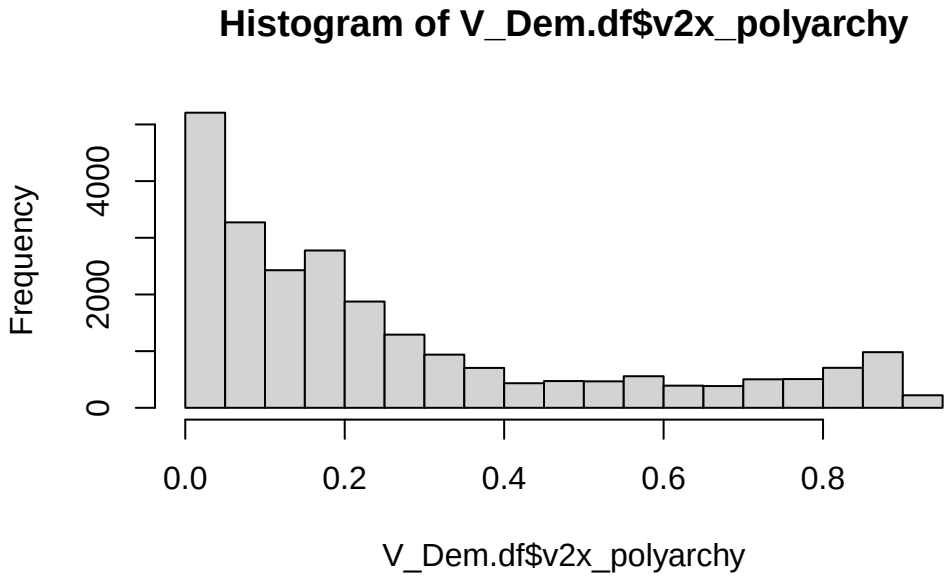
Pset2

Problem #1

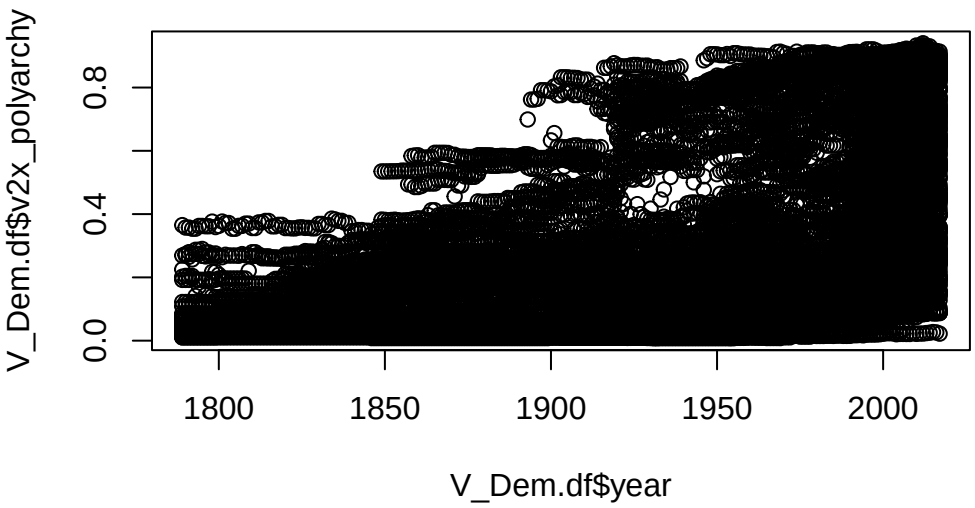
```
V_Dem.df <- read_csv("~/Documents/MIT Fall '25/17.800 Quant 1/Math Camp/Datasets/V-Dem-Red.cs

(single.plot <- hist(V_Dem.df$v2x_polyarchy) )
```




```
$breaks
 [1] 0.00 0.05 0.10 0.15 0.20 0.25 0.30 0.35 0.40 0.45 0.50 0.55 0.60 0.65 0.70
[16] 0.75 0.80 0.85 0.90 0.95
```

```
$counts
 [1] 5207 3272 2428 2776 1875 1291  938  704  434  472  467  557  391  384  503
[16]  507  706  982  221

$density
 [1] 4.3184740 2.7136637 2.0136844 2.3023015 1.5550487 1.0707029 0.7779390
 [8] 0.5838690 0.3599419 0.3914576 0.3873108 0.4619531 0.3242795 0.3184740
[15] 0.4171677 0.4204852 0.5855277 0.8144309 0.1832884

$mids
 [1] 0.025 0.075 0.125 0.175 0.225 0.275 0.325 0.375 0.425 0.475 0.525 0.575
[13] 0.625 0.675 0.725 0.775 0.825 0.875 0.925

$xname
[1] "V_Dem.df$v2x_polyarchy"

$equidist
[1] TRUE

attr(,"class")
[1] "histogram"
```

```
(bivariate.plot <- plot(V_Dem.df$year,
                        V_Dem.df$v2x_polyarchy ) )
```



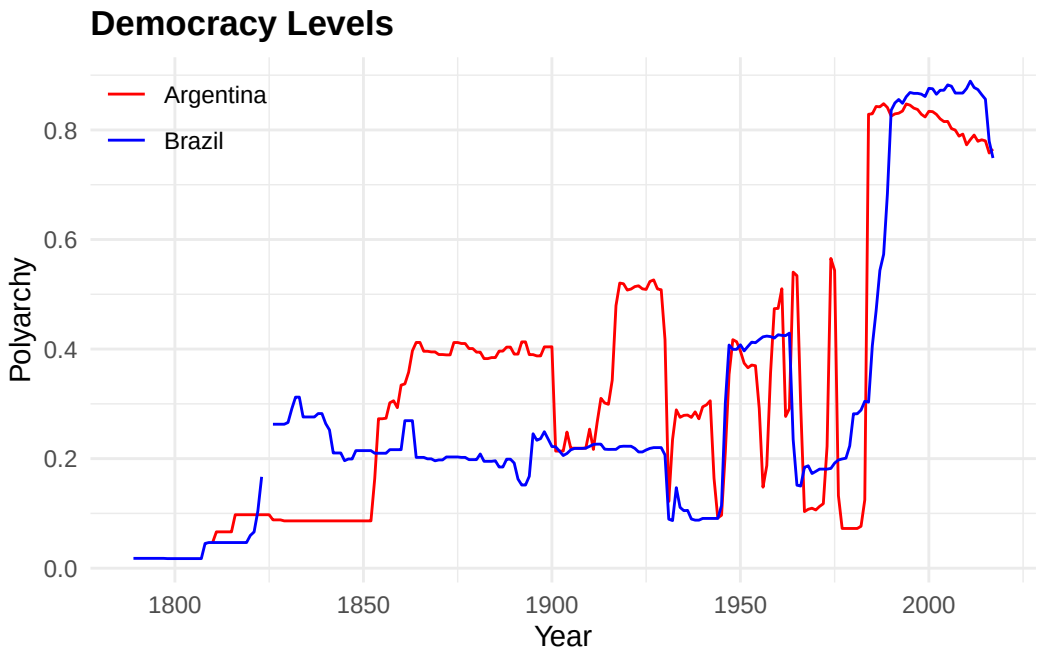

```
NULL
```

- Single Variable Plot – Histogram of the "v2x_polyarchy" variable demonstrates the frequency of each value of the variable in the dataset.

Problem 2

```
(recreate.grob <- V_Dem.df %>%
  dplyr::filter(country_name == "Argentina" |
                  country_name == "Brazil") %>%
  ggplot(aes(x = year, y = v2x_polyarchy) ) +
  geom_line(aes(color = country_name) ) +
  labs (x = "Year", y = "Polyarchy", "Democracy Level",
        title = "Democracy Levels") +
  theme_minimal()  +
    theme(legend.title = element_blank(),
          legend.position = c(.1, 0.9),
          plot.title = element_text(face = "bold")) +
    scale_y_continuous(breaks = seq(0, .8, .2) ) +
    scale_color_manual(values = c("Argentina" = "Red",
```

```
                                  "Brazil" = "Blue") )
)
```


Democracy Levels
Argentina
Brazil
Polyarchy
0.0
0.2
0.4
0.6
0.8
1800
1850
1900
1950
2000
Year