DPSS Capstone, Social Inequality: George Floyd Protests

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Task 1 - Setup

```
# reading in relevant data - base
protests <- read_csv("data/george-floyd-exports-june-22.csv")
us_counties <- st_read("data/tl_2016_us_county/tl_2016_us_county.shp")
```

```
Reading layer 'tl_2016_us_county' from data source
  '/Users/shaymilner/Desktop/Projects/DPSS-2021/data/tl_2016_us_county/tl_2016_us_county.shp'
  using driver 'ESRI Shapefile'
Simple feature collection with 3233 features and 18 fields
Geometry type: MULTIPOLYGON
Dimension:     XY
Bounding box:  xmin: -179.2311 ymin: -14.60181 xmax: 179.8597 ymax: 71.44106
Geodetic CRS:  NAD83
```

```
# getting gini index data
vote_2020 <- read_excel("data/vote2020.xlsx")
vars_acs_2019 <- load_variables(2019, "acs5")
gini_index <- get_acs( # note: 0 = no inequality, 1 = complete inequality
  geography = "county",
  variables = c("B19083_001"),
  year = 2019
)
gini_index <- gini_index %>%
  select(-variable)
```

```
# getting parler data
parler_data <- read_csv("data/parler-videos-geocoded.csv")
```

Task 2 - Generating Maps

PART 1 - Sub-setting protest data for variables of interest

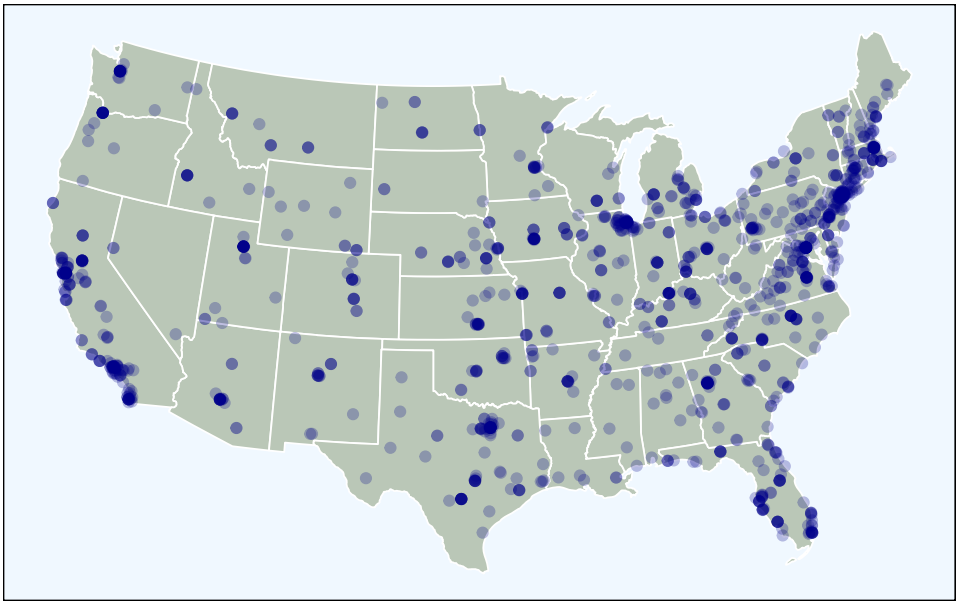
```
protests_map <- protests %>%
    select(longitude, latitude, type_of_gathering, state, escalation,
        police_altercation) %>%
    mutate(size = case_when(protests$size == "Large" ~ 2, protests$size ==
        "Moderate" ~ 1, protests$size == "Small" ~ 0), type_of_gathering = ifelse(protests$type_of_gath
        "Protests", 0, 1))
```

PART 2 - Mapping Data

```
protests_map_trans <- usmap_transform(protests_map) # transform for usmaps

protests_map_trans <- # remove data Hawaii and Alaska
  protests_map_trans[protests_map_trans$state !="Hawaii" &
                       protests_map_trans$state !="Alaska",]
```

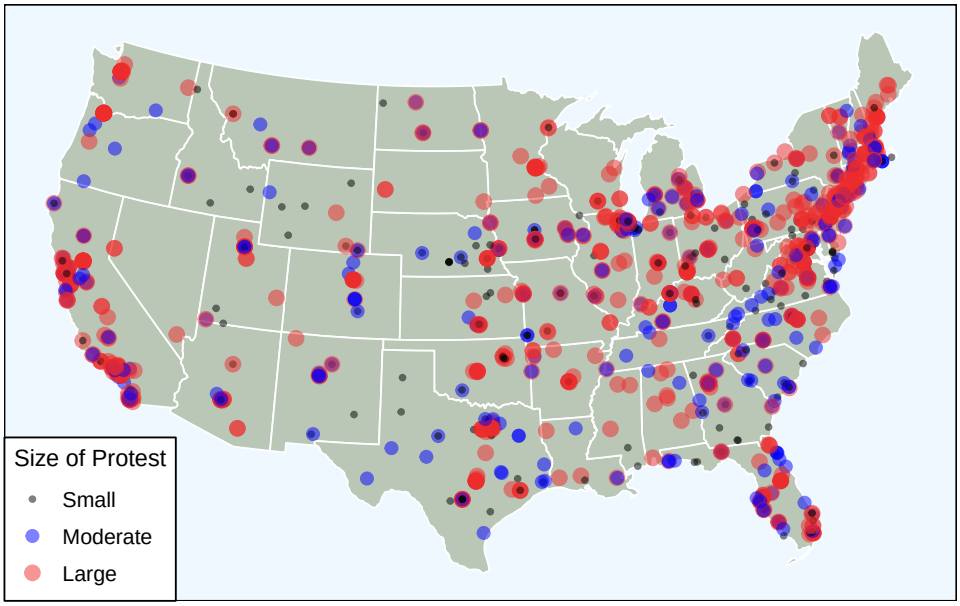
2a: Mapping general location of protests across the us

Location of George Floyd Protests, Summer 2020
Source: Ipsos



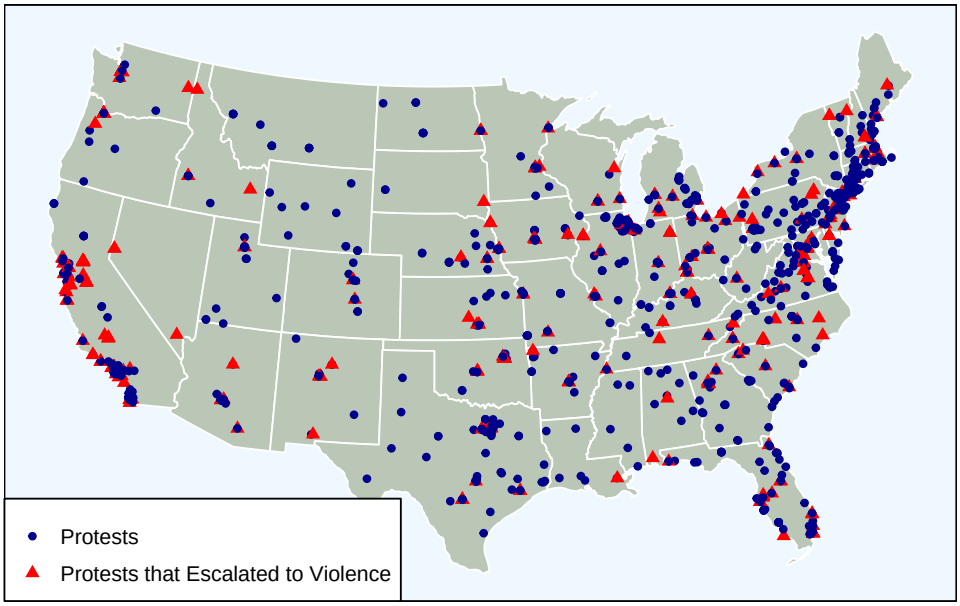
2b: Mapping protest across the us by size

Location of George Floyd Protests by Size, Summer 2020
Source: Ipsos



2c: Mapping protest by if they escalated to violence

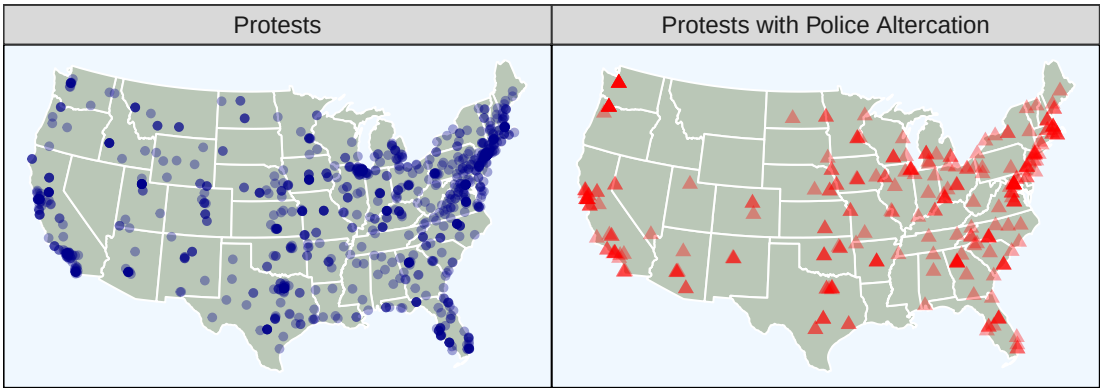
George Floyd Protests by Escalation to Violence, Summer 2020
Source: Ipsos



2d: Mapping protest by if they had police violence

George Floyd Protests by Police Altercation, Summer 2020

Source: Ipsos



Task 3 - Running Regressions

PART 1 - Collapsing and generating variables

```
protests_geom <- protests %>% # choosing variables of interest
  select(longitude, latitude, escalation) %>%
  mutate(escalation = ifelse(escalation=="No", 0, 1))

protests_geom <- st_as_sf( # generating correct geom cat for county data join
  protests_geom,
  coords = c("longitude", "latitude"),
  crs = 4326)

counties_sub <- us_counties %>% # subsetting county data set
  select(fips, STATEFP)

counties_sub <- st_transform(counties_sub, 4326) # for merge with protest data

protests_geom <- st_join( # joining protest and county to get protest/county
  protests_geom,
  counties_sub,
  join = st_within
)
```

1a: Retrieving county names for protest data

```r
protests_geom$fips <- as.character(protests_geom$fips) # makes grouping by fips easier
protests_geom <- protests_geom %>%
  select(-STATEFP) # will add back later

protests_geom <- protests_geom %>%
  select(escalation, fips) %>%
  add_count(fips) %>% # creates count variable of num protests that happened
  rename(num_protests = n) %>% # renames count variable
  select(escalation, fips, num_protests) %>%
  group_by(fips, num_protests) %>%
  summarise(num_escalations = sum(escalation)) # creates count of escalations
```

1b: calculating num protests + escalations that escalated per County

PART 2 - Joining new variables with county-level voting data

```r
vote_2020 <- vote_2020 %>%
    rename(County = county_name, fips = county_fips)

vote_2020$fips <- as.character(vote_2020$fips)  # makes joining easier
```

2a: cleaning county name and fips code in vote data

```r
vote_2020_protest <- left_join(vote_2020, protests_geom, by="fips")

vote_2020_protest$num_escalations[is.na(vote_2020_protest$num_escalations)] <- 0

vote_2020_protest <- vote_2020_protest %>% # add escalate binary variable
  mutate(escalated_b = ifelse(num_escalations == 0,0,1))

vote_2020_protest$num_protests[is.na(vote_2020_protest$num_protests)] <- 0

vote_2020_protest <- vote_2020_protest %>% # add if protest happened binary variable
  mutate(protest_b = ifelse(num_protests == 0,0,1))

vote_2020_protest <- vote_2020_protest %>% # don't need anymore
  select(-geometry)

# get statefp from counties dataset for fixed effects later
counties_sub$fips <- as.character(counties_sub$fips)
vote_2020_protest <- left_join(vote_2020_protest, counties_sub, by="fips")
```

2b: joining voting data with protest data + changing all na values

PART 3 - Running regressions on generated data

```
vote_2020_protest$esc_prot_interact <- # hard-code interaction term b/c NAs
  vote_2020_protest$escalated_b*vote_2020_protest$protest_b

reg_prot_viol_vote <- lm(votes_gop ~ protest_b + esc_prot_interact,
                         data=vote_2020_protest) # looking at num votes

reg_prot_viol_vote2 <- lm(per_gop ~ protest_b + esc_prot_interact,
                          data=vote_2020_protest) # looking at proportion of votes

# num gop votes
summary(reg_prot_viol_vote)
```

3a - effect between protest occurrence and escalation on Trump vote share

```
Call:
lm(formula = votes_gop ~ protest_b + esc_prot_interact, data = vote_2020_protest)

Residuals:
    Min      1Q  Median      3Q     Max
-140744  -10694   -6908    1470 1000749

Coefficients:
                  Estimate Std. Error t value Pr(>|t|)
(Intercept)        13164.8      860.1   15.31   <2e-16 ***
protest_b          41065.3     2777.4   14.79   <2e-16 ***
esc_prot_interact  90550.7     4423.0   20.47   <2e-16 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 44740 on 3149 degrees of freedom
Multiple R-squared:  0.315, Adjusted R-squared:  0.3146
F-statistic: 724.1 on 2 and 3149 DF,  p-value: < 2.2e-16
```

```
# proportion gop votes
summary(reg_prot_viol_vote2)
```

```
Call:
lm(formula = per_gop ~ protest_b + esc_prot_interact, data = vote_2020_protest)

Residuals:
     Min       1Q   Median       3Q      Max
-0.58736 -0.08479  0.02443  0.10797  0.33951

Coefficients:
                   Estimate Std. Error t value Pr(>|t|)
(Intercept)        0.674656   0.002813 239.849   <2e-16 ***
protest_b         -0.146589   0.009084 -16.138   <2e-16 ***
```

```
esc_prot_interact -0.121110   0.014466  -8.372   <2e-16 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.1463 on 3149 degrees of freedom
Multiple R-squared:  0.1849,    Adjusted R-squared:  0.1843
F-statistic: 357.1 on 2 and 3149 DF,  p-value: < 2.2e-16
```

```
reg_prot_cnt_viol_vote <- lm(votes_gop ~ num_protests + escalated_b *
    num_protests, data = vote_2020_protest)  # num gop votes
reg_prot_cnt_viol_vote2 <- lm(per_gop ~ num_protests + escalated_b *
    num_protests, data = vote_2020_protest)  # proportion gop votes

# num gop votes
summary(reg_prot_cnt_viol_vote)
```

3b - effect between protest counts and escalation on Trump vote share

```
Call:
lm(formula = votes_gop ~ num_protests + escalated_b * num_protests,
    data = vote_2020_protest)

Residuals:
    Min      1Q  Median      3Q     Max
-388555  -11135   -7336    1468  640053

Coefficients:
                        Estimate Std. Error t value Pr(>|t|)
(Intercept)              13907.4      762.7  18.234  < 2e-16 ***
num_protests             18426.2     1048.8  17.569  < 2e-16 ***
escalated_b              52946.8     4503.4  11.757  < 2e-16 ***
num_protests:escalated_b  -5300.9     1168.7  -4.536 5.95e-06 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 40520 on 3148 degrees of freedom
Multiple R-squared:  0.4382,    Adjusted R-squared:  0.4377
F-statistic: 818.5 on 3 and 3148 DF,  p-value: < 2.2e-16
```

```
# proportion gop votes
summary(reg_prot_cnt_viol_vote2)
```

```
Call:
lm(formula = per_gop ~ num_protests + escalated_b * num_protests,
    data = vote_2020_protest)

Residuals:
     Min       1Q   Median       3Q      Max
```

```
-0.58321 -0.08427  0.02359  0.10959  0.32172

Coefficients:
                          Estimate Std. Error t value Pr(>|t|)
(Intercept)               0.670510   0.002756  243.30   <2e-16 ***
num_protests             -0.057155   0.003789  -15.08   <2e-16 ***
escalated_b              -0.203617   0.016272  -12.51   <2e-16 ***
num_protests:escalated_b  0.047060   0.004223   11.14   <2e-16 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.1464 on 3148 degrees of freedom
Multiple R-squared:  0.184, Adjusted R-squared:  0.1832
F-statistic: 236.6 on 3 and 3148 DF,  p-value: < 2.2e-16
```

TASK 4 - Fixed Effects

PART 1 - effect between protest occurrence and escalation on Trump vote share

```
fe_prot_viol_vote <- lm(per_gop ~ protest_b + esc_prot_interact +
    factor(STATEFP), data = vote_2020_protest)
summary(fe_prot_viol_vote)
```

```
Call:
lm(formula = per_gop ~ protest_b + esc_prot_interact + factor(STATEFP),
    data = vote_2020_protest)

Residuals:
     Min       1Q   Median       3Q      Max
-0.58597 -0.05999  0.01795  0.07429  0.35093

Coefficients:
                   Estimate Std. Error t value Pr(>|t|)
(Intercept)        0.666267   0.014642  45.504  < 2e-16 ***
protest_b         -0.117564   0.007847 -14.982  < 2e-16 ***
esc_prot_interact -0.104394   0.012145  -8.596  < 2e-16 ***
factor(STATEFP)04 -0.073152   0.034218  -2.138 0.032609 *
factor(STATEFP)05  0.037587   0.020110   1.869 0.061700 .
factor(STATEFP)06 -0.147860   0.021641  -6.832 1.00e-11 ***
factor(STATEFP)08 -0.092481   0.020911  -4.423 1.01e-05 ***
factor(STATEFP)09 -0.140469   0.044952  -3.125 0.001796 **
factor(STATEFP)10 -0.036070   0.070930  -0.509 0.611117
factor(STATEFP)11 -0.390336   0.120909  -3.228 0.001258 **
factor(STATEFP)12  0.021537   0.020715   1.040 0.298573
factor(STATEFP)13 -0.014794   0.017426  -0.849 0.395960
factor(STATEFP)15 -0.248071   0.061776  -4.016 6.07e-05 ***
factor(STATEFP)16  0.082047   0.023222   3.533 0.000417 ***
factor(STATEFP)17  0.002827   0.018811   0.150 0.880533
factor(STATEFP)18  0.034799   0.019218   1.811 0.070274 .
factor(STATEFP)19 -0.015419   0.018933  -0.814 0.415478
factor(STATEFP)20  0.094991   0.018712   5.076 4.07e-07 ***
```

```
factor(STATEFP)21  0.084604   0.018250   4.636 3.70e-06 ***
factor(STATEFP)22 -0.007122   0.020910  -0.341 0.733408
factor(STATEFP)23 -0.122697   0.033322  -3.682 0.000235 ***
factor(STATEFP)24 -0.155451   0.028469  -5.460 5.13e-08 ***
factor(STATEFP)25 -0.267919   0.035269  -7.596 4.02e-14 ***
factor(STATEFP)26 -0.048975   0.019647  -2.493 0.012731 *
factor(STATEFP)27 -0.051073   0.019449  -2.626 0.008682 **
factor(STATEFP)28 -0.096265   0.019705  -4.885 1.09e-06 ***
factor(STATEFP)29  0.097626   0.018393   5.308 1.19e-07 ***
factor(STATEFP)30  0.031552   0.021663   1.457 0.145347
factor(STATEFP)31  0.130484   0.019170   6.807 1.20e-11 ***
factor(STATEFP)32  0.056824   0.032505   1.748 0.080541 .
factor(STATEFP)33 -0.126726   0.040683  -3.115 0.001857 **
factor(STATEFP)34 -0.130091   0.030119  -4.319 1.62e-05 ***
factor(STATEFP)35 -0.103180   0.025447  -4.055 5.15e-05 ***
factor(STATEFP)36 -0.108331   0.021115  -5.131 3.07e-07 ***
factor(STATEFP)37 -0.063668   0.018894  -3.370 0.000762 ***
factor(STATEFP)38  0.070144   0.021993   3.189 0.001440 **
factor(STATEFP)39  0.037708   0.019411   1.943 0.052155 .
factor(STATEFP)40  0.120949   0.019995   6.049 1.63e-09 ***
factor(STATEFP)41 -0.074718   0.024721  -3.022 0.002528 **
factor(STATEFP)42  0.033010   0.020760   1.590 0.111919
factor(STATEFP)44 -0.241286   0.055486  -4.349 1.42e-05 ***
factor(STATEFP)45 -0.101073   0.022912  -4.411 1.06e-05 ***
factor(STATEFP)46  0.012517   0.020758   0.603 0.546550
factor(STATEFP)47  0.093361   0.019095   4.889 1.06e-06 ***
factor(STATEFP)48  0.092180   0.016430   5.611 2.20e-08 ***
factor(STATEFP)49  0.094482   0.026602   3.552 0.000388 ***
factor(STATEFP)50 -0.257661   0.035184  -7.323 3.08e-13 ***
factor(STATEFP)51 -0.072533   0.017963  -4.038 5.53e-05 ***
factor(STATEFP)53 -0.128454   0.024097  -5.331 1.05e-07 ***
factor(STATEFP)54  0.089858   0.021766   4.128 3.75e-05 ***
factor(STATEFP)55 -0.091127   0.020318  -4.485 7.56e-06 ***
factor(STATEFP)56  0.125537   0.028971   4.333 1.52e-05 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.1196 on 3060 degrees of freedom
  (40 observations deleted due to missingness)
Multiple R-squared:  0.4589,    Adjusted R-squared:  0.4499
F-statistic: 50.88 on 51 and 3060 DF,  p-value: < 2.2e-16
```

Part 2 - effect between protest counts and escalation on Trump vote share

```
prot_cnt_viol_vote_fe <- lm(per_gop ~ num_protests + escalated_b *
    num_protests + factor(STATEFP), data = vote_2020_protest)
summary(prot_cnt_viol_vote_fe)
```

```
Call:
lm(formula = per_gop ~ num_protests + escalated_b * num_protests +
    factor(STATEFP), data = vote_2020_protest)
```

```
Residuals:
     Min       1Q   Median       3Q      Max
-0.58483 -0.06125  0.01747  0.07421  0.40376

Coefficients:
                         Estimate Std. Error t value Pr(>|t|)
(Intercept)              0.657323   0.014668  44.813  < 2e-16 ***
num_protests            -0.043643   0.003292 -13.258  < 2e-16 ***
escalated_b             -0.168078   0.013692 -12.276  < 2e-16 ***
factor(STATEFP)04       -0.060000   0.034336  -1.747 0.080659 .
factor(STATEFP)05        0.041728   0.020172   2.069 0.038661 *
factor(STATEFP)06       -0.133634   0.021766  -6.139 9.35e-10 ***
factor(STATEFP)08       -0.087402   0.020974  -4.167 3.17e-05 ***
factor(STATEFP)09       -0.090690   0.045672  -1.986 0.047156 *
factor(STATEFP)10       -0.067516   0.071151  -0.949 0.342740
factor(STATEFP)11       -0.236448   0.124347  -1.902 0.057329 .
factor(STATEFP)12        0.029582   0.020810   1.421 0.155275
factor(STATEFP)13       -0.007342   0.017481  -0.420 0.674518
factor(STATEFP)15       -0.240014   0.062072  -3.867 0.000113 ***
factor(STATEFP)16        0.087406   0.023287   3.753 0.000178 ***
factor(STATEFP)17        0.011681   0.018877   0.619 0.536116
factor(STATEFP)18        0.041887   0.019273   2.173 0.029825 *
factor(STATEFP)19       -0.007207   0.018983  -0.380 0.704234
factor(STATEFP)20        0.101081   0.018765   5.387 7.71e-08 ***
factor(STATEFP)21        0.092956   0.018303   5.079 4.02e-07 ***
factor(STATEFP)22       -0.004525   0.020973  -0.216 0.829203
factor(STATEFP)23       -0.128650   0.033416  -3.850 0.000121 ***
factor(STATEFP)24       -0.157256   0.028555  -5.507 3.95e-08 ***
factor(STATEFP)25       -0.239076   0.035581  -6.719 2.17e-11 ***
factor(STATEFP)26       -0.041947   0.019711  -2.128 0.033407 *
factor(STATEFP)27       -0.045189   0.019504  -2.317 0.020572 *
factor(STATEFP)28       -0.091828   0.019764  -4.646 3.52e-06 ***
factor(STATEFP)29        0.107274   0.018442   5.817 6.62e-09 ***
factor(STATEFP)30        0.043789   0.021734   2.015 0.044015 *
factor(STATEFP)31        0.135212   0.019228   7.032 2.50e-12 ***
factor(STATEFP)32        0.060955   0.032604   1.870 0.061639 .
factor(STATEFP)33       -0.135715   0.040795  -3.327 0.000889 ***
factor(STATEFP)34       -0.131732   0.030295  -4.348 1.42e-05 ***
factor(STATEFP)35       -0.098481   0.025527  -3.858 0.000117 ***
factor(STATEFP)36       -0.094513   0.021246  -4.449 8.95e-06 ***
factor(STATEFP)37       -0.055175   0.018946  -2.912 0.003615 **
factor(STATEFP)38        0.077671   0.022058   3.521 0.000436 ***
factor(STATEFP)39        0.041176   0.019469   2.115 0.034517 *
factor(STATEFP)40        0.128713   0.020049   6.420 1.58e-10 ***
factor(STATEFP)41       -0.073618   0.024799  -2.969 0.003014 **
factor(STATEFP)42        0.020131   0.020779   0.969 0.332713
factor(STATEFP)44       -0.234473   0.055654  -4.213 2.59e-05 ***
factor(STATEFP)45       -0.100038   0.022983  -4.353 1.39e-05 ***
factor(STATEFP)46        0.020318   0.020812   0.976 0.329009
factor(STATEFP)47        0.099117   0.019145   5.177 2.40e-07 ***
factor(STATEFP)48        0.096634   0.016483   5.863 5.04e-09 ***
factor(STATEFP)49        0.093458   0.026685   3.502 0.000468 ***
factor(STATEFP)50       -0.261049   0.035306  -7.394 1.83e-13 ***
```

```
factor(STATEFP)51        -0.080681   0.017992  -4.484 7.58e-06 ***
factor(STATEFP)53        -0.121408   0.024176  -5.022 5.41e-07 ***
factor(STATEFP)54         0.091417   0.021833   4.187 2.91e-05 ***
factor(STATEFP)55        -0.084134   0.020370  -4.130 3.72e-05 ***
factor(STATEFP)56         0.118257   0.029038   4.073 4.77e-05 ***
num_protests:escalated_b  0.034999   0.003649   9.590  < 2e-16 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.12 on 3059 degrees of freedom
  (40 observations deleted due to missingness)
Multiple R-squared:  0.4557,    Adjusted R-squared:  0.4465
F-statistic: 49.25 on 52 and 3059 DF,  p-value: < 2.2e-16
```

EXTRA 1 - income inequality data below

PART 1: joining gini index data with us counties data to get fips codes

```
counties_fips_geo <- us_counties %>% # to make join easier
  select(GEOID, fips)

counties_fips_geo <- st_transform(counties_fips_geo, 4326)

gini_geom <- left_join(gini_index, counties_fips_geo, by = "GEOID")

gini_geom <- gini_geom %>%
  rename(coefficient = estimate) %>%
  select(-moe)
```

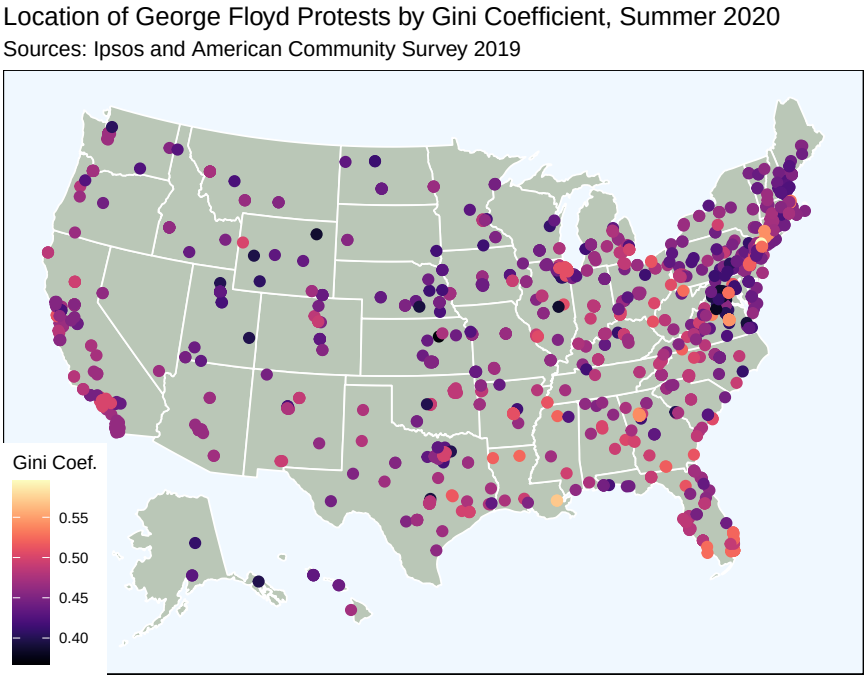
PART 2: joining protest data with gini data to get index for each protest county + map

```
protests_fips <- protests %>% # creating additional lat/long for later mapping
  select(longitude, latitude, size:state_deployed_national_guard) %>%
  mutate(longitude.1 = longitude,
         latitude.1 = latitude)

protests_fips <- st_as_sf( # to join with county data to get fips
  protests_fips,
  coords = c("longitude.1", "latitude.1"),
  crs = 4326
)

counties_fips <- counties_fips_geo %>%
  select(-GEOID)

protests_fips <- st_join( # joining protest and county to get protest/county
  protests_fips,
  counties_fips,
  join = st_within
```

```
)

gini_fips <- gini_geom %>% # get just gini coefs and fips
  select(fips, coefficient)

protests_fips_gini <- left_join(protests_fips, gini_fips, by = "fips")

protests_fips_gini <- rename(protests_fips_gini, gini_coef = coefficient)

protests_fips_gini_trans <- usmap_transform(protests_fips_gini)
```

2a - joining gini and protest data

2b - mapping protests by gini coef



PART 3: add ginis to data on unique fips + protests

```
gini_fips$fips <- as.character(gini_fips$fips)

pro_fips_uniq <- left_join(protests_geom, gini_fips, by="fips")

pro_fips_uniq <- pro_fips_uniq %>%
  rename(gini_coef = coefficient)

# 3b: join with votes
vote_2020_gini <- left_join(vote_2020, gini_fips, by="fips") # to get coefs for each fip
```

```
vote_2020_gini <- left_join(vote_2020_gini, pro_fips_uniq, by="fips") # to get protest data

vote_2020_gini <- vote_2020_gini %>% # drop unnecessary/duplicate variables
  select(-geometry, -gini_coef)
```

3a - add fips to protests_geom data to get protests counts + coef per fip

PART 4: Regressions

```
reg_num_prot_gini <- lm(num_protests ~ gini_coef, data = vote_2020_gini)
summary(reg_num_prot_gini)
```

```

Call:
lm(formula = num_protests ~ gini_coef, data = vote_2020_gini)

Residuals:
   Min     1Q Median     3Q    Max
-3.094 -0.619 -0.352 -0.057 32.984

Coefficients:
            Estimate Std. Error t value Pr(>|t|)
(Intercept)  -4.0085     0.4361  -9.191   <2e-16 ***
gini_coef    10.0459     0.9750  10.304   <2e-16 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 1.985 on 3110 degrees of freedom
  (40 observations deleted due to missingness)
Multiple R-squared:  0.03301,   Adjusted R-squared:  0.0327
F-statistic: 106.2 on 1 and 3110 DF,  p-value: < 2.2e-16
```

EXTRA 2 - parler data below

```
Attaching package: 'lubridate'

The following objects are masked from 'package:base':

    date, intersect, setdiff, union
```

PART 1: Mapping parler data by protests

```
parler_data_geom <- parler_data %>%  # extra lat long vars for future mapping
  mutate(longitude.1 = Longitude,
         latitude.1 = Latitude)
```

```
parler_data_geom <- st_as_sf( # gen geom for join with counties data
  parler_data_geom,
  coords=c("longitude.1", "latitude.1"),
  crs = 4326
)

protests_fips_2 <- as.data.frame(protests_fips$fips) # get protest fips codes

protests_fips_2<- rename(protests_fips_2, "fips" = "protests_fips$fips")


parler_geom_us <- st_join( # add all us fips to parler data
  parler_data_geom,
  counties_fips,
  join = st_within
)

parler_geom_us <- parler_geom_us[!is.na(parler_geom_us$fips),] # remove non us locations

parler_geom_prot <- parler_geom_us %>% # only keep parler data where protests happened
  semi_join(protests_fips_2)
```

1a - isolate us parler data by protest location

```
Joining, by = "fips"
```

```
parler_geom_prot <- usmap_transform(parler_geom_prot) # transform for mapping
```

1b - map general parler data before and after protests start