# US Maps (Proportion of Total Respondents)

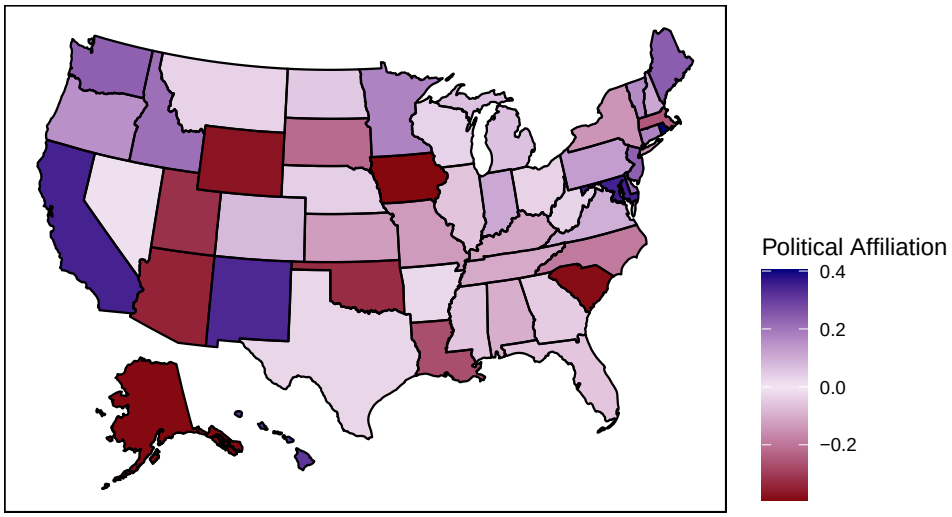
## Map Plots

```
source("state_politics.R")
```

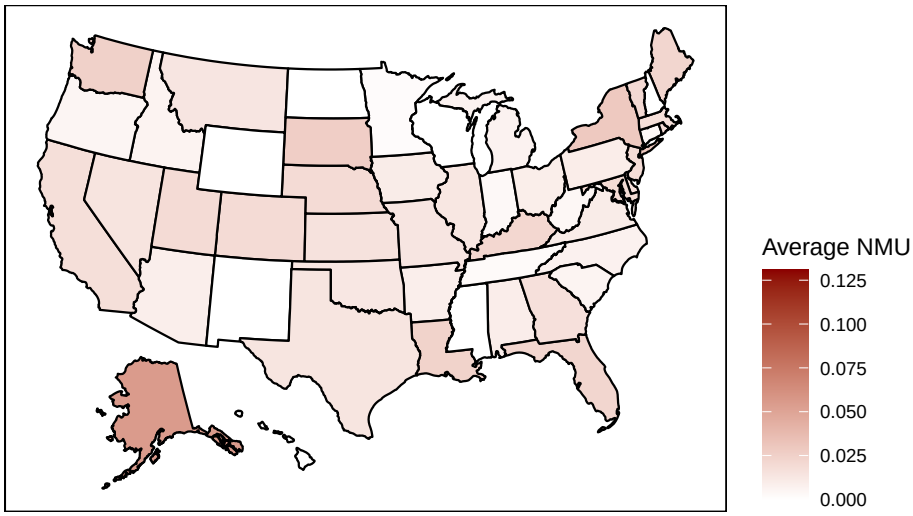
```
## -- Attaching packages --------------------------------------- tidyverse 1.3.1 --

## v ggplot2 3.3.3     v purrr   0.3.4
## v tibble  3.1.1     v dplyr   1.0.5
## v tidyr   1.1.3     v stringr 1.4.0
## v readr   1.4.0     v forcats 0.5.1

## -- Conflicts ------------------------------------------ tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
```

```
par(mfrow = c(1, 2))

for (i in 2:19) {
    # political affiliation by 2018 election results ----
  print(plot_usmap(data = nmu_politics, values = "election",
                   labels = FALSE) +
          scale_fill_gradient2(low = rgb(0.5, 0, 0), mid = rgb(0.5, 0, 0.5, alpha = 0.1),
                               high = rgb(0, 0, 0.5),
                               name = "Political Affiliation") +
          theme(legend.position = "right") +
          theme(panel.background = element_rect(color = "black")) +
          labs(title = "Political Affiliation by 2018 Election Results"))

    # average NMU by state ----
  print(plot_usmap(data = nmu_politics,
                   values = names(nmu_politics)[i], labels = FALSE) +
          scale_fill_continuous(
            low = "white", high = "darkred", name = "Average NMU",
            limits = if (i < 19) {range(nmu_politics[, -c(1, 19:23)])
              } else {NULL}) +
          theme(legend.position = "right") +
          theme(panel.background = element_rect(color = "black")) +
          labs(title =
                 str_c("Average ", names(nmu_politics)[i], " NMU By State")))
}
```

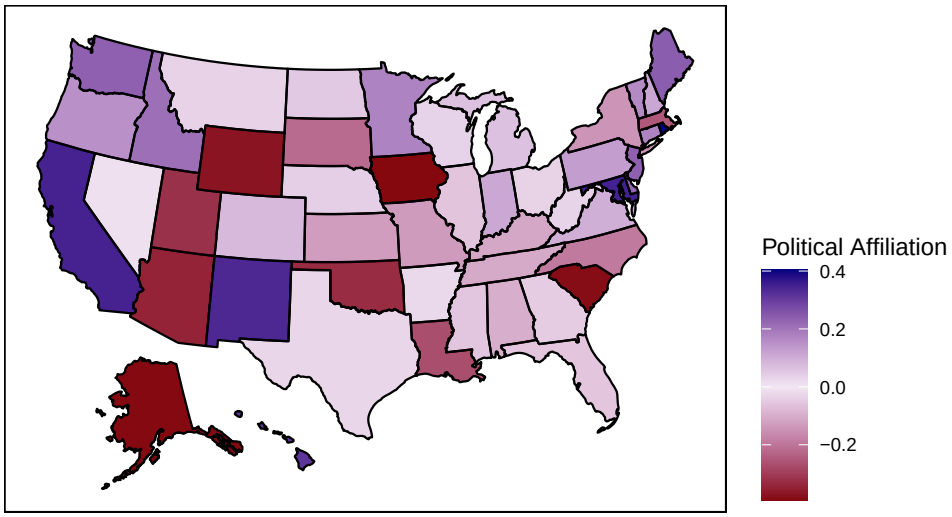
Political Affiliation by 2018 Election Results



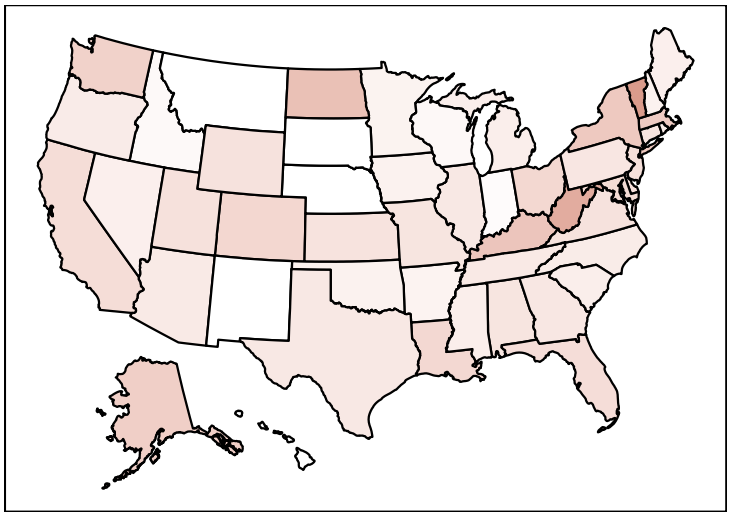

Average FENT NMU By State



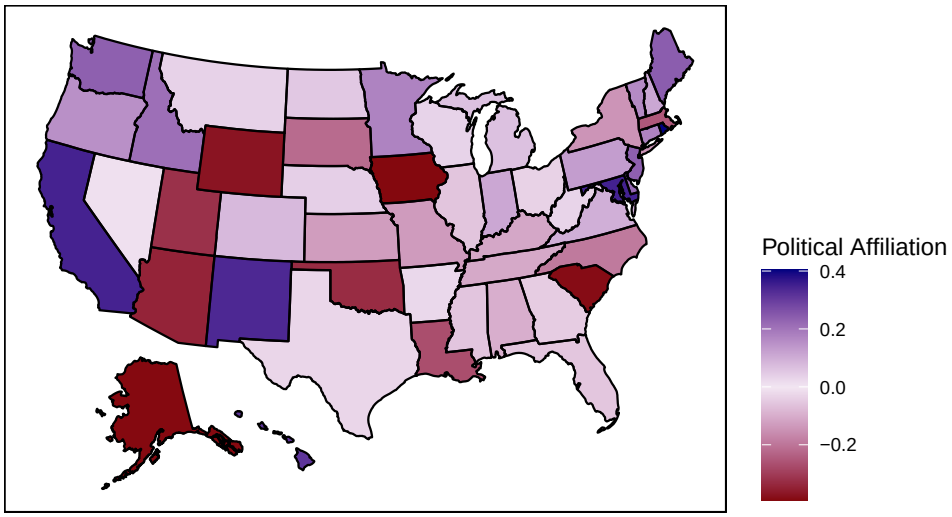
Political Affiliation by 2018 Election Results



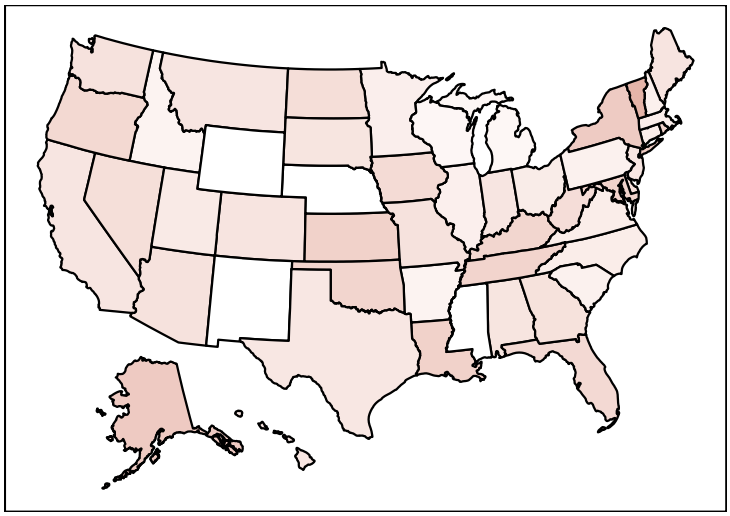

Average BUP NMU By State



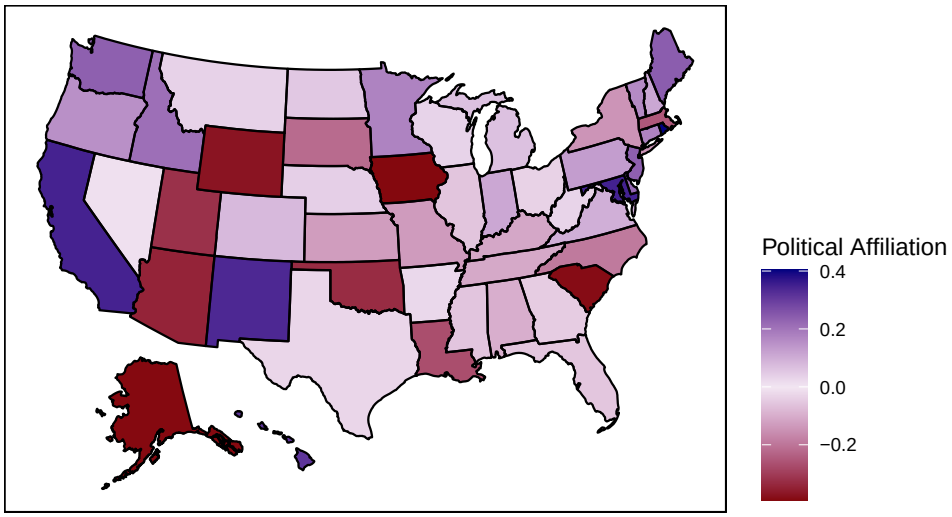
Political Affiliation by 2018 Election Results



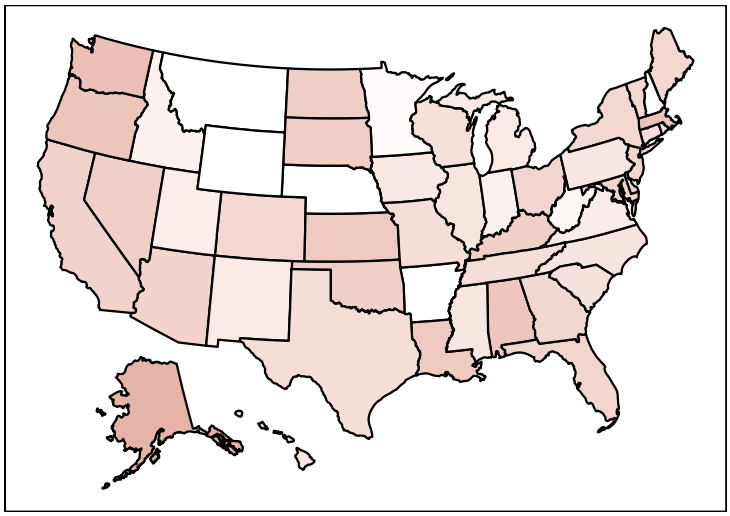

Average METH NMU By State



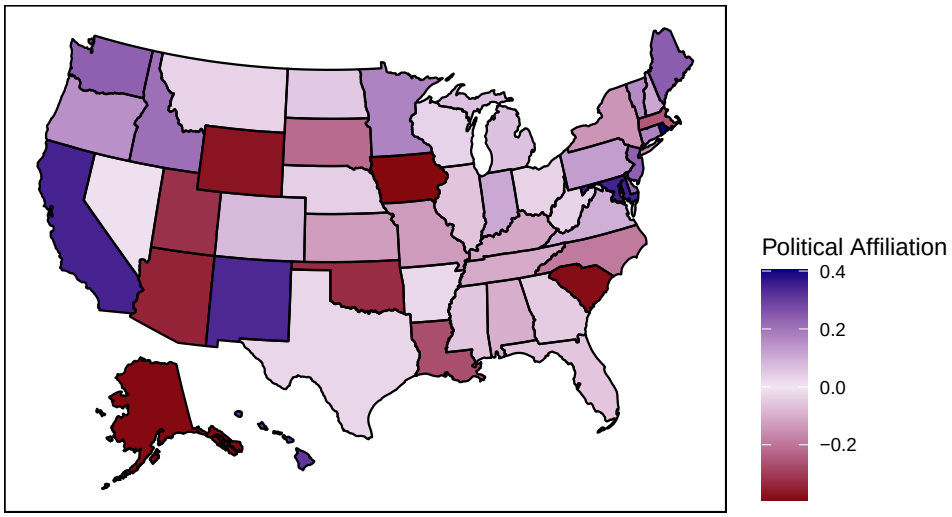
Political Affiliation by 2018 Election Results



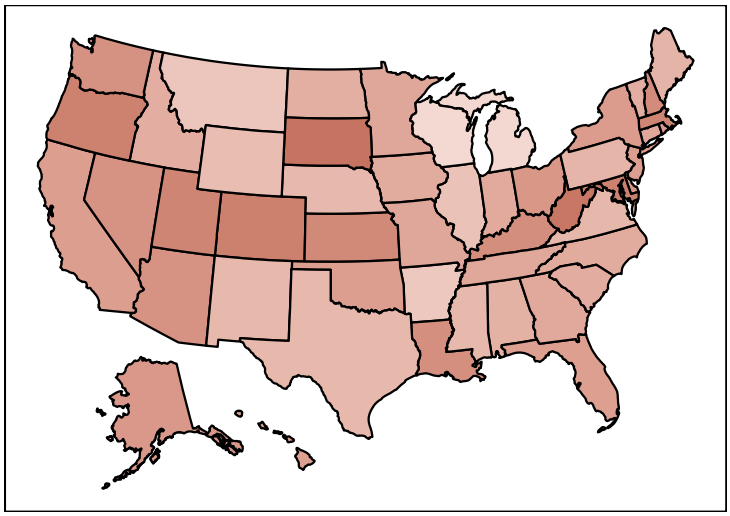

Average MORPH NMU By State



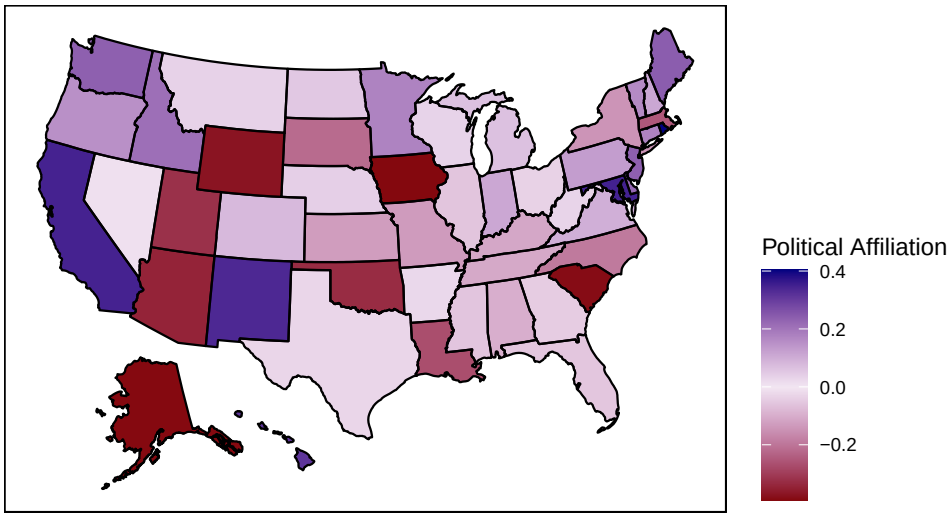
Political Affiliation by 2018 Election Results



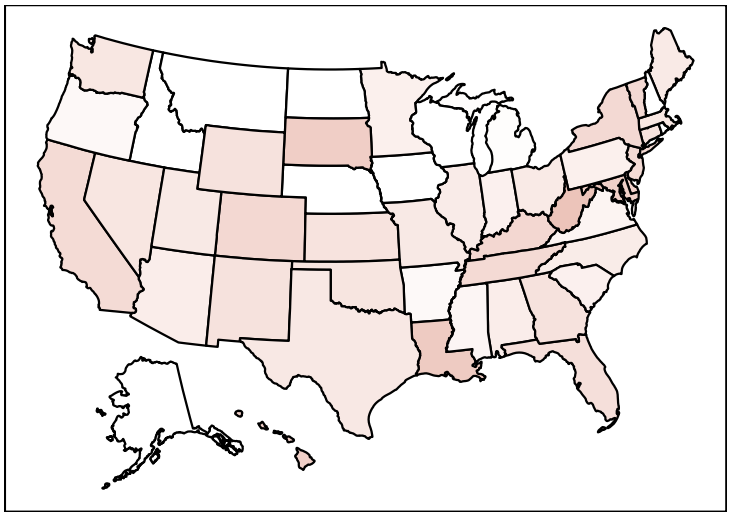

Average OXY NMU By State



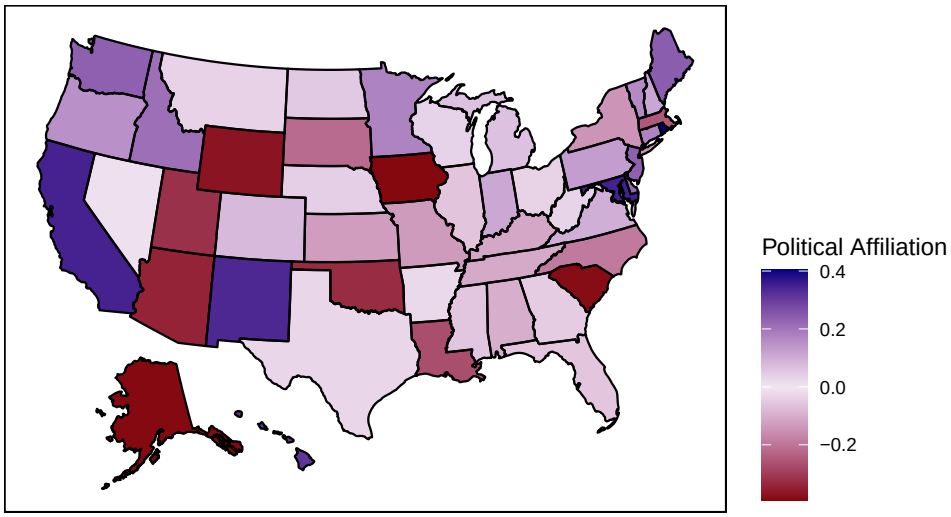
Political Affiliation by 2018 Election Results



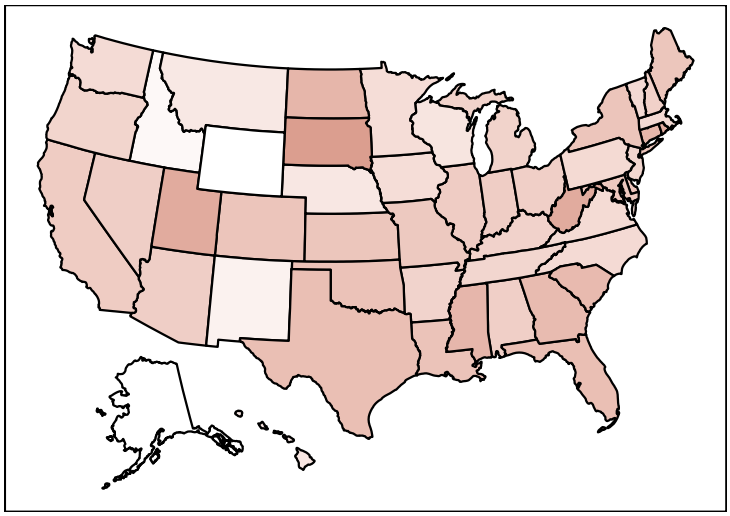

Average OXYM NMU By State



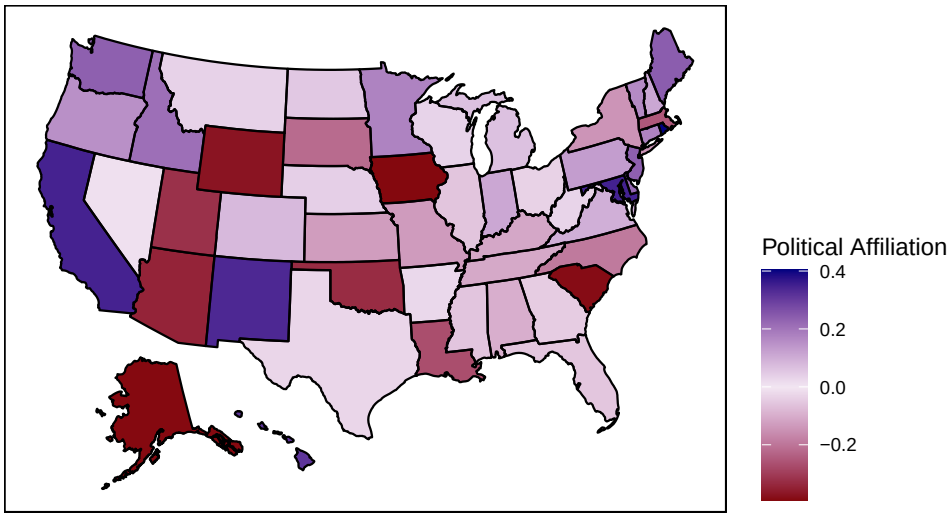
Political Affiliation by 2018 Election Results



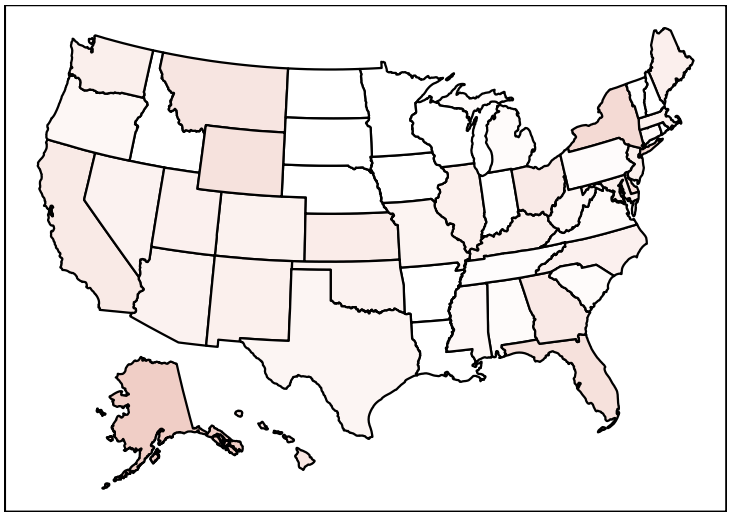

Average TRAM NMU By State



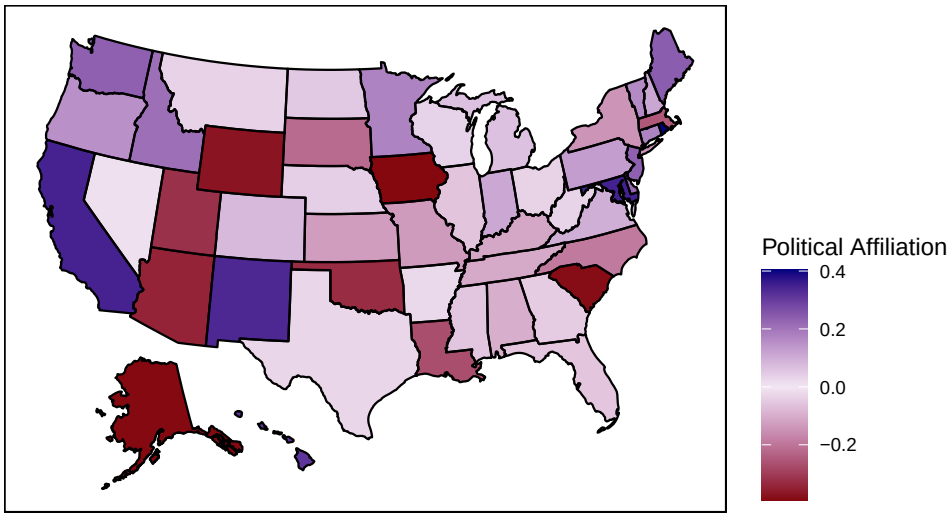
Political Affiliation by 2018 Election Results



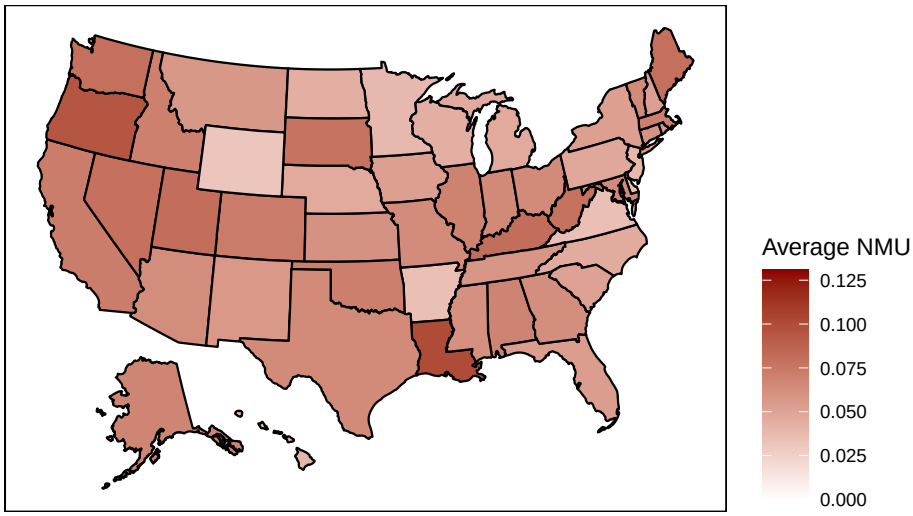

Average TAP NMU By State



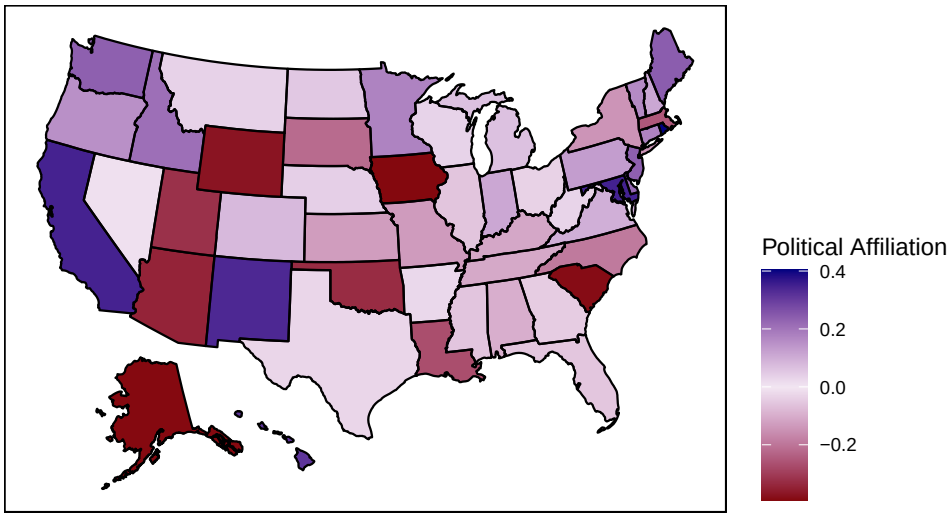
Political Affiliation by 2018 Election Results



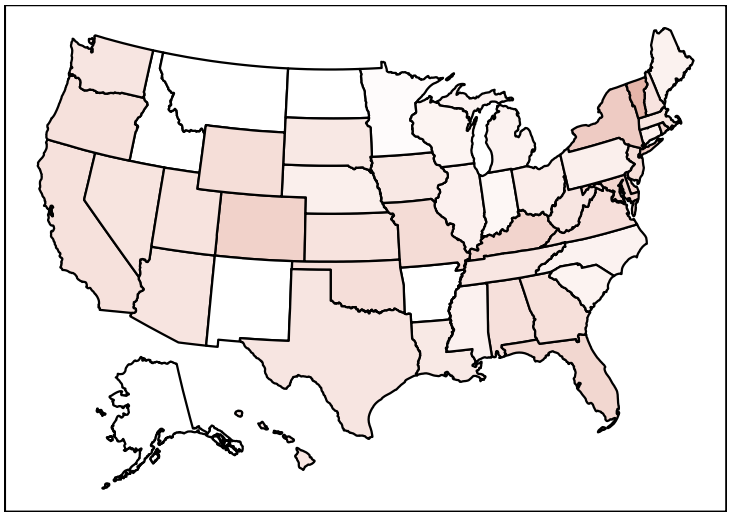

Average HYD NMU By State



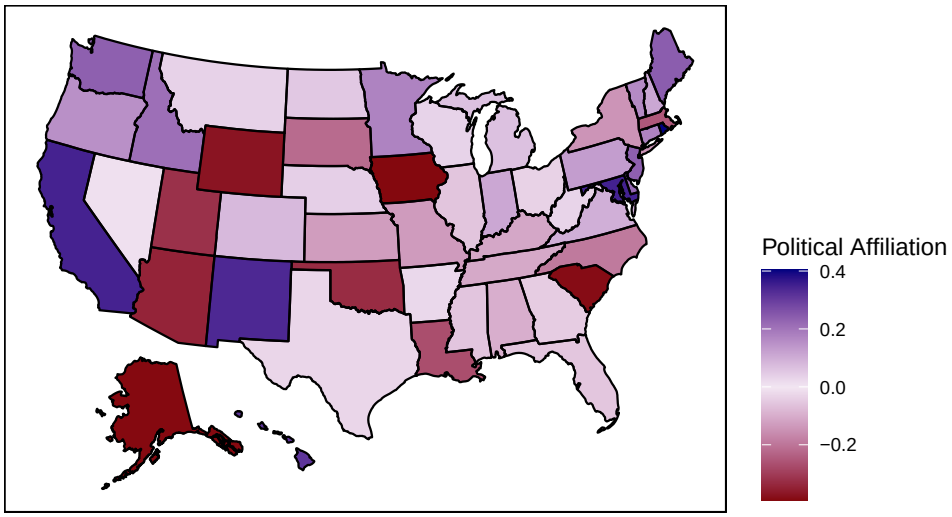
Political Affiliation by 2018 Election Results



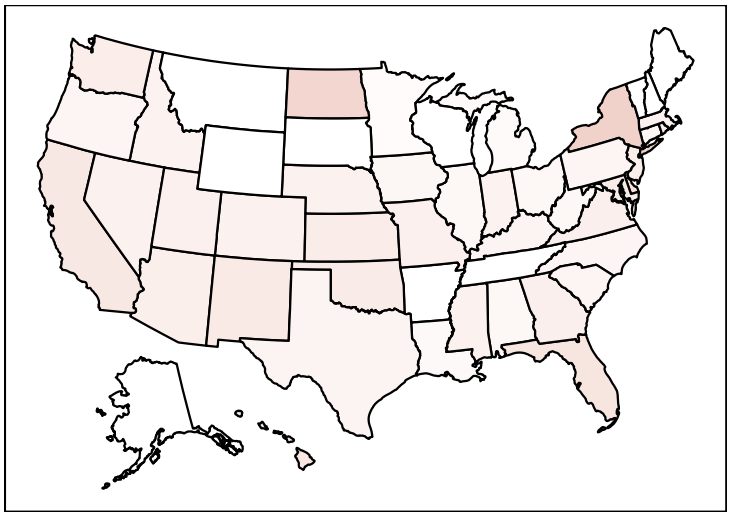

Average HYDM NMU By State



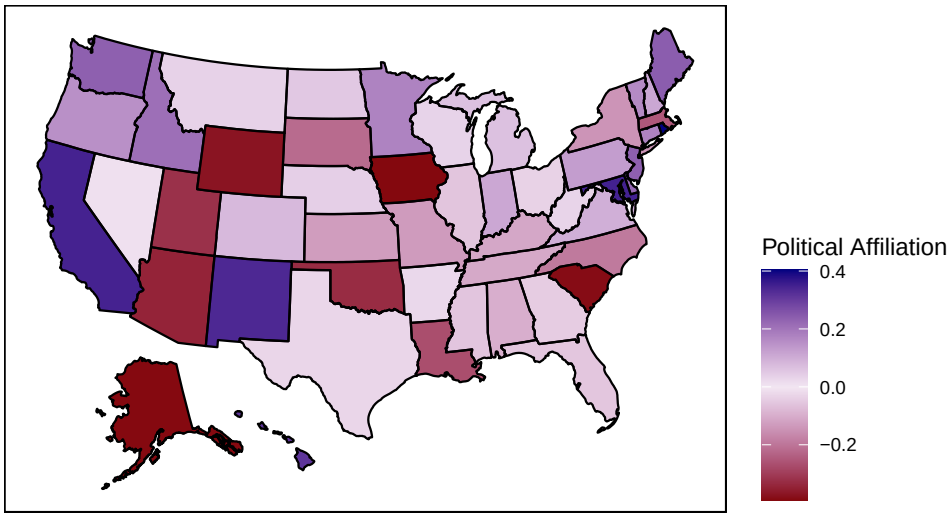
Political Affiliation by 2018 Election Results



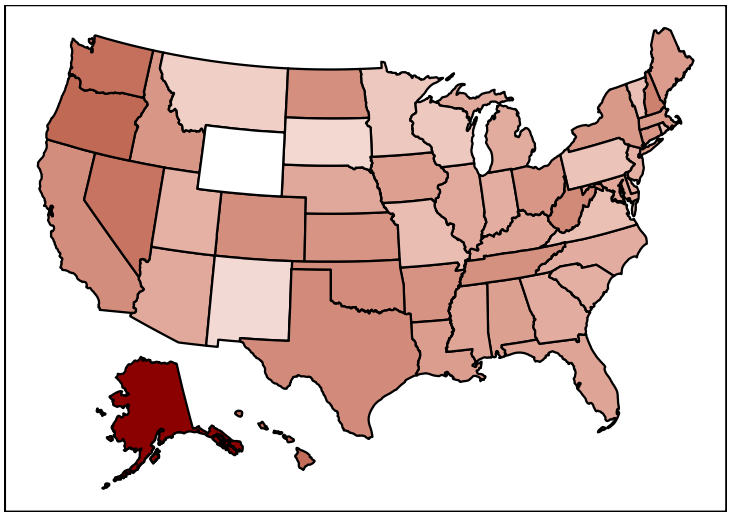

Average SUF NMU By State



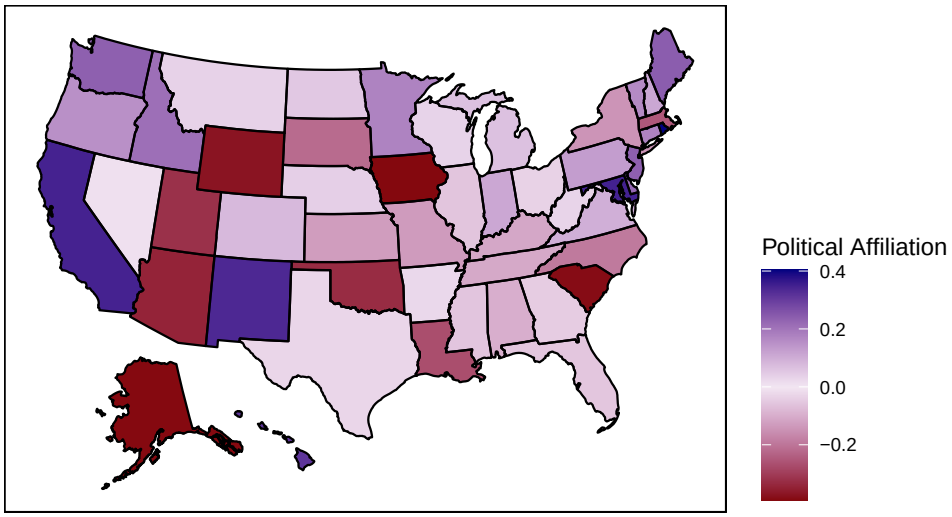
Political Affiliation by 2018 Election Results



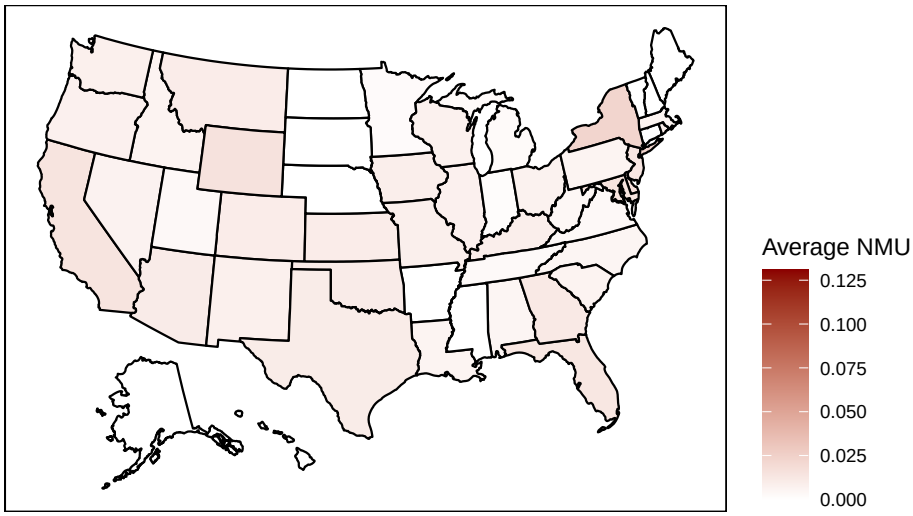

Average COD NMU By State



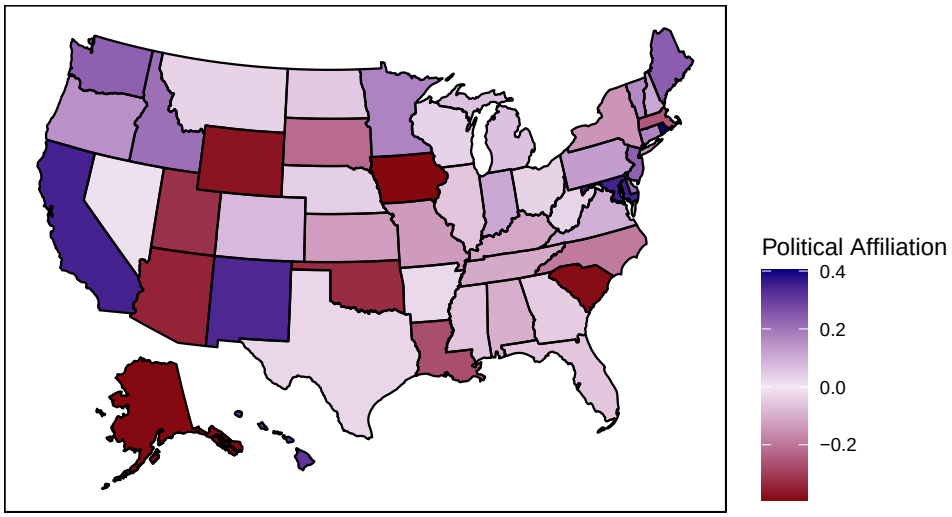
Political Affiliation by 2018 Election Results



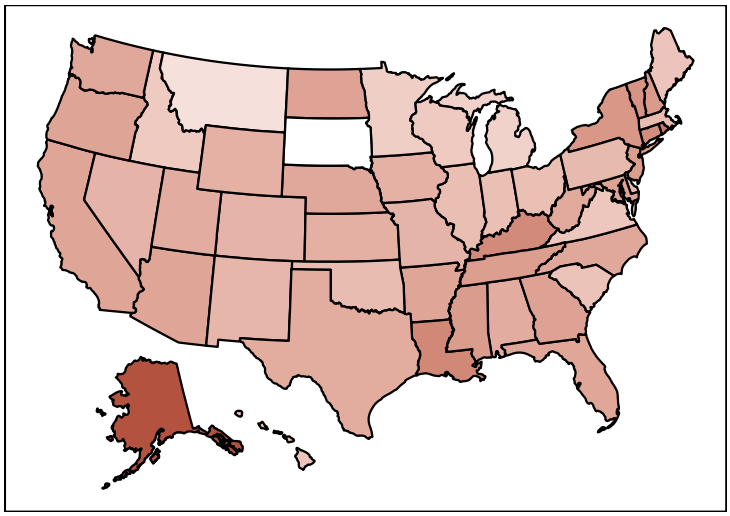

Average DIHY NMU By State



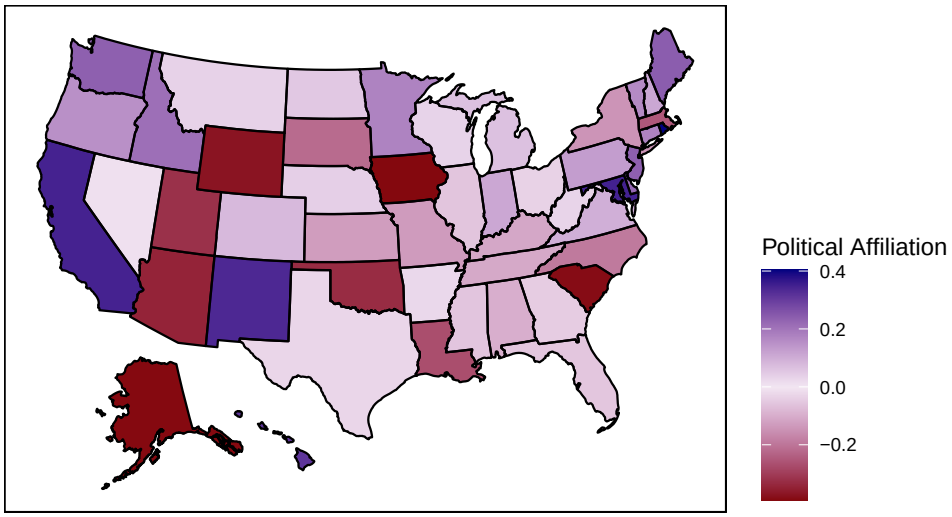
Political Affiliation by 2018 Election Results



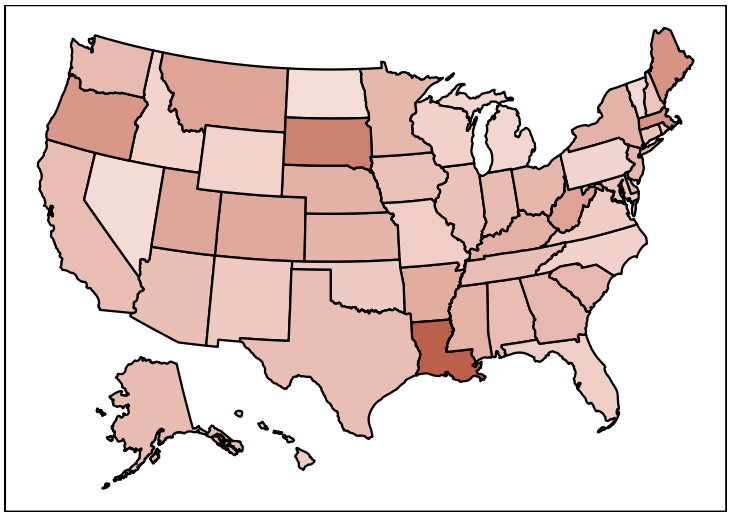

Average BENZ NMU By State



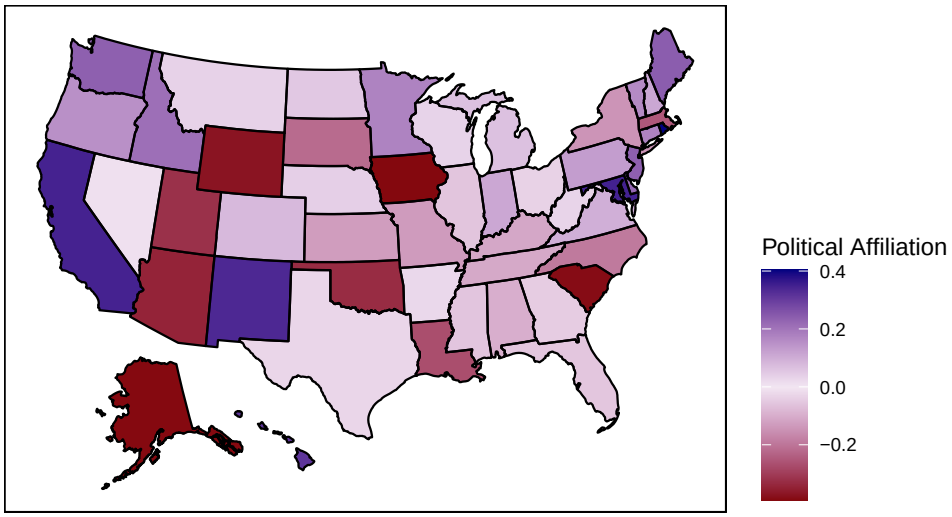
Political Affiliation by 2018 Election Results



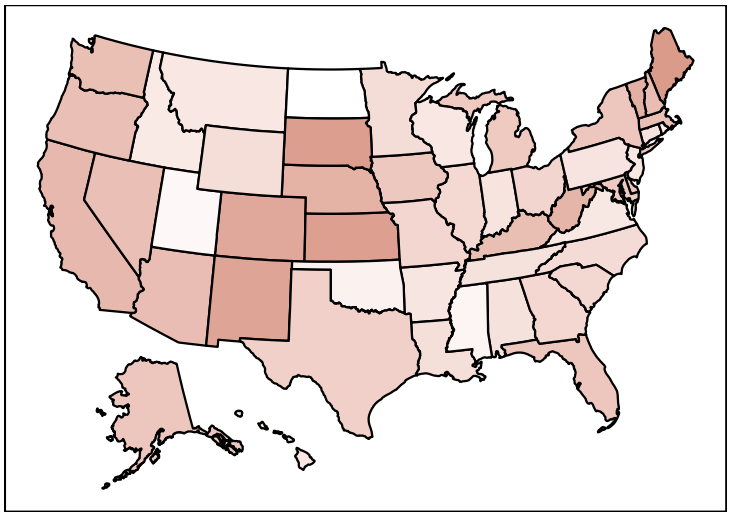

Average STIM NMU By State



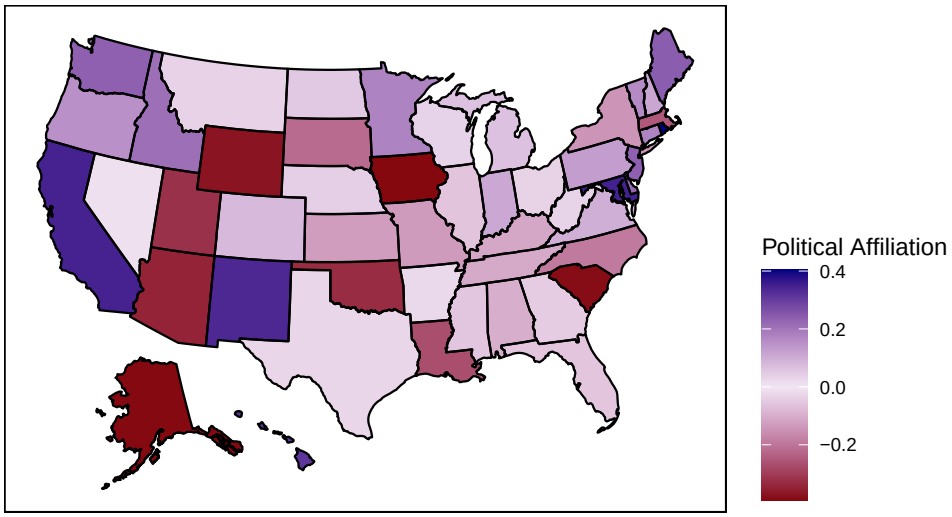
Political Affiliation by 2018 Election Results



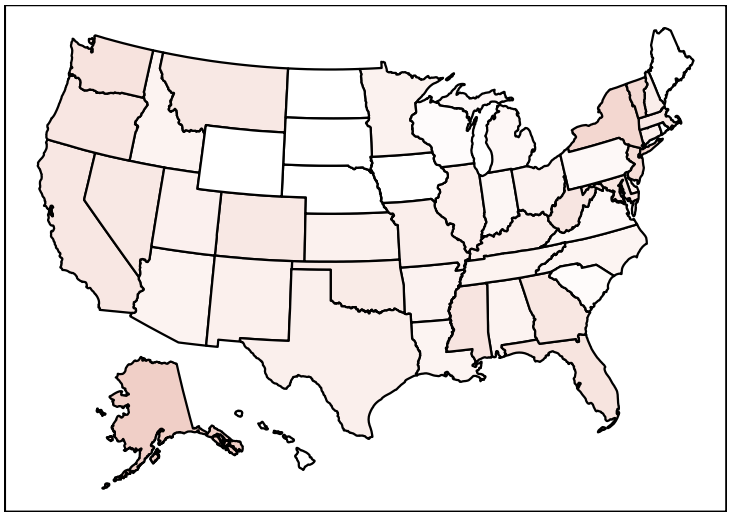

Average THC NMU By State

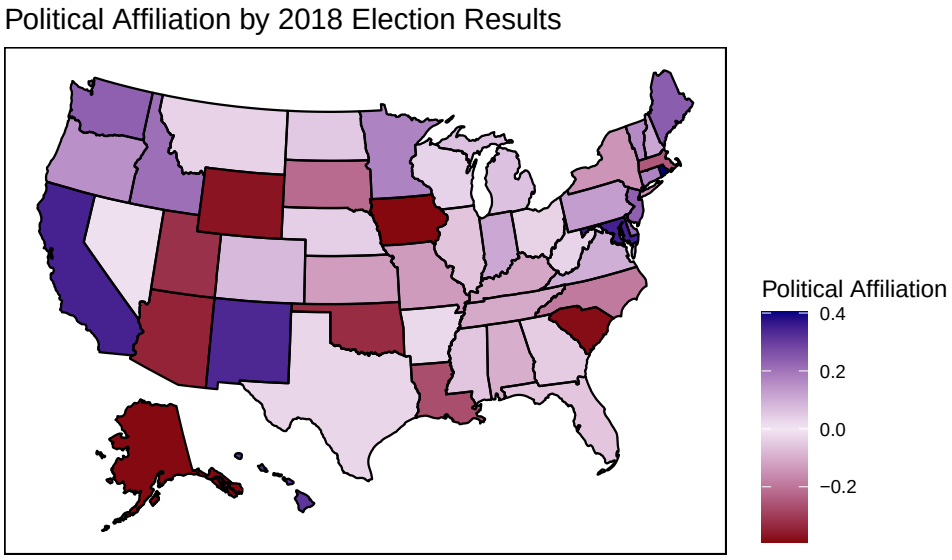


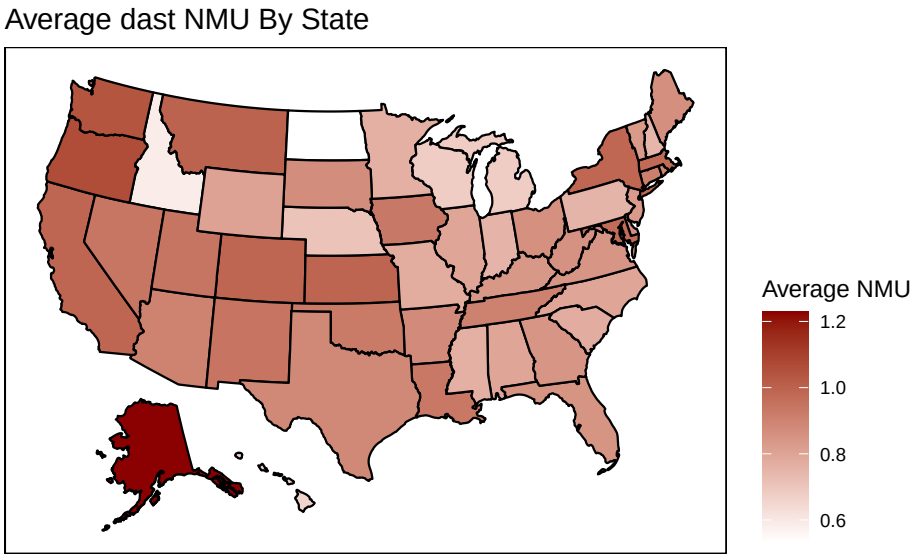
Political Affiliation by 2018 Election Results




Average KTM NMU By State



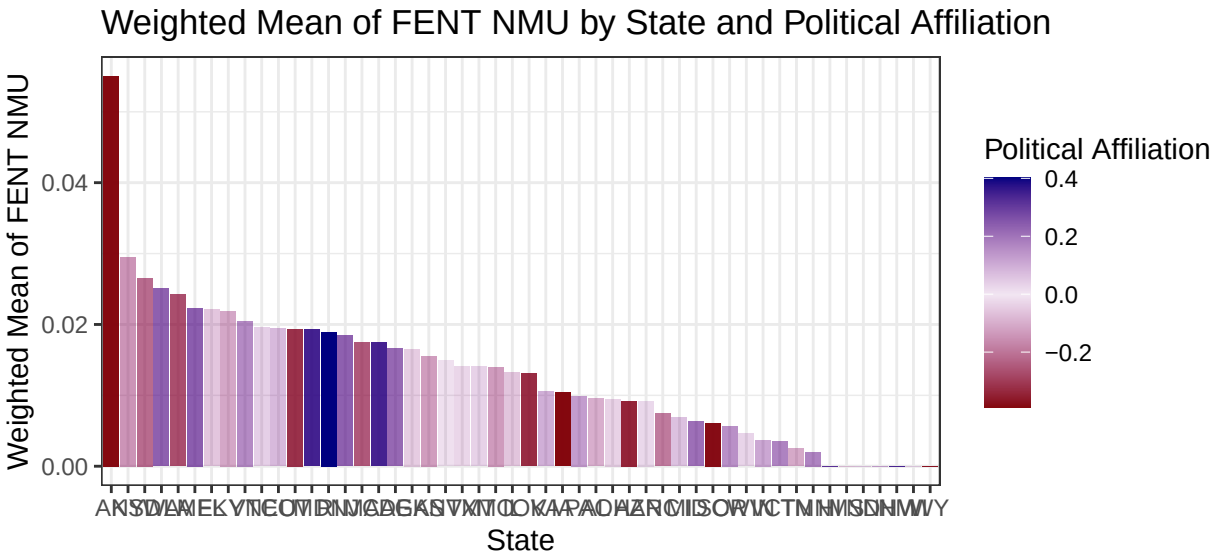


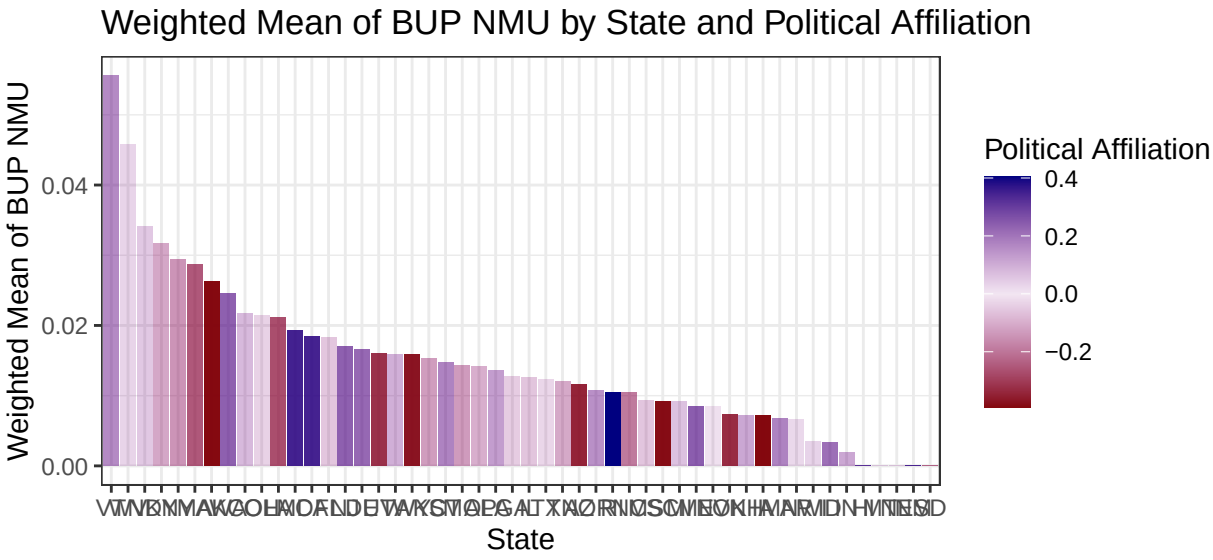



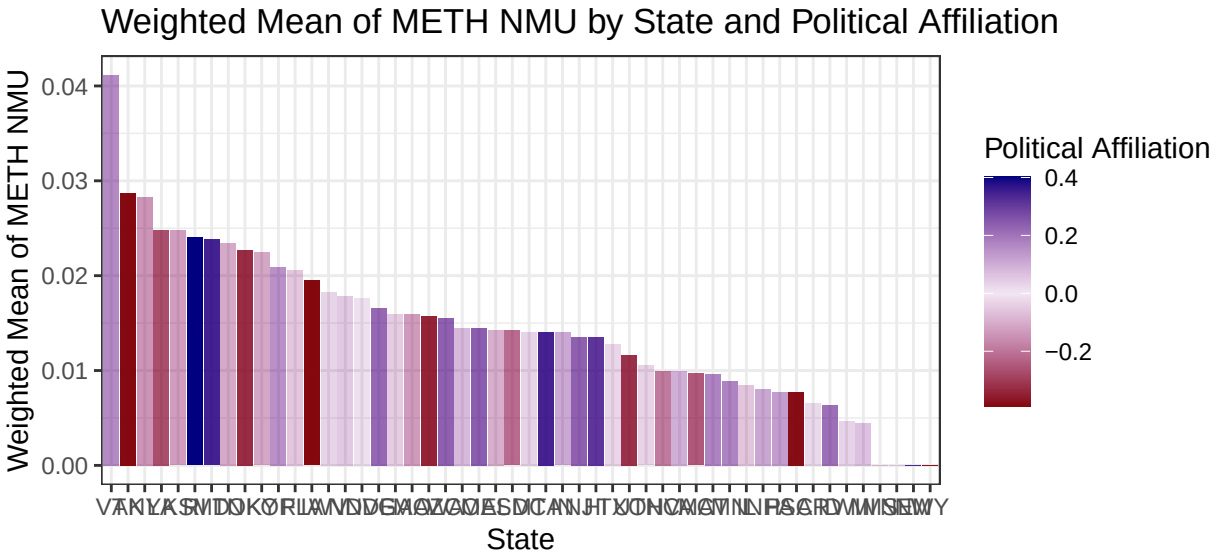

## Bar Plots

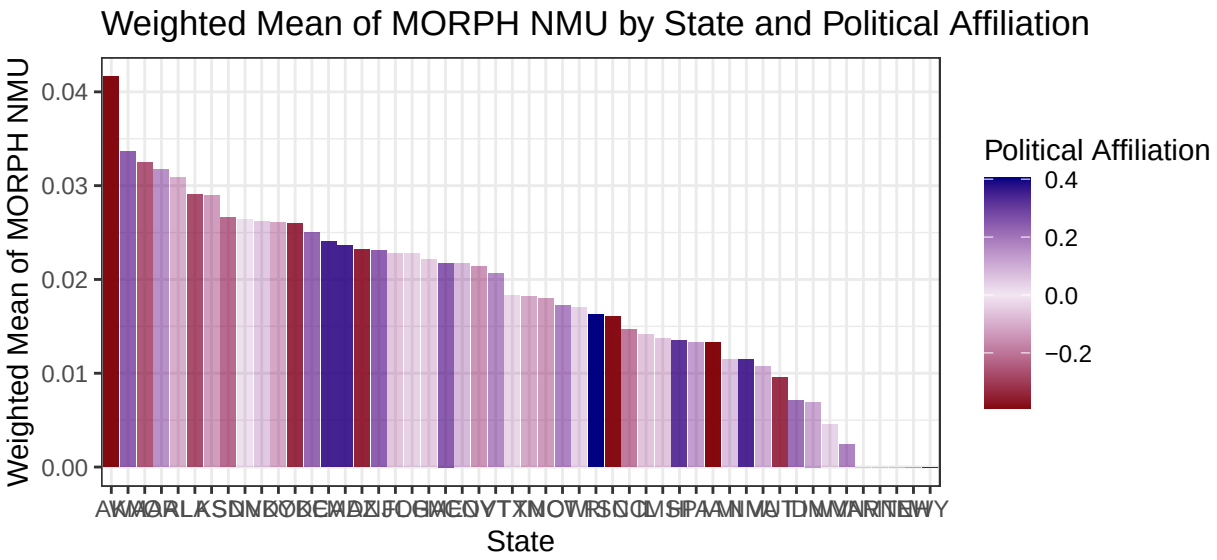
```
par(mfrow = c(1, 2))

for (i in 2:19) {
  df <- nmu_politics %>% select(state, election, nmu = names(nmu_politics)[i])
  print(df %>% ggplot() +
          geom_col(aes(reorder(state, -nmu), nmu, fill = election)) +
          scale_fill_gradient2(low = rgb(0.5, 0, 0), mid = rgb(0.5, 0, 0.5, alpha = 0.1),
                               high = rgb(0, 0, 0.5),
                               name = "Political Affiliation") +
          theme_bw() +
          labs(title = str_c("Weighted Mean of ", names(nmu_politics)[i],
                             " NMU by State and Political Affiliation"),
```

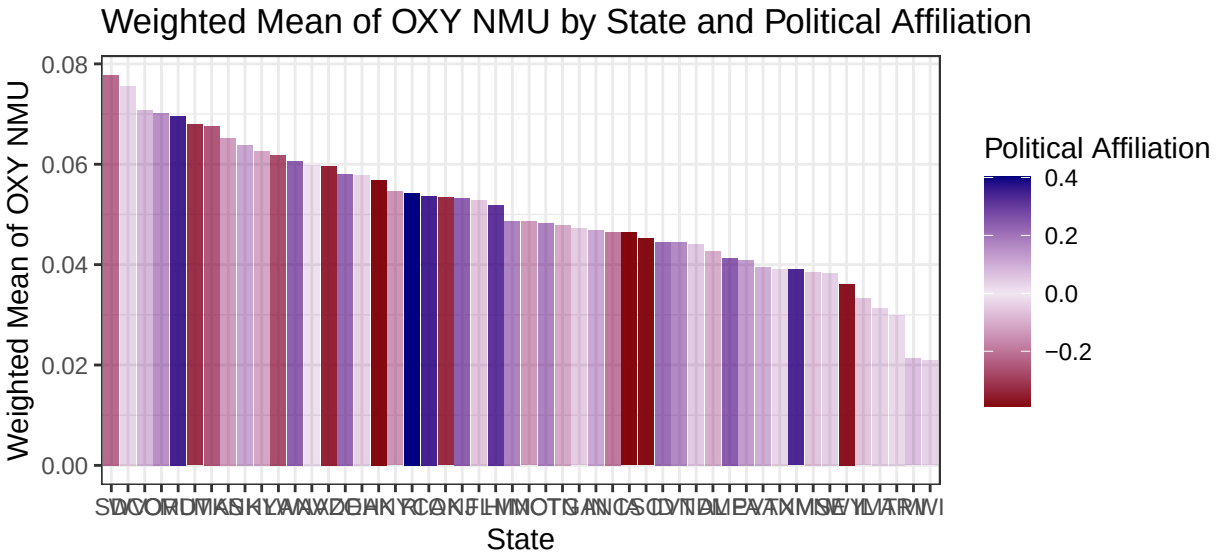
```
                x = "State", y = str_c("Weighted Mean of ",
                                       names(nmu_politics)[i], " NMU")))
}
```

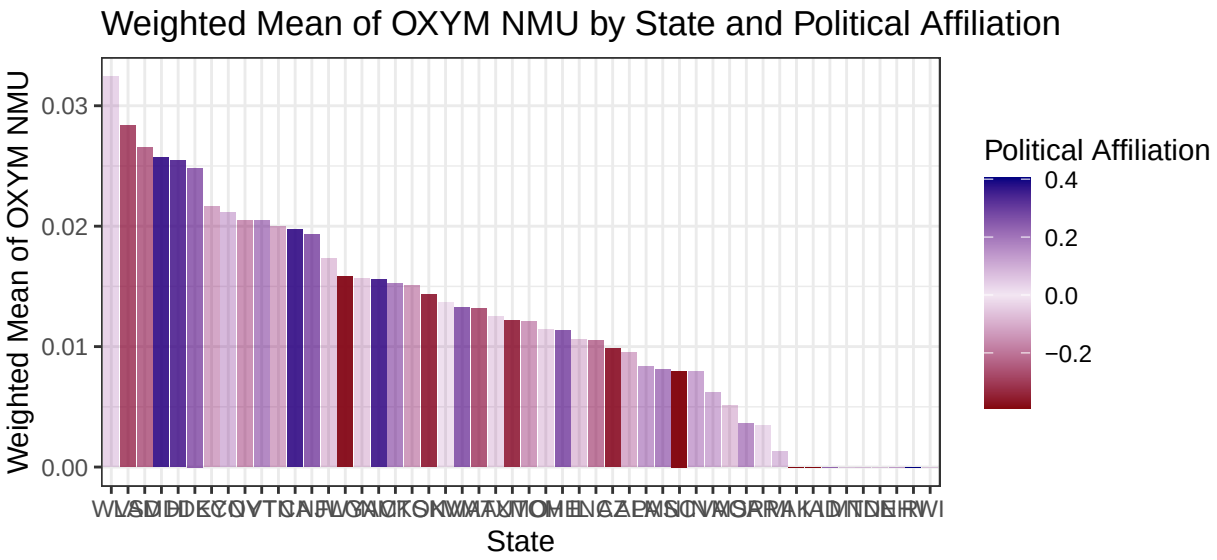


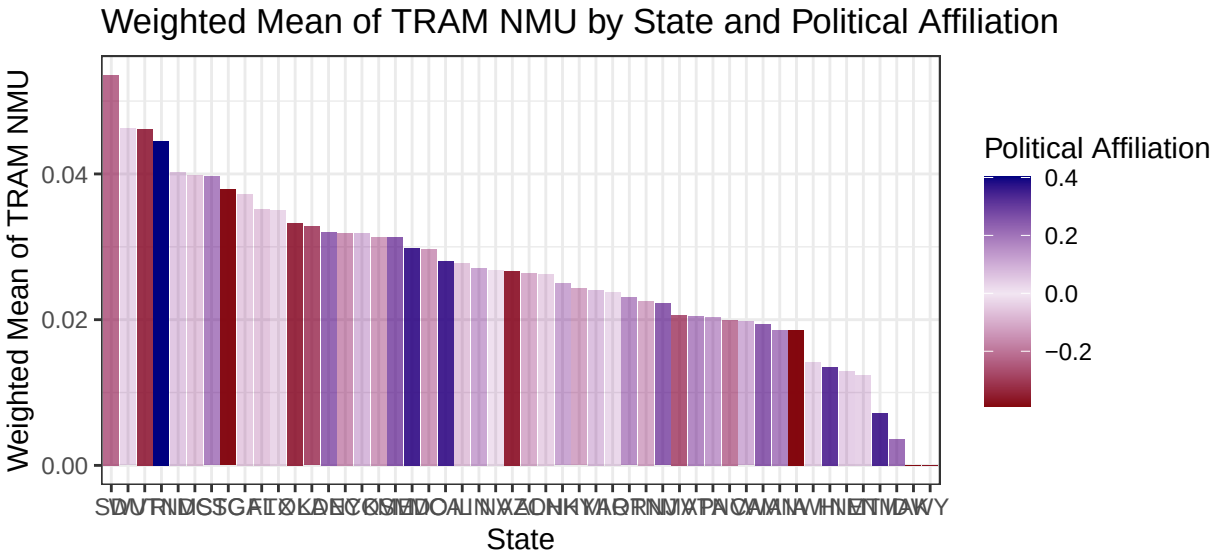



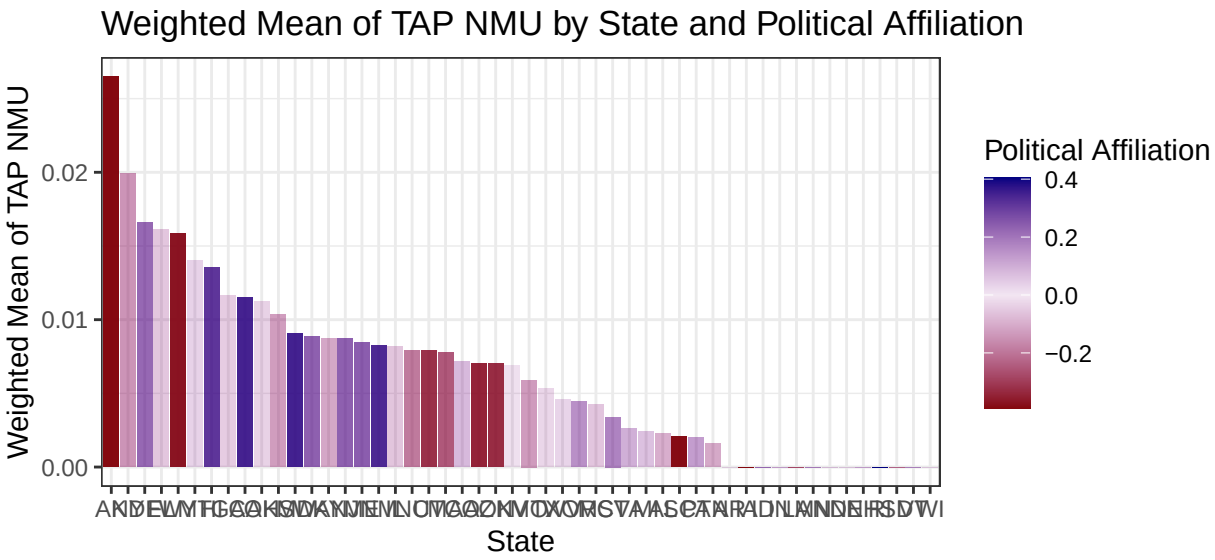

Weighted Mean of METH NMU by State and Political Affiliation
Weighted Mean of METH NMU
0.04
0.03
0.02
0.01
0.00
State
Political Affiliation
0.4
0.2
0.0
−0.2

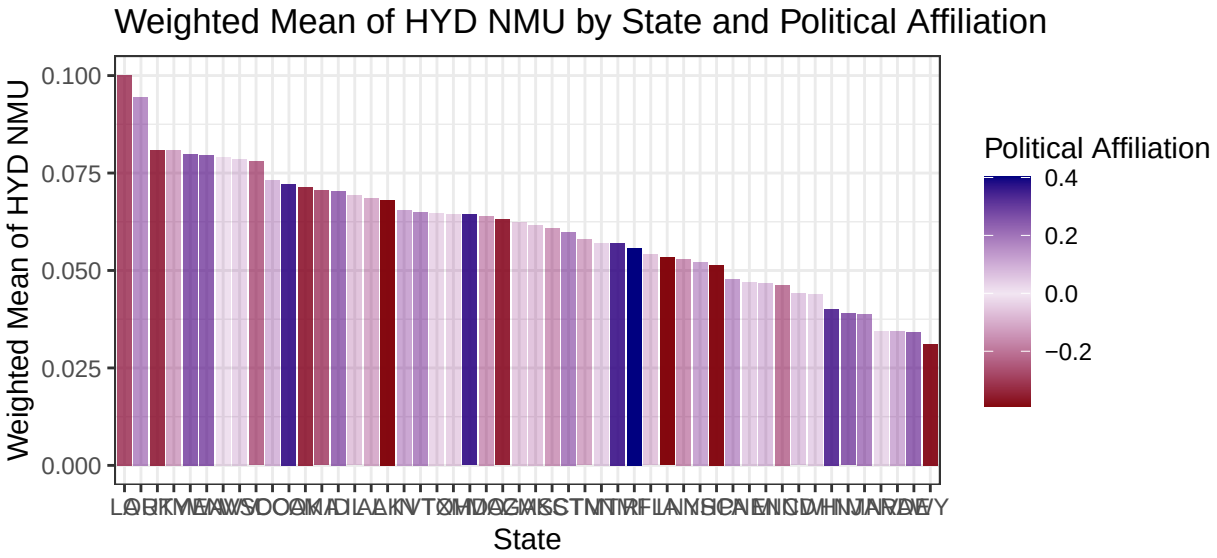

Weighted Mean of MORPH NMU by State and Political Affiliation
Weighted Mean of MORPH NMU
0.04
0.03
0.02
0.01
0.00
State
Political Affiliation
0.4
0.2
0.0
−0.2

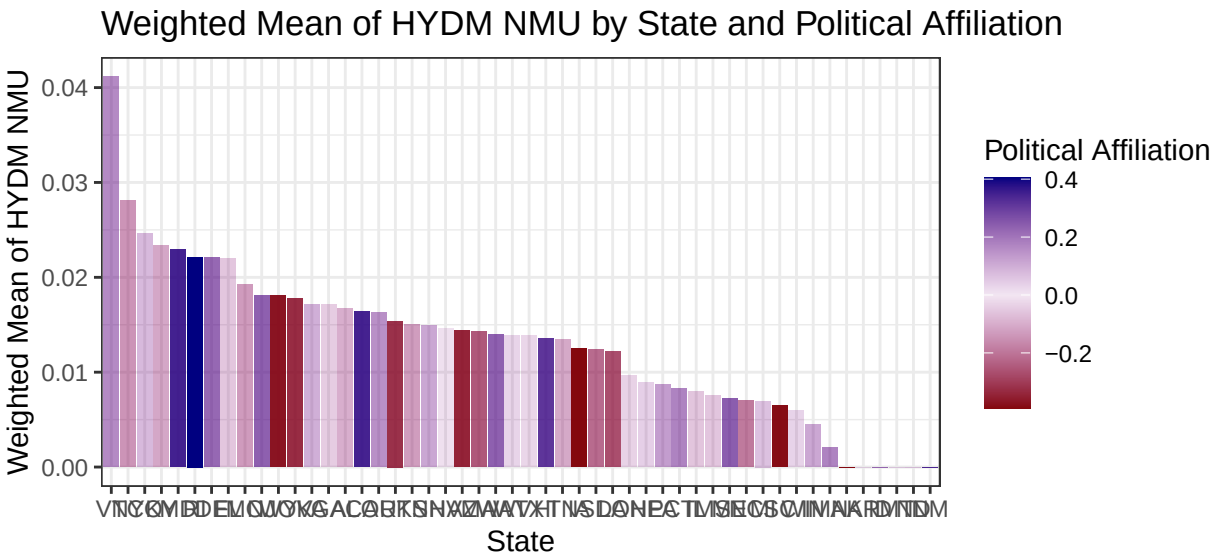

Weighted Mean of OXY NMU by State and Political Affiliation
Weighted Mean of OXY NMU
0.08
0.06
0.04
0.02
0.00
State
Political Affiliation
0.4
0.2
0.0
−0.2

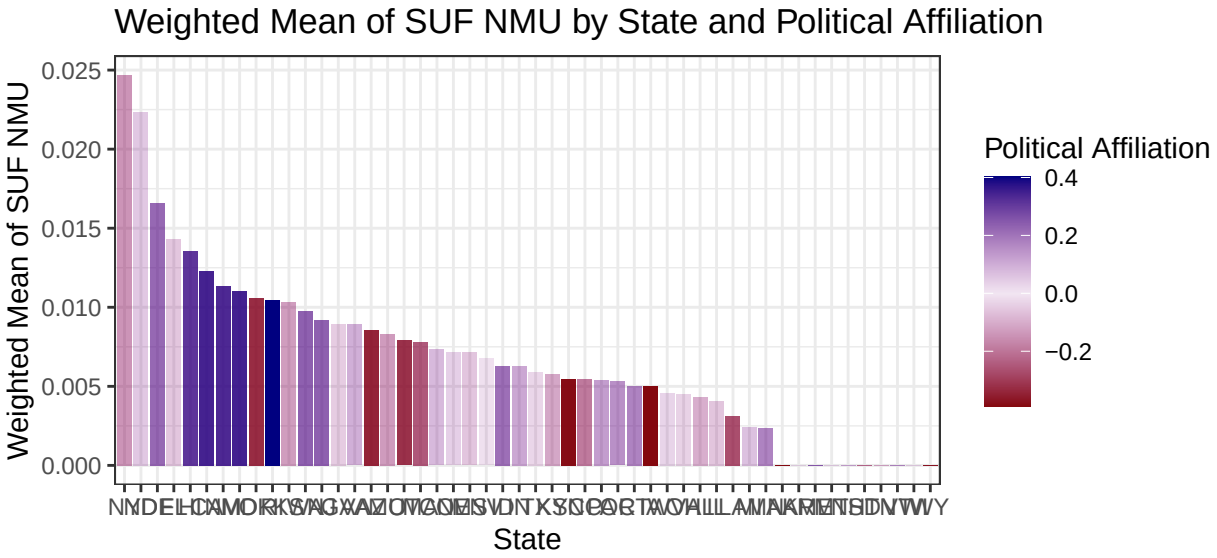

Weighted Mean of OXYM NMU by State and Political Affiliation
Weighted Mean of OXYM NMU
0.03
0.02
0.01
0.00
State
Political Affiliation
0.4
0.2
0.0
−0.2

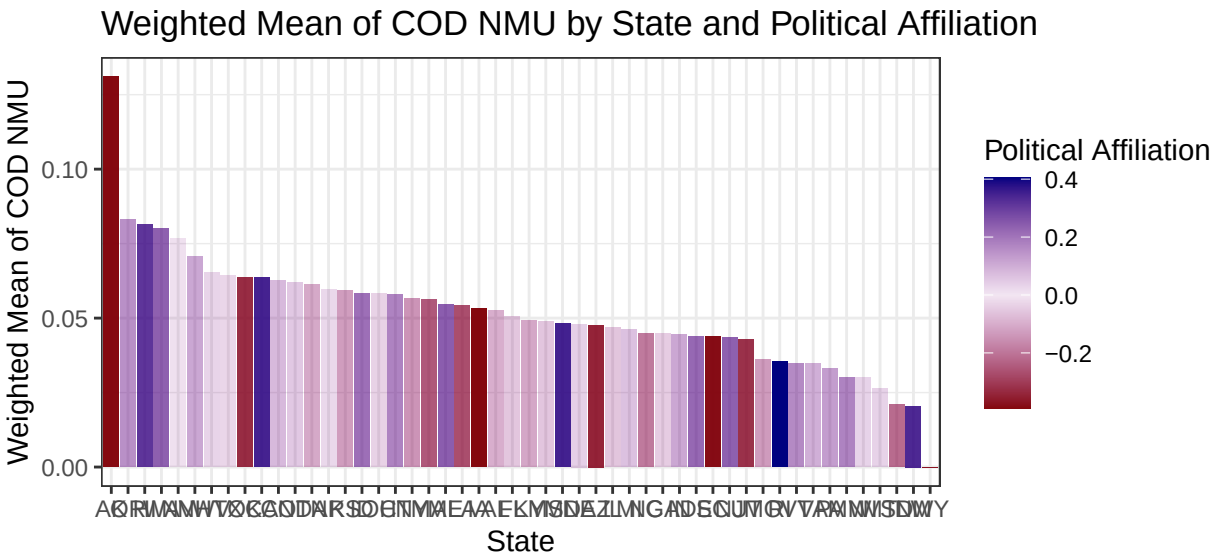

Weighted Mean of TRAM NMU by State and Political Affiliation
Weighted Mean of TRAM NMU
0.04
0.02
0.00
State
Political Affiliation
0.4
0.2
0.0
−0.2

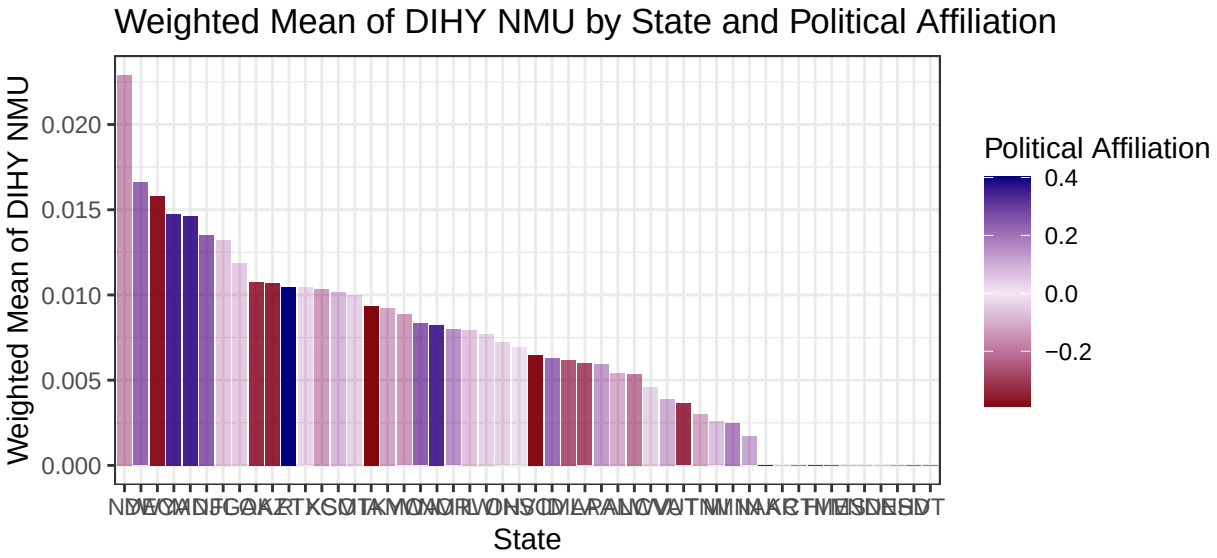

Weighted Mean of TAP NMU by State and Political Affiliation
Weighted Mean of TAP NMU
0.02
0.01
0.00
State
Political Affiliation
0.4
0.2
0.0
−0.2

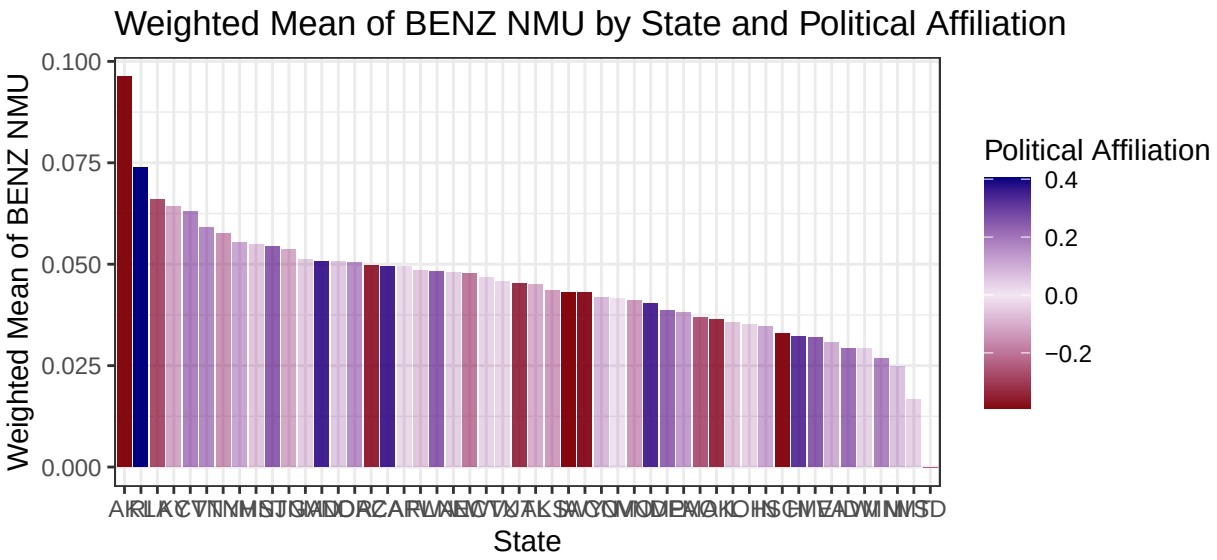

Weighted Mean of HYD NMU by State and Political Affiliation
Weighted Mean of HYD NMU
0.100
0.075
0.050
0.025
0.000
State
Political Affiliation
0.4
0.2
0.0
−0.2

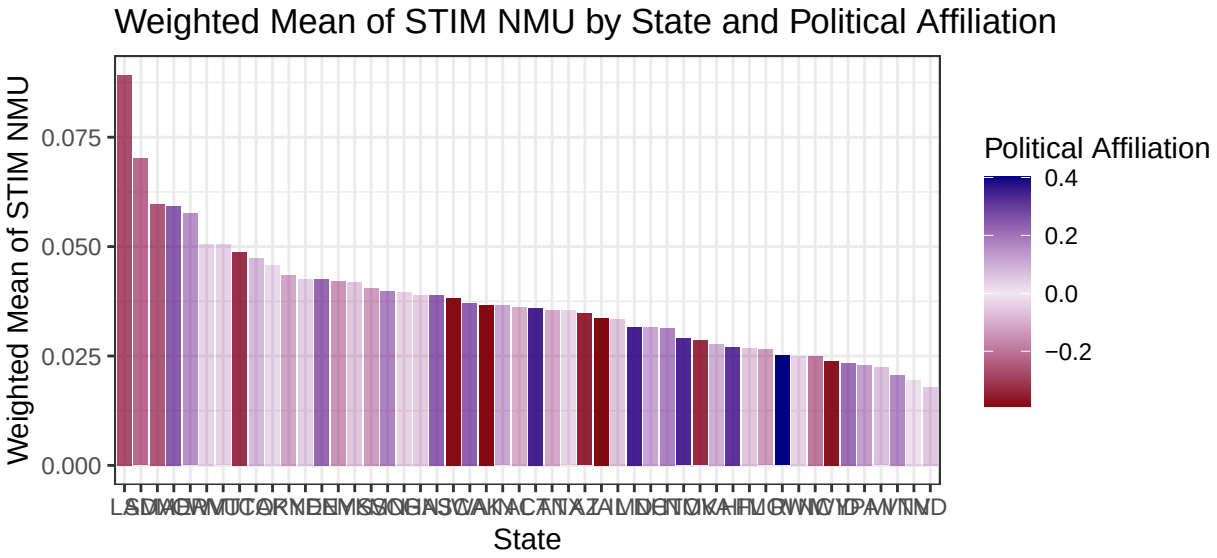

Weighted Mean of HYDM NMU by State and Political Affiliation
Weighted Mean of HYDM NMU
0.04
0.03
0.02
0.01
0.00
State
Political Affiliation
0.4
0.2
0.0
−0.2

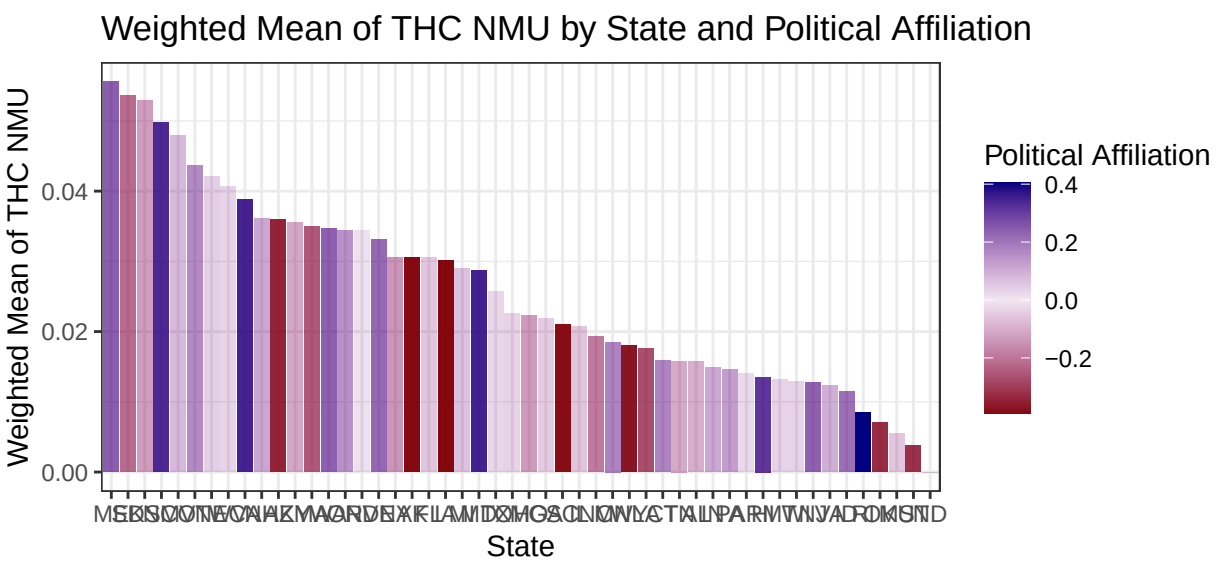

Weighted Mean of SUF NMU by State and Political Affiliation
Weighted Mean of SUF NMU
0.025
0.020
0.015
0.010
0.005
0.000
State
Political Affiliation
0.4
0.2
0.0
−0.2

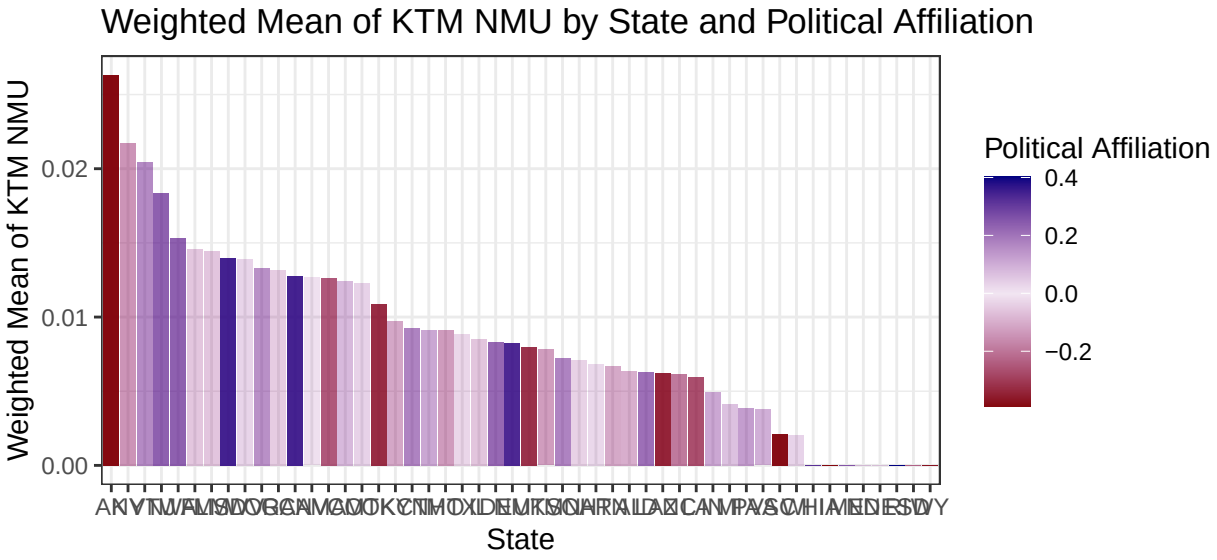

Weighted Mean of COD NMU by State and Political Affiliation
Weighted Mean of COD NMU
0.10
0.05
0.00
State
Political Affiliation
0.4
0.2
0.0
−0.2

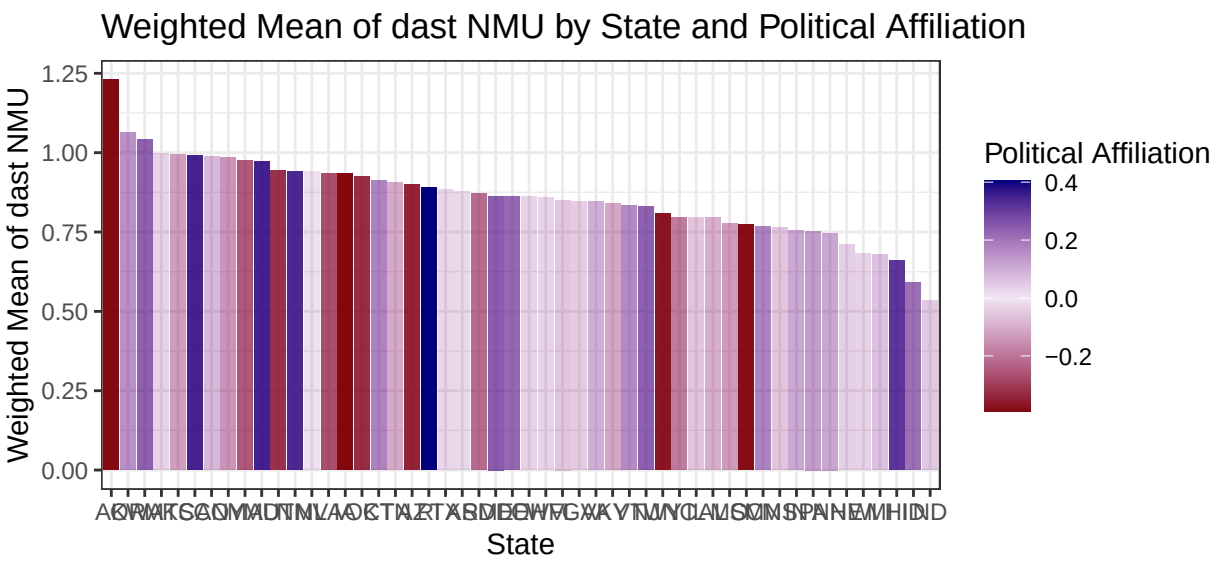

Weighted Mean of DIHY NMU by State and Political Affiliation
Weighted Mean of DIHY NMU
0.020
0.015
0.010
0.005
0.000
State
Political Affiliation
0.4
0.2
0.0
−0.2


Weighted Mean of BENZ NMU by State and Political Affiliation
Weighted Mean of BENZ NMU
0.100
0.075
0.050
0.025
0.000
State
Political Affiliation
0.4
0.2
0.0
−0.2


Weighted Mean of STIM NMU by State and Political Affiliation
Weighted Mean of STIM NMU
0.075
0.050
0.025
0.000
State
Political Affiliation
0.4
0.2
0.0
−0.2


Weighted Mean of THC NMU by State and Political Affiliation
Weighted Mean of THC NMU
0.04
0.02
0.00
State
Political Affiliation
0.4
0.2
0.0
−0.2


Weighted Mean of KTM NMU by State and Political Affiliation
Weighted Mean of KTM NMU
0.02
0.01
0.00
State
Political Affiliation
0.4
0.2
0.0
−0.2


Weighted Mean of dast NMU by State and Political Affiliation
Weighted Mean of dast NMU
1.25
1.00
0.75
0.50
0.25
0.00
State
Political Affiliation
0.4
0.2
0.0
−0.2