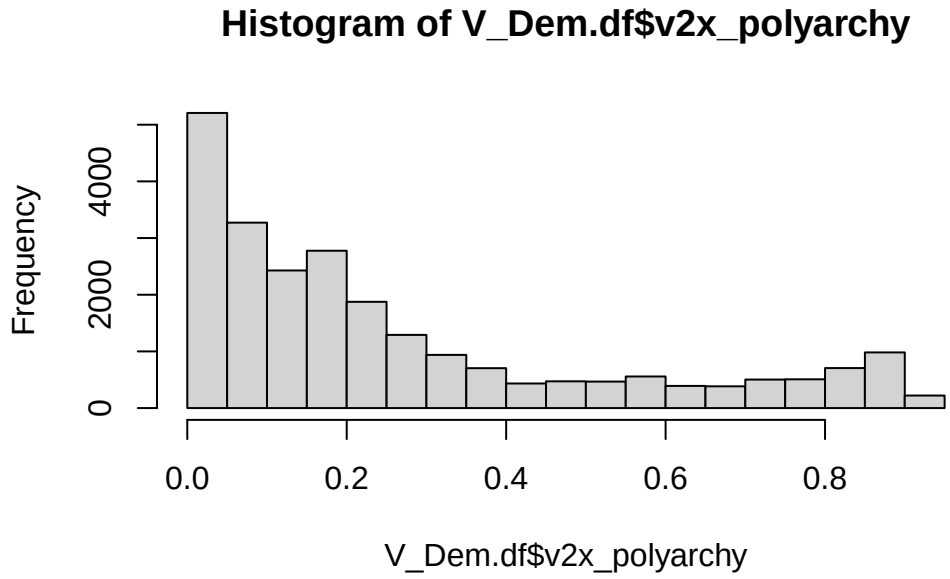
Pset2

Problem #1

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

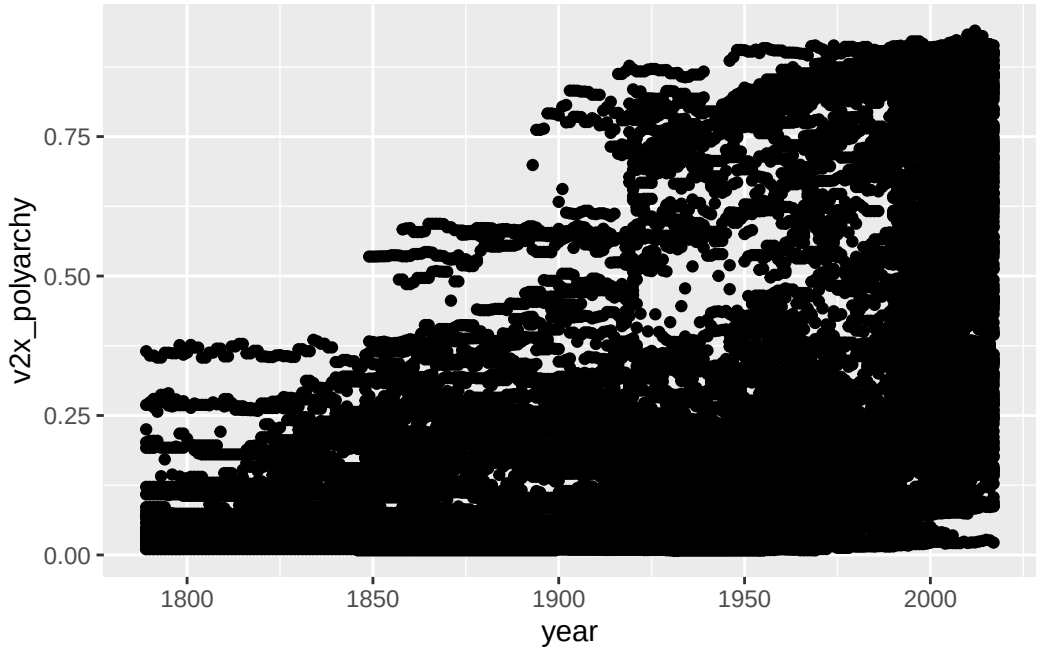
```
V_Dem.df <- read_csv("~/Documents/MIT Fall '25/17.800 Quant 1/Math Camp/Datasets/V-Dem-Red.cs

(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
```

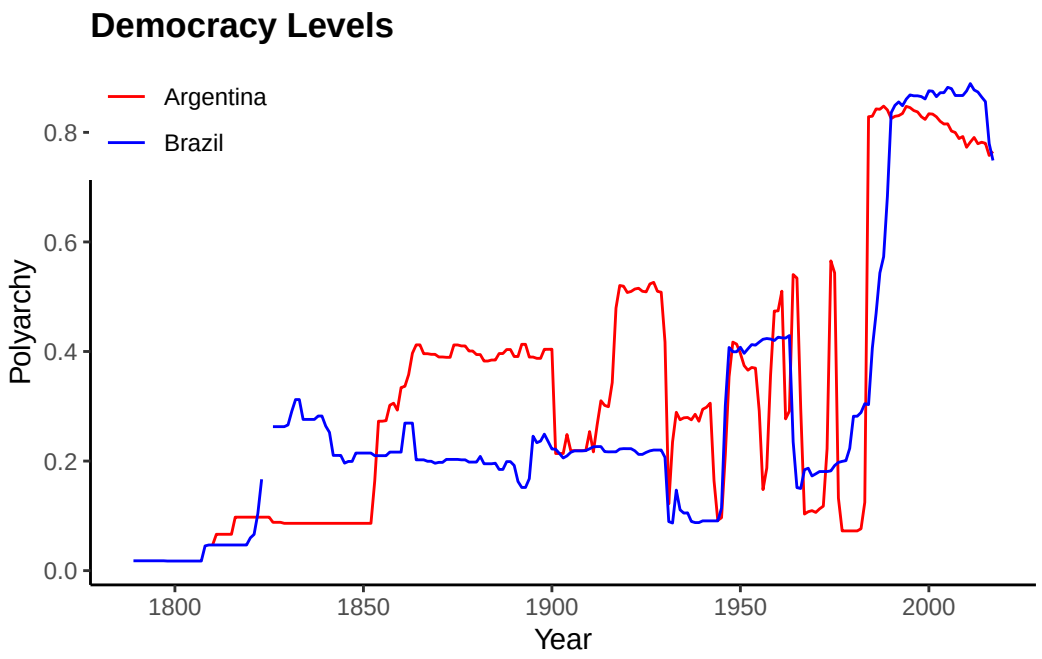
```
[16] 0.75 0.80 0.85 0.90 0.95

$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"
```

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

(bivariate.plot <- V_Dem.df %>%
    ggplot(aes(x = year, y = v2x_polyarchy)) + geom_point())
```



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_classic() +
    theme(legend.title = element_blank(), legend.position = c(0.1,
        0.9), plot.title = element_text(face = "bold")) +
    scale_y_continuous(breaks = seq(0, 0.8, 0.2)) +
    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