[anes$respondent.race %in% c(-9,-8)] <- NA
summary(anes$respondent.race)
```

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.    NA's
##   1.000   1.000   1.000   1.629   2.000   6.000     102
```

```r
#table(anes$respondent.race)
### creating new variables for difference of means
#res.race.category

anes$res.race.category <- NA
anes$res.race.category[anes$respondent.race %in% c(1)] <- 1
anes$res.race.category[anes$respondent.race %in% c(2,3,4,5,6)] <- 0
#anes$res.race.category[!(anes$respondent.race %in% c(1))] <- 0

unique(anes$res.race.category)
```

```
## [1]  0  1 NA
```

```r
table(anes$res.race.category)
```

```
##
##    0    1
## 2215 5963
```

```r
#res.white
anes$res.white <- NA
anes$res.white[anes$respondent.race %in% c(1)] <- 1
anes$res.white[is.na(anes$res.white)] <- 0

#res.nonwhite
anes$res.nonwhite <- NA
anes$res.nonwhite[anes$respondent.race %in% c(2,3,4,5,6)] <- 1
anes$res.nonwhite[is.na(anes$res.nonwhite)] <- 0

##Opinion on best way to deal with urban unrest and rioting - INDEPENDENT VARIABLE
anes$urban.unrest.opinion <- anes$V201429

anes$urban.unrest.opinion[anes$urban.unrest.opinion %in% c(-9,-8,99)] <- NA
summary(anes$urban.unrest.opinion)
```

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.    NA's
##   1.000   1.000   3.000   3.486   6.000   7.000     567
```

```r
#table(anes$urban.unrest.opinion)

##Opinion on building wall border with Mexico - INDEPENDENT VARIABLE
anes$mexico.border.opinion <- anes$V201424

anes$mexico.border.opinion[anes$mexico.border.opinion %in% c(-9,-8)] <- NA
summary(anes$mexico.border.opinion)
```

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.    NA's
##   1.000   1.000   2.000   1.817   2.000   3.000      37
```

```r
#table(anes$mexico.border.opinion)

##Opinion on U.S gov. policy towards unauthorized immigrants - INDEPENDENT VARIABLE
anes$us.immigrant.opinion <- anes$V201417

anes$us.immigrant.opinion[anes$us.immigrant.opinion %in% c(-9,-8)] <- NA
summary(anes$us.immigrant.opinion)
```

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.    NA's
##   1.000   2.000   3.000   2.768   3.000   4.000      83
```

```r
#table(anes$us.immigrant.opinion)

##Respondent age - INDEPENDENT VARIABLE
anes$age <- anes$V201507x

anes$age[anes$age==-9] <- NA
summary(anes$age)
```

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.    NA's
##   18.00   37.00   52.00   51.59   66.00   80.00     348
```

```r
#table(anes$age)

#Weight
anes$weight<- anes$V200010a

#Restrict to variables we care about
anes <- anes[,63:81]

#Create weight object
anes.w <- svydesign(ids = ~1,
                    data=anes,
                    weights = anes$weight)
```

Describing Main Variables

```r
stargazer(subset(anes,
                 select = c(biden.ft,blm.ft,respondent.LC.placement,respondent.race,trump.ft,urban.unres
                 type = 'latex',
           title = "Summary Statistic of Variables",
          covariate.labels = c('Joe Biden Feeling Thermometer',
                               'Black Lives Matter Feeling Thermometer',
                               'Liberal/Conservative Scale',
                               'Respondents Self-Identified Race',
                               'Trump Feeling Thermometer',
                               'Urban Unrest Opinion',
                               'Mexico Border Opinion',
                               'U.S Immigration Opinion',
                               'Respondents Age'))
```

% Table created by stargazer v.5.2.3 by Marek Hlavac, Social Policy Institute. E-mail: marek.hlavac at gmail.com % Date and time: Tue, May 10, 2022 - 3:28:52 AM

Table 1: Summary Statistic of Variables

Statistic	N	Mean	St. Dev.	Min	Max
Joe Biden Feeling Thermometer	8,060	49.237	34.497	0	100
Black Lives Matter Feeling Thermometer	7,344	53.296	35.432	0	100
Liberal/Conservative Scale	7,056	4.091	1.669	1	7
Respondents Self-Identified Race	8,178	1.629	1.242	1	6
Trump Feeling Thermometer	8,048	40.441	40.311	0	100
Urban Unrest Opinion	7,713	3.486	2.305	1	7
Mexico Border Opinion	8,243	1.817	0.712	1	3
U.S Immigration Opinion	8,197	2.768	0.887	1	4
Respondents Age	7,932	51.585	17.207	18	80

```
stargazer(anes, type = 'latex')
```

% Table created by stargazer v.5.2.3 by Marek Hlavac, Social Policy Institute. E-mail: marek.hlavac at gmail.com % Date and time: Tue, May 10, 2022 - 3:28:52 AM

Table 2:

Statistic	N	Mean	St. Dev.	Min	Max
biden.ft	8,060	49.237	34.497	0	100
blm.ft	7,344	53.296	35.432	0	100
blm.ft.category	7,344	0.627	0.484	0	1
blm.support	8,280	0.556	0.497	0	1
blm.notsupport	8,280	0.331	0.471	0	1
trump.ft	8,048	40.441	40.311	0	100
respondent.LC.placement	7,056	4.091	1.669	1	7
liberal	8,280	0.302	0.459	0	1
moderate	8,280	0.220	0.414	0	1
conservative	8,280	0.331	0.471	0	1
respondent.race	8,178	1.629	1.242	1	6
res.race.category	8,178	0.729	0.444	0	1
res.white	8,280	0.720	0.449	0	1
res.nonwhite	8,280	0.268	0.443	0	1
urban.unrest.opinion	7,713	3.486	2.305	1	7
mexico.border.opinion	8,243	1.817	0.712	1	3
us.immigrant.opinion	8,197	2.768	0.887	1	4
age	7,932	51.585	17.207	18	80
weight	8,280	1.000	0.915	0.026	6.933

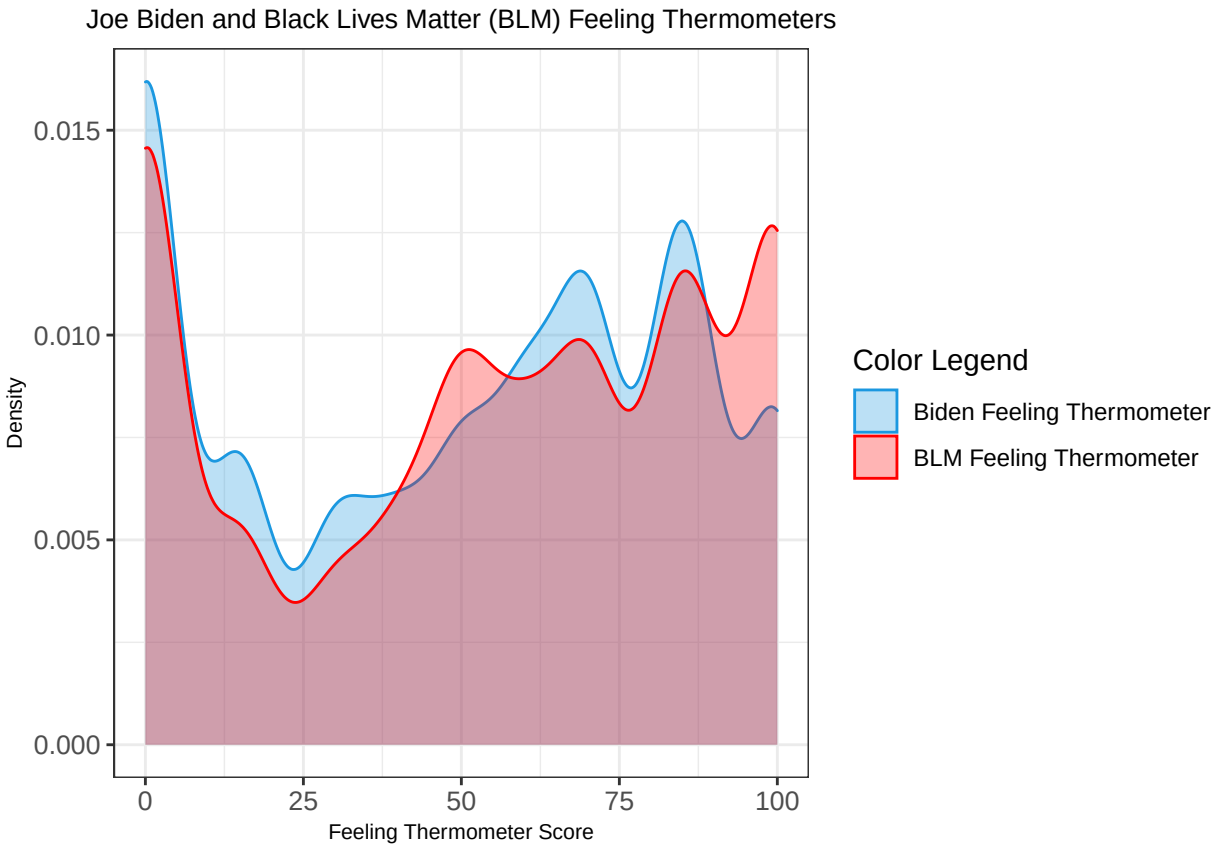
```
# stargazer(subset(anes,
#                  alabama.court$race == 'B',
#                  select = c(amountremain,amountdue,amountpaid)),
#                  type = 'latex')
```

Graph of main variables (Biden Feeling Thermometer and BLM)

```
anes %>%
  select(biden.ft, blm.ft) %>%
  gather(key = 'which.ft', value = 'values') %>%
  ggplot() +
  geom_density(aes(x=values,color=which.ft,fill=which.ft),alpha=0.3) +
  scale_fill_manual(values = c( "#1b98e0","red"),
                    name = "Color Legend",
                    labels = c("Biden Feeling Thermometer", "BLM Feeling Thermometer")) +
  scale_color_manual(values = c( "#1b98e0","red"),
                    name = "Color Legend",
                    labels = c("Biden Feeling Thermometer", "BLM Feeling Thermometer")) +
  xlab("Feeling Thermometer Score") +
  ylab('Density') +
  ggtitle("Joe Biden and Black Lives Matter (BLM) Feeling Thermometers") +
  theme_bw() +
  theme(plot.title = element_text(hjust = 0.5)) +
    theme(axis.text.x = element_text(size = 10),
        axis.text.y = element_text(size = 10),
        axis.title.x = element_text(size = 8),
        axis.title.y = element_text(size = 8),
        plot.title = element_text(size = 10))
```

```
## Warning: attributes are not identical across measure variables;
## they will be dropped
```

```
## Warning: Removed 1156 rows containing non-finite values (stat_density).
```

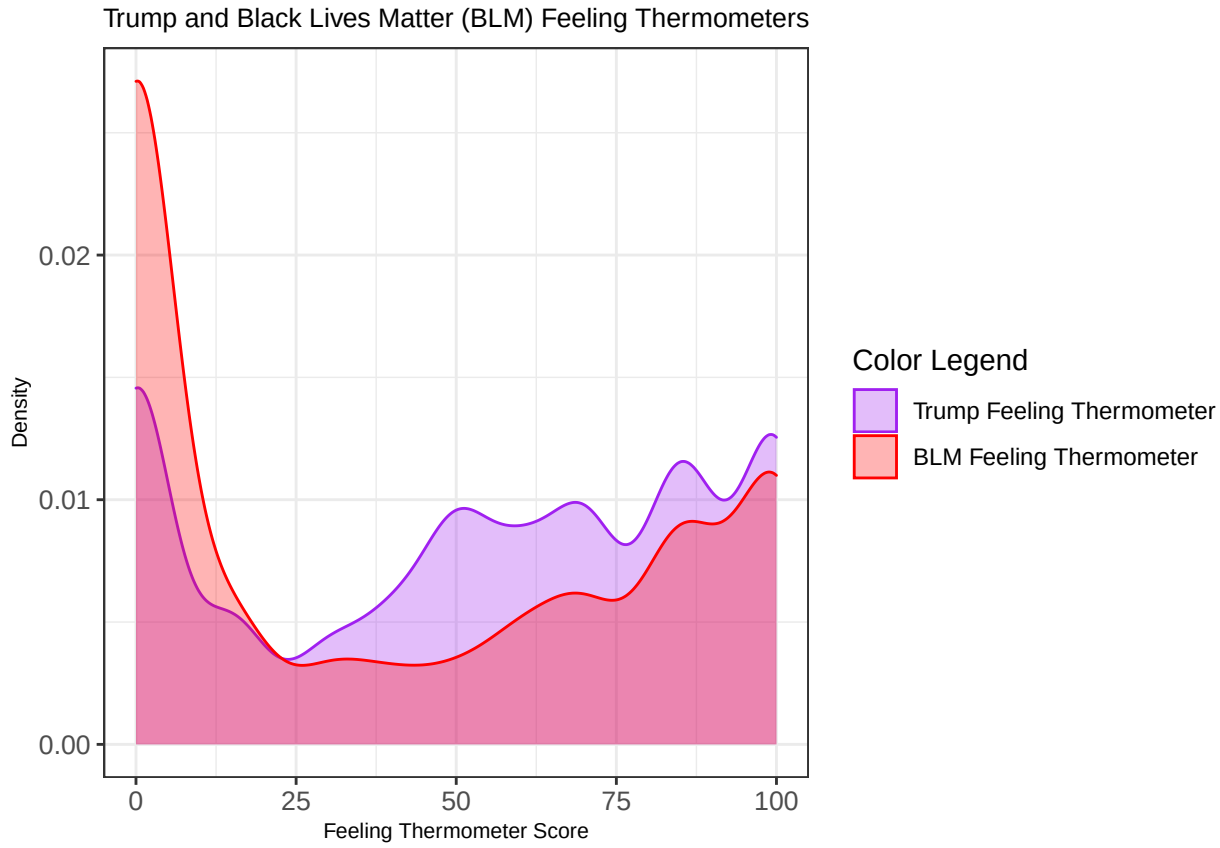


#Trump Feeling thermometer and BLM

```
anes %>%
  select(trump.ft, blm.ft) %>%
  gather(key = 'which.ft', value = 'values') %>%
  ggplot() +
  geom_density(aes(x=values,color=which.ft,fill=which.ft),alpha=0.3) +
  scale_fill_manual(values = c( "purple","red"),
                    name = "Color Legend",
                    labels = c("Trump Feeling Thermometer", "BLM Feeling Thermometer")) +
  scale_color_manual(values = c( "purple","red"),
                    name = "Color Legend",
                    labels = c("Trump Feeling Thermometer", "BLM Feeling Thermometer")) +
  xlab("Feeling Thermometer Score") +
  ylab('Density') +
  ggtitle("Trump and Black Lives Matter (BLM) Feeling Thermometers") +
  theme_bw() +
  theme(plot.title = element_text(hjust = 0.5)) +
    theme(axis.text.x = element_text(size = 10),
        axis.text.y = element_text(size = 10),
        axis.title.x = element_text(size = 8),
        axis.title.y = element_text(size = 8),
        plot.title = element_text(size = 10))
```

```
## Warning: attributes are not identical across measure variables;
## they will be dropped
```

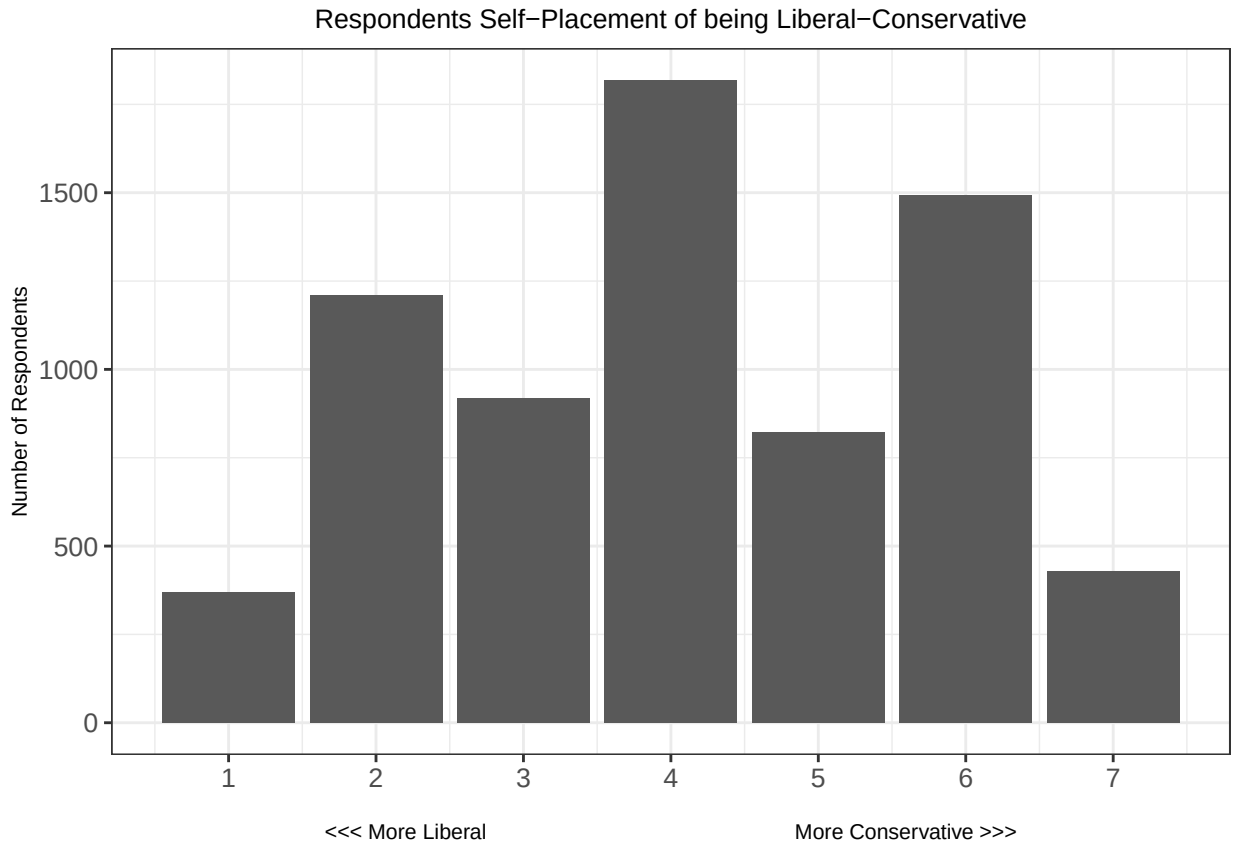
```
## Warning: Removed 1168 rows containing non-finite values (stat_density).
```



#Graph of liberal-conservative scale

```
anes %>%
  ggplot()+
  geom_bar(aes(x=respondent.LC.placement)) +
  labs(title="Respondents Self-Placement of being Liberal-Conservative",
       x="Liberal-Conservative Scale",
       y = "Number of Respondents") +
scale_x_continuous(breaks=c(1,2,3,4,5,6,7)) +
  xlab(paste("\n<<< More Liberal",
             spaces(50), "More Conservative >>>")) +
  theme_bw() +
  theme(plot.title = element_text(hjust = 0.5)) +
  theme(axis.text.x = element_text(size = 10),
        axis.text.y = element_text(size = 10),
        axis.title.x = element_text(size = 8),
        axis.title.y = element_text(size = 8),
        plot.title = element_text(size = 10))
```

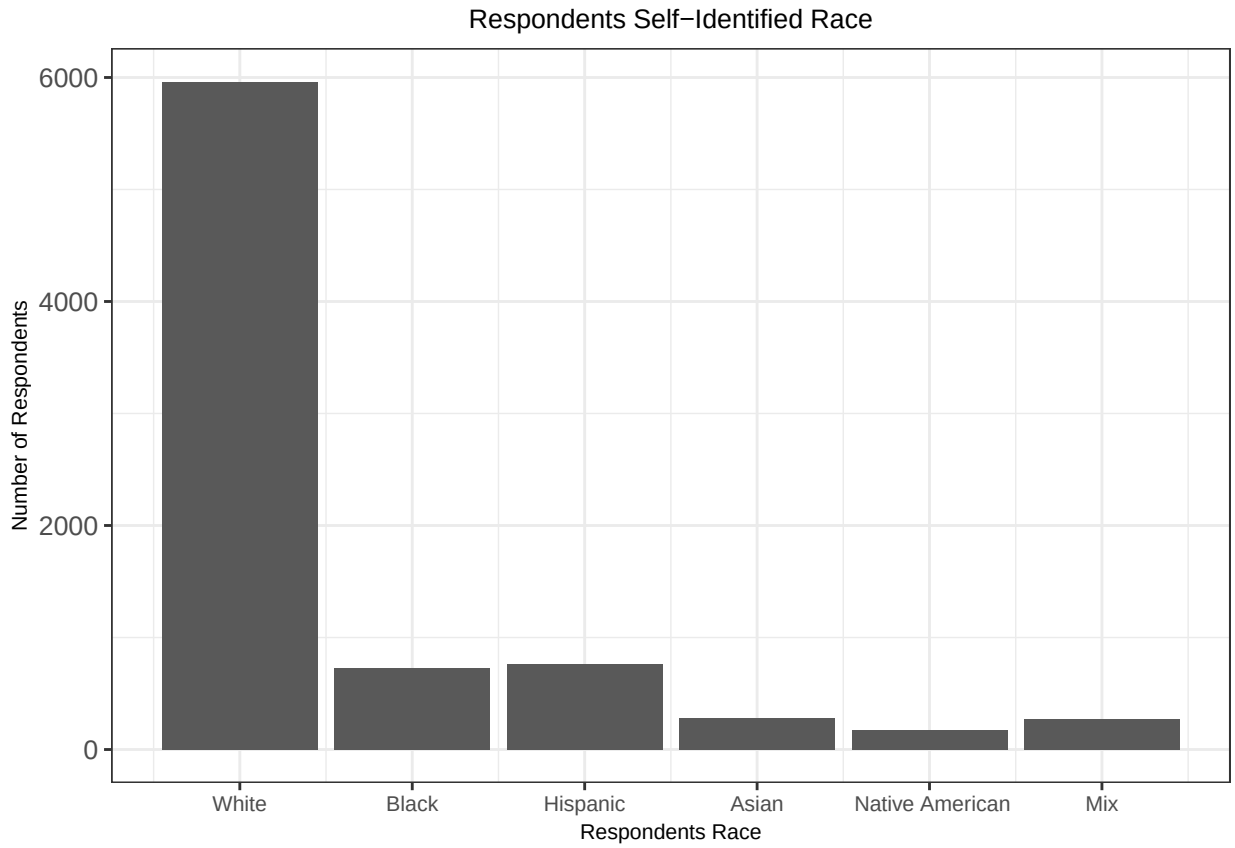
```
## Warning: Removed 1224 rows containing non-finite values (stat_count).
```



#Respondents Self-Identified Race

```
anes %>%
  ggplot()+
  geom_bar(aes(x=respondent.race)) +
  labs(title="Respondents Self-Identified Race",
       x="Respondents Race",
       y = "Number of Respondents") +
  scale_x_continuous(breaks=c(1,2,3,4,5,6),
                     labels = c('White','Black','Hispanic','Asian',' Native American','Mix')) +
  theme_bw() +
  theme(plot.title = element_text(hjust = 0.5)) +
  theme(axis.text.x = element_text(size = 8),
        axis.text.y = element_text(size = 10),
        axis.title.x = element_text(size = 8),
        axis.title.y = element_text(size = 8),
        plot.title = element_text(size = 10))
```

```
## Warning: Removed 102 rows containing non-finite values (stat_count).
```



#performing 3 t-tests

```
#biden.ft,blm.ft.category
t3 <- svyttest(biden.ft ~ blm.ft.category, anes.w)
t3
```

```
##
##  Design-based t-test
##
## data:  biden.ft ~ blm.ft.category
## t = 48.4, df = 7159, p-value < 2.2e-16
## alternative hypothesis: true difference in mean is not equal to 0
## 95 percent confidence interval:
##  42.14271 45.70051
## sample estimates:
## difference in mean
##           43.92161
```

```
#Among conservatives (biden.ft, res.LC.category&res.race.category, blm.ft.category) - CONSERVATIVE, WHI
anes.w.r3LW <- svydesign(ids = ~1,
                      data=anes[anes$conservative==1 & anes$res.white==1,],
                      weights = anes$weight[anes$conservative==1 & anes$res.white==1])
t3CW <- svyttest(biden.ft ~ blm.ft.category, anes.w.r3LW)
t3CW
```

```
##
```

```
##  Design-based t-test
##
## data:  biden.ft ~ blm.ft.category
## t = 10.269, df = 1983, p-value < 2.2e-16
## alternative hypothesis: true difference in mean is not equal to 0
## 95 percent confidence interval:
##  15.65377 23.04438
## sample estimates:
## difference in mean
##           19.34908
```

```
#Among conservatives (biden.ft, res.LC.category&res.race.category, blm.ft.category) - CONSERVATIVE, NON
anes.w.l3LW <- svydesign(ids = ~1,
                      data=anes[anes$conservative==1 & anes$res.nonwhite==1,],
                      weights = anes$weight[anes$conservative==1 & anes$res.nonwhite==1])
t3CNW <- svyttest(biden.ft ~ blm.ft.category, anes.w.l3LW)
t3CNW
```

```
##
##  Design-based t-test
##
## data:  biden.ft ~ blm.ft.category
## t = 12.02, df = 365, p-value < 2.2e-16
## alternative hypothesis: true difference in mean is not equal to 0
## 95 percent confidence interval:
##  36.13515 50.27203
## sample estimates:
## difference in mean
##           43.20359
```

```
#Among liberals (biden.ft, res.LC.category&res.race.category, blm.ft.category) - LIBERAL, WHITE
anes.w.l..3LW <- svydesign(ids = ~1,
                      data=anes[anes$liberal==1 & anes$res.white==1,],
                      weights = anes$weight[anes$liberal==1 & anes$res.white==1])

tl3LW <- svyttest(biden.ft ~ blm.ft.category, anes.w.l..3LW)
tl3LW
```

```
##
##  Design-based t-test
##
## data:  biden.ft ~ blm.ft.category
## t = 6.5925, df = 1675, p-value = 5.78e-11
## alternative hypothesis: true difference in mean is not equal to 0
## 95 percent confidence interval:
##  15.42884 28.49787
## sample estimates:
## difference in mean
##           21.96336
```

```
#Among liberals (biden.ft, res.LC.category&res.race.category, blm.ft.category) - LIBERAL, NON-WHITE
anes.w.l..3LW <- svydesign(ids = ~1,
                      data=anes[anes$liberal==1 & anes$res.nonwhite==1,],
```

```
                      weights = anes$weight[anes$liberal==1 & anes$res.nonwhite==1])

tl3LNW <- svyttest(biden.ft ~ blm.ft.category, anes.w.l..3LW)
tl3LNW
```

```
##
##  Design-based t-test
##
## data:  biden.ft ~ blm.ft.category
## t = 3.6528, df = 557, p-value = 0.0002838
## alternative hypothesis: true difference in mean is not equal to 0
## 95 percent confidence interval:
##   8.49103 28.24504
## sample estimates:
## difference in mean
##           18.36804
```

#calculating means, extreme difference and probabilities of variables

```
#mean rating for individuals who do not support the BLM movement
round(weighted.mean(anes$biden.ft[anes$blm.ft.category==0], weight=anes$weight[anes$blm.ft.category==0]
```

```
## [1] 20.79
```

```
#mean rating for individuals who do support the BLM movement
round(weighted.mean(anes$biden.ft[anes$blm.ft.category==1], weight=anes$weight[anes$blm.ft.category==1]
```

```
## [1] 66.58
```

```
#probability of seeing extreme difference (48.4) of...
round(t3$statistic,2)
```

```
##    t
## 48.4
```

```
#...in our sample if the true difference if the population was 0 is...
format.pval(t3$p.value, eps=.01, nsmall=2)
```

```
## [1] "< 0.01"
```

```
#extreme difference for conservative-WHITE
round(t3CW$statistic,2)
```

```
##     t
## 10.27
```

```
#probability of getting extreme difference if the population was 0 is...
format.pval(t3CW$p.value, eps=.01, nsmall=2)
```

```
## [1] "< 0.01"
```

```r
#extreme difference for conservative-NONWHITE
round(t3CNW$statistic,2)
```

```
##     t
## 12.02
```

```r
#probability of getting extreme difference for if the population was 0 is...
format.pval(t3CNW$p.value, eps=.01, nsmall=2)
```

```
## [1] "< 0.01"
```

```r
#extreme difference for liberal-WHITE
round(tl3LW$statistic,2)
```

```
##    t
## 6.59
```

```r
#probability of getting extreme difference for if the population was 0 is...
format.pval(tl3LW$p.value, eps=.01, nsmall=2)
```

```
## [1] "< 0.01"
```

```r
#extreme difference for liberal-NONWHITE
round(tl3LNW$statistic,2)
```

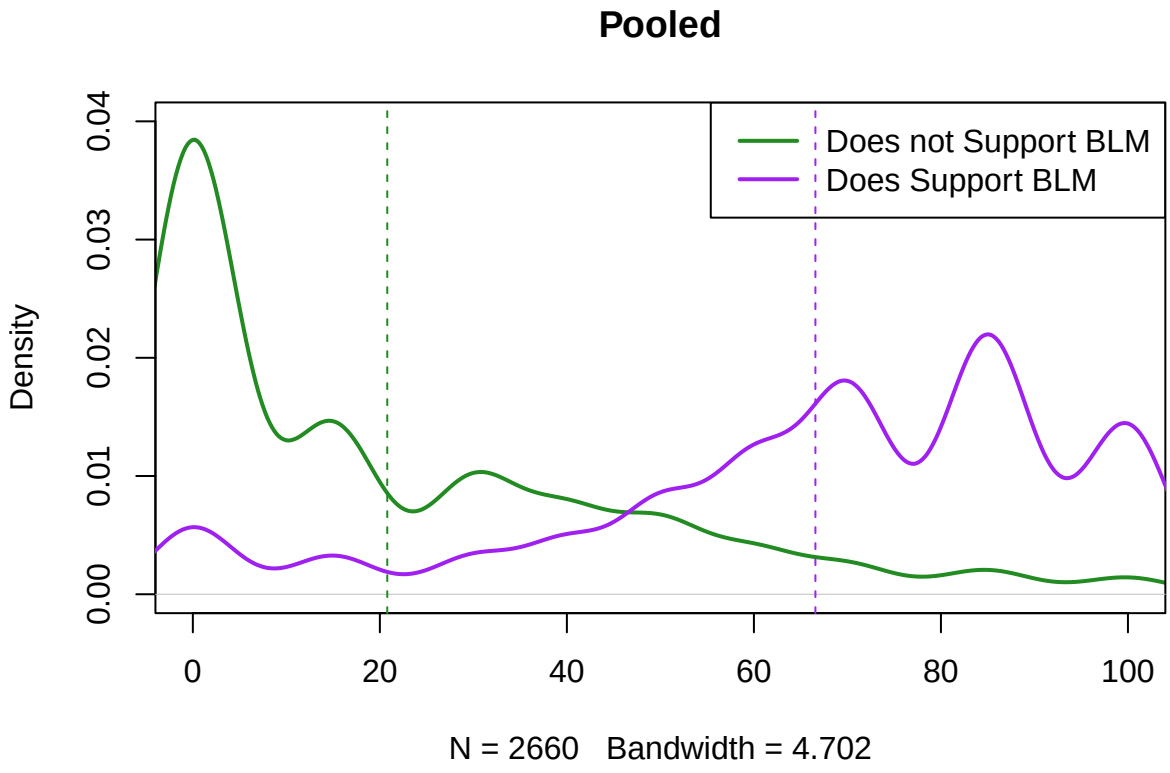
```
##    t
## 3.65
```

```r
#probability of getting extreme difference if the population was 0 is...
format.pval(tl3LNW$p.value, eps=.01, nsmall=2)
```

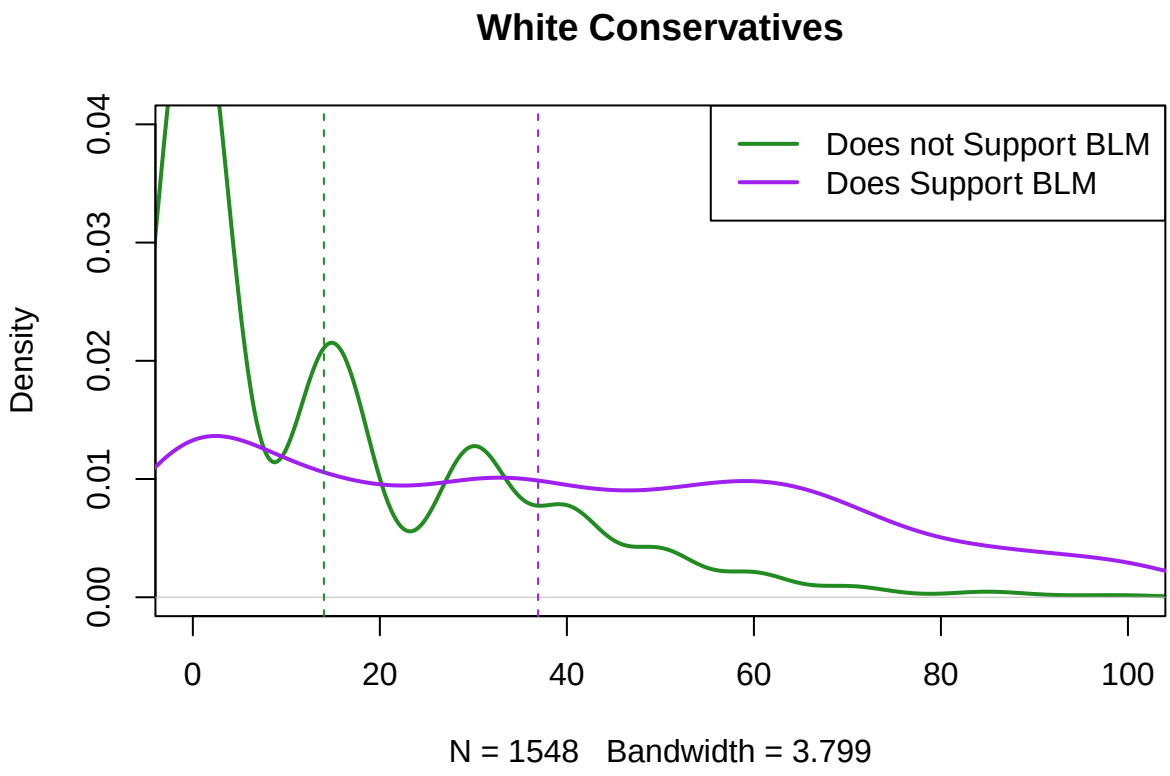
```
## [1] "< 0.01"
```

#creating 6 graphs to show the difference in means

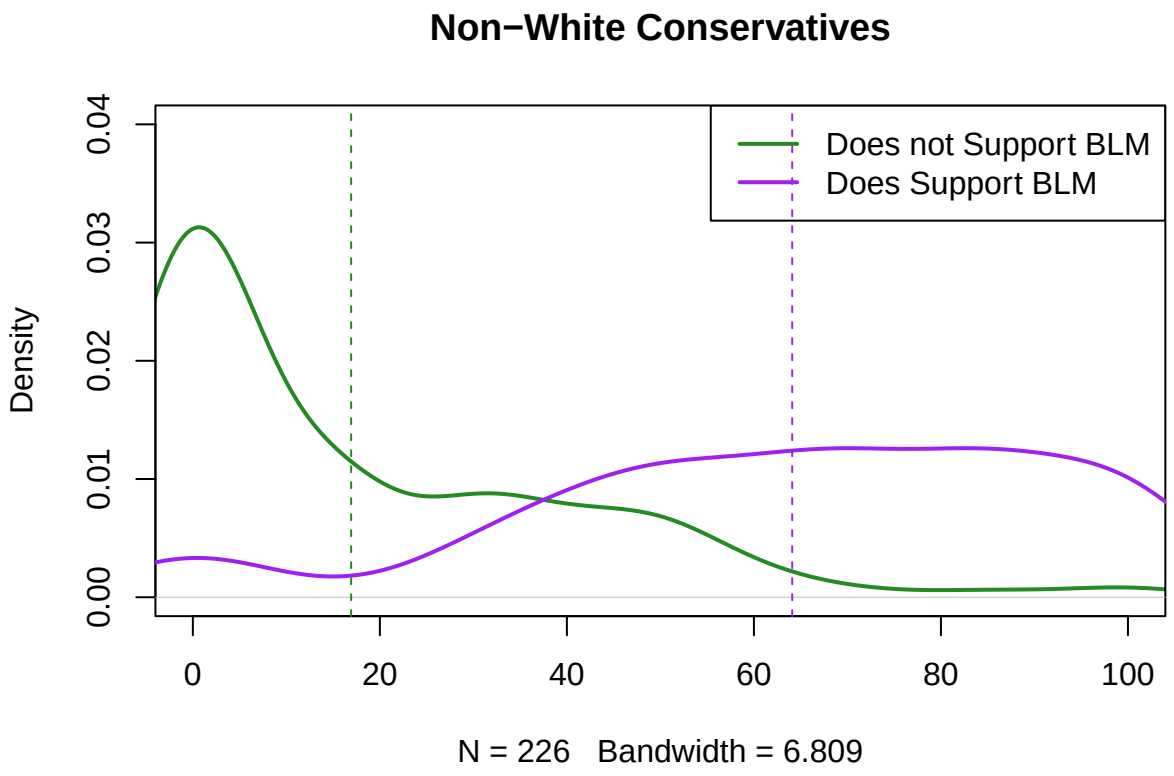
```r
#biden.ft -- blm.ft.category  CATEGORY: res.LC.category & res.race.category
#Visualize Main
plot(density(anes$biden.ft[anes$blm.ft.category==0], na.rm=T),
     lwd=2, col="forestgreen", ylim=c(0,0.04), xlim=c(0,100),
     main="Pooled")
points(density(anes$biden.ft[anes$blm.ft.category==1],na.=T),
       lwd=2, col="purple", type="l")
abline(v=mean(anes$biden.ft[anes$blm.ft.category==0], na.rm=T), lty=2, col="forestgreen")
abline(v=mean(anes$biden.ft[anes$blm.ft.category==1], na.rm=T), lty=2, col="purple")
legend("topright", c("Does not Support BLM", "Does Support BLM"), lty=c(1,1), lwd=c(2,2),
       col=c("forestgreen", "purple"))
```



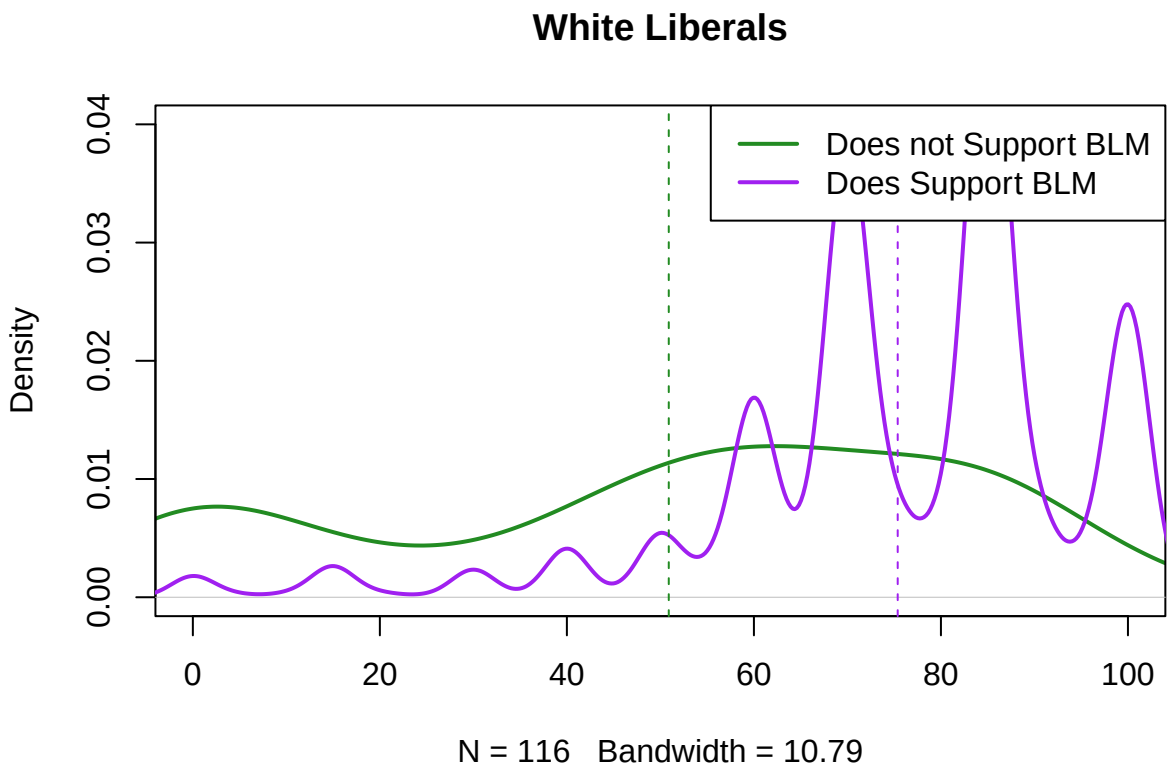

```
#Visualize conservative -WHITE
plot(density(anes$biden.ft[anes$blm.ft.category==0 & anes$conservative==1 & anes$res.white == 1], na.rm=
     lwd=2, col="forestgreen", ylim=c(0,0.04), xlim=c(0,100),
     main="White Conservatives")
points(density(anes$biden.ft[anes$blm.ft.category==1 & anes$conservative==1 & anes$res.white == 1],na.=
       lwd=2, col="purple", type="l")
abline(v=mean(anes$biden.ft[anes$blm.ft.category==0 & anes$conservative==1 & anes$res.white == 1], na.r
abline(v=mean(anes$biden.ft[anes$blm.ft.category==1 & anes$conservative==1 & anes$res.white == 1], na.r
legend("topright", c("Does not Support BLM", "Does Support BLM"), lty=c(1,1), lwd=c(2,2),
       col=c("forestgreen", "purple"),)
```



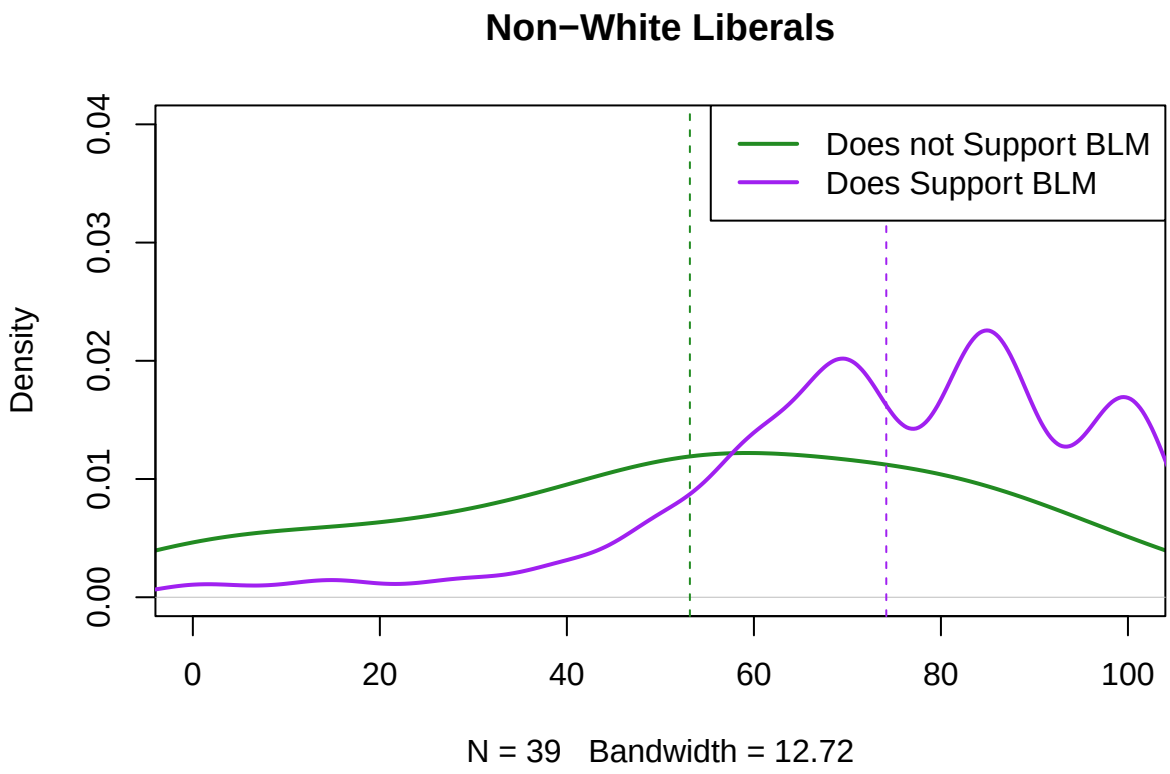

```
#Visualize conservative -NON-WHITE
plot(density(anes$biden.ft[anes$blm.ft.category==0 & anes$conservative==1 & anes$res.nonwhite == 1], na
     lwd=2, col="forestgreen", ylim=c(0,0.04), xlim=c(0,100),
     main="Non-White Conservatives")
points(density(anes$biden.ft[anes$blm.ft.category==1 & anes$conservative==1 & anes$res.nonwhite == 1],na
       lwd=2, col="purple", type="l")
abline(v=mean(anes$biden.ft[anes$blm.ft.category==0 & anes$conservative==1 & anes$res.nonwhite == 1], na
abline(v=mean(anes$biden.ft[anes$blm.ft.category==1 & anes$conservative==1 & anes$res.nonwhite == 1], na
legend("topright", c("Does not Support BLM", "Does Support BLM"), lty=c(1,1), lwd=c(2,2),
       col=c("forestgreen", "purple"),)
```




```
#Visualize liberal -WHITE
plot(density(anes$biden.ft[anes$blm.ft.category==0 & anes$liberal==1 & anes$res.white == 1], na.rm=T),
     lwd=2, col="forestgreen", ylim=c(0,0.04), xlim=c(0,100),
     main="White Liberals")
points(density(anes$biden.ft[anes$blm.ft.category==1 & anes$liberal==1 & anes$res.white == 1],na.=T),
       lwd=2, col="purple", type="l")
abline(v=mean(anes$biden.ft[anes$blm.ft.category==0 & anes$liberal==1 & anes$res.white == 1], na.rm=T),
abline(v=mean(anes$biden.ft[anes$blm.ft.category==1 & anes$liberal==1 & anes$res.white == 1], na.rm=T),
legend("topright", c("Does not Support BLM", "Does Support BLM"), lty=c(1,1), lwd=c(2,2),
       col=c("forestgreen", "purple"), bg="white")
```




```
#Visualize liberal -NON-WHITE
plot(density(anes$biden.ft[anes$blm.ft.category==0 & anes$liberal==1 & anes$res.nonwhite == 1], na.rm=T
     lwd=2, col="forestgreen", ylim=c(0,0.04), xlim=c(0,100),
     main="Non-White Liberals")
points(density(anes$biden.ft[anes$blm.ft.category==1 & anes$liberal==1 & anes$res.nonwhite == 1],na.=T)
       lwd=2, col="purple", type="l")
abline(v=mean(anes$biden.ft[anes$blm.ft.category==0 & anes$liberal==1 & anes$res.nonwhite == 1], na.rm=
abline(v=mean(anes$biden.ft[anes$blm.ft.category==1 & anes$liberal==1 & anes$res.nonwhite == 1], na.rm=
legend("topright", c("Does not Support BLM", "Does Support BLM"), lty=c(1,1), lwd=c(2,2),
       col=c("forestgreen", "purple"), bg="white")
```



#setting up the regression

```
#biden.ft, blm.ft
m1 <- lm(biden.ft ~  blm.ft, data=anes, weights= anes$weight)
m1.vcov <- vcovCL(m1, cluster=anes$state)
m1.se <- sqrt(diag(m1.vcov))


#biden.ft, respondent.LC.placement
m2 <- lm(biden.ft ~ respondent.LC.placement, data=anes, weights= anes$weight)
m2.vcov <- vcovCL(m2, cluster=anes$state)
m2.se <- sqrt(diag(m2.vcov))


#biden.ft, res.race.category
m3 <- lm(biden.ft ~ res.race.category, data=anes, weights= anes$weight)
m3.vcov <- vcovCL(m3, cluster=anes$state)
m3.se <- sqrt(diag(m3.vcov))

#biden.ft, blm.ft, respondent.LC.placement, res.race.category
m4 <- lm(biden.ft ~ blm.ft + respondent.LC.placement + res.race.category, data=anes, weights= anes$weigh
m4.vcov <- vcovCL(m3, cluster=anes$state)
m4.se <- sqrt(diag(m3.vcov))
```

#making the table

#performing regression

Table 3: Direct Effects

	Biden Feeling Thermometer			
	Model 1	**Model 2**	**Model 3**	**Model 4**
BLM Feeling Thermometer	0.65* (0.01)			0.41
Ideology		−13.45* (0.23)		−7.52
Respondent Race			−20.15* (1.06)	−5.23* (1.06)
Constant	13.66* (0.69)	103.10* (1.08)	61.34* (0.88)	60.92* (0.88)
N	7161	6913	7969	6135
Adj. R-squared	0.45	0.43	0.08	0.56

OLS regression weighted to US adult population..
Robust standard errors clustered by state. *p<0.05

```
#biden.ft, blm.ft
summary(lm(biden.ft ~ blm.ft,
           data = anes,
           weight = anes$weight))
```

```
##
## Call:
## lm(formula = biden.ft ~ blm.ft, data = anes, weights = anes$weight)
##
## Weighted Residuals:
##      Min       1Q   Median       3Q      Max
## -188.067  -12.419    1.366   14.968  227.342
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept) 13.658212   0.538351   25.37   <2e-16 ***
## blm.ft       0.647582   0.008402   77.07   <2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 25.33 on 7159 degrees of freedom
##   (1119 observations deleted due to missingness)
## Multiple R-squared:  0.4535, Adjusted R-squared:  0.4534
## F-statistic:  5940 on 1 and 7159 DF,  p-value: < 2.2e-16
```

```
#biden.ft, respondent.LC.placement
summary(lm(biden.ft ~ respondent.LC.placement,
           data = anes,
           weight = anes$weight))
```

```
##
## Call:
## lm(formula = biden.ft ~ respondent.LC.placement, data = anes,
##     weights = anes$weight)
##
## Weighted Residuals:
##      Min       1Q   Median       3Q      Max
## -152.065  -13.649    0.504   14.304  139.906
```

```
##
## Coefficients:
##                          Estimate Std. Error t value Pr(>|t|)
## (Intercept)              103.0986     0.8339   123.6   <2e-16 ***
## respondent.LC.placement -13.4513     0.1866   -72.1   <2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 25.39 on 6911 degrees of freedom
##   (1367 observations deleted due to missingness)
## Multiple R-squared:  0.4293, Adjusted R-squared:  0.4292
## F-statistic:  5198 on 1 and 6911 DF,  p-value: < 2.2e-16
```

```
#biden.ft, respondent.race
summary(lm(biden.ft ~ respondent.race,
           data = anes,
           weight = anes$weight))
```

```
##
## Call:
## lm(formula = biden.ft ~ respondent.race, data = anes, weights = anes$weight)
##
## Weighted Residuals:
##      Min       1Q   Median       3Q      Max
## -141.985  -25.161    4.847   24.777  145.068
##
## Coefficients:
##                 Estimate Std. Error t value Pr(>|t|)
## (Intercept)      40.7327     0.6450   63.15   <2e-16 ***
## respondent.race   4.1723     0.2971   14.04   <2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 34.02 on 7967 degrees of freedom
##   (311 observations deleted due to missingness)
## Multiple R-squared:  0.02416,    Adjusted R-squared:  0.02404
## F-statistic: 197.3 on 1 and 7967 DF,  p-value: < 2.2e-16
```

```
#biden.ft, blm.ft, respondent.LC.placement, respondent.race
summary(lm(biden.ft ~ blm.ft + respondent.LC.placement + respondent.race,
           data = anes,
           weight = anes$weight))
```

```
##
## Call:
## lm(formula = biden.ft ~ blm.ft + respondent.LC.placement + respondent.race,
##     data = anes, weights = anes$weight)
##
## Weighted Residuals:
##      Min       1Q   Median       3Q      Max
## -135.667  -10.774    0.685   12.927  137.199
##
## Coefficients:
```

```
##                          Estimate Std. Error t value Pr(>|t|)
## (Intercept)              55.16420    1.50495  36.655  < 2e-16 ***
## blm.ft                    0.42803    0.01114  38.416  < 2e-16 ***
## respondent.LC.placement -7.45959    0.23758 -31.398  < 2e-16 ***
## respondent.race           0.60605    0.23268   2.605  0.00922 **
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 22.43 on 6131 degrees of freedom
##   (2145 observations deleted due to missingness)
## Multiple R-squared:  0.5532, Adjusted R-squared:  0.5529
## F-statistic:  2530 on 3 and 6131 DF,  p-value: < 2.2e-16
```

```
summary(lm(biden.ft ~ blm.ft + respondent.LC.placement + respondent.race + urban.unrest.opinion + mexico
           data = anes,
           weight = anes$weight))
```

```
##
## Call:
## lm(formula = biden.ft ~ blm.ft + respondent.LC.placement + respondent.race +
##     urban.unrest.opinion + mexico.border.opinion + us.immigrant.opinion +
##     age, data = anes, weights = anes$weight)
##
## Weighted Residuals:
##      Min       1Q   Median       3Q      Max
## -117.268  -10.441    0.247   10.815  111.849
##
## Coefficients:
##                          Estimate Std. Error t value Pr(>|t|)
## (Intercept)              28.06613    2.27380  12.343  < 2e-16 ***
## blm.ft                    0.31537    0.01228  25.689  < 2e-16 ***
## respondent.LC.placement -5.78026    0.24866 -23.245  < 2e-16 ***
## respondent.race           0.96025    0.22425   4.282 1.88e-05 ***
## urban.unrest.opinion     -2.52225    0.18702 -13.486  < 2e-16 ***
## mexico.border.opinion     7.47626    0.47283  15.812  < 2e-16 ***
## us.immigrant.opinion      0.97626    0.37091   2.632  0.00851 **
## age                       0.37805    0.01650  22.905  < 2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 20.56 on 5695 degrees of freedom
##   (2577 observations deleted due to missingness)
## Multiple R-squared:  0.6243, Adjusted R-squared:  0.6239
## F-statistic:  1352 on 7 and 5695 DF,  p-value: < 2.2e-16
```

#regression with interaction term

```
m4 <- lm(biden.ft ~ blm.ft*res.race.category*respondent.LC.placement, data=anes, weights= anes$weight)
m5 <- lm(biden.ft ~ blm.ft*res.race.category*respondent.LC.placement + urban.unrest.opinion + mexico.bo
```

#interaction term regression graph

[1] "< 0.01"

#assessing the coefficiants

Table 4: Interactive Effects

	Biden Feeling Thermometer	
	Model 1	**Model 2**
BLM Feeling Thermometer	−0.14* (0.05)	−0.08 (0.05)
Race	−22.10* (5.16)	−14.38* (5.06)
Ideology	−13.84* (0.88)	−10.32* (0.87)
Urban Unrest Opinion		−2.35* (0.18)
Mexico Border Opinion		6.14* (0.48)
US Immigration Opinion		1.38* (0.37)
Age		0.38* (0.02)
BLM*Race	0.35* (0.06)	0.23* (0.06)
BLM*Ideology	0.13* (0.01)	0.09* (0.01)
Race*Ideology	3.38* (0.99)	1.81 (0.96)
BLM*Race*Ideology	−0.08* (0.01)	−0.06* (0.01)
Constant	92.99* (4.49)	57.15* (4.83)
N	6135	5703
Adj. R-squared	0.57	0.64

OLS regression weighted to US adult population.
Robust standard errors clustered by state. *p<0.05

Table 5: Marginal Effect of BLM Support, by Ideology

Ideology	Very Liberal	2	3	Moderate	5	6	Very Conservative
BLM Support	0.74224032	0.61689218	0.49154403	0.36619589	0.24084774	0.11549960	-0.00984855

```
ideo.levels <- seq(1,7)
#blm.ft:respondent.LC.placement
effect.blm <- coef(m4)["blm.ft"] + coef(m4)["blm.ft:respondent.LC.placement"]*ideo.levels
effect.blm
```

```
## [1] -0.00984855  0.11549960  0.24084774  0.36619589  0.49154403  0.61689218
## [7]  0.74224032
```

```
#blm.ft:respondent.LC.placement
effect.race <- coef(m4)["res.race.category"] + coef(m4)["res.race.category:respondent.LC.placement"]*ide
effect.race
```

```
## [1] -18.716449 -15.334272 -11.952096  -8.569920  -5.187743  -1.805567   1.576609
```

```
two.lev <- seq(1,2)
#blm.ft:res.race.category
effect.ra1 <- coef(m4)["blm.ft"] + coef(m4)["blm.ft:res.race.category"]*two.lev
effect.ra1
```

```
## [1] 0.2191901 0.5735768
```

#biden feeling thermometer and ideology

#race and ideology

#BLM and race

Table 6: Marginal Effect of Race, by Ideology

Ideology	Very Liberal	2	3	Moderate	5	6	Very Conservative
Effect of Race	1.576609	-1.805567	-5.187743	-8.569920	-11.952096	-15.334272	-18.716449

Table 7: Marginal Effect of BLM Support, by Race

Ideology	Non-White	White
Effect of BLM	0.5735768	0.2191901