Gov 51: Boxplots and QQ-plots

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Assassination attempts

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```
##  [1] "dies between a day and a week"
##  [2] "dies between a week and a month"
##  [3] "dies within a day after the attack"
##  [4] "dies, timing unknown"
##  [5] "hospitalization but no permanent disability"
##  [6] "not wounded"
##  [7] "plot stopped"
##  [8] "survives but wounded severely"
##  [9] "survives, whether wounded unknown"
## [10] "wounded lightly"
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```
## [1] 0.216
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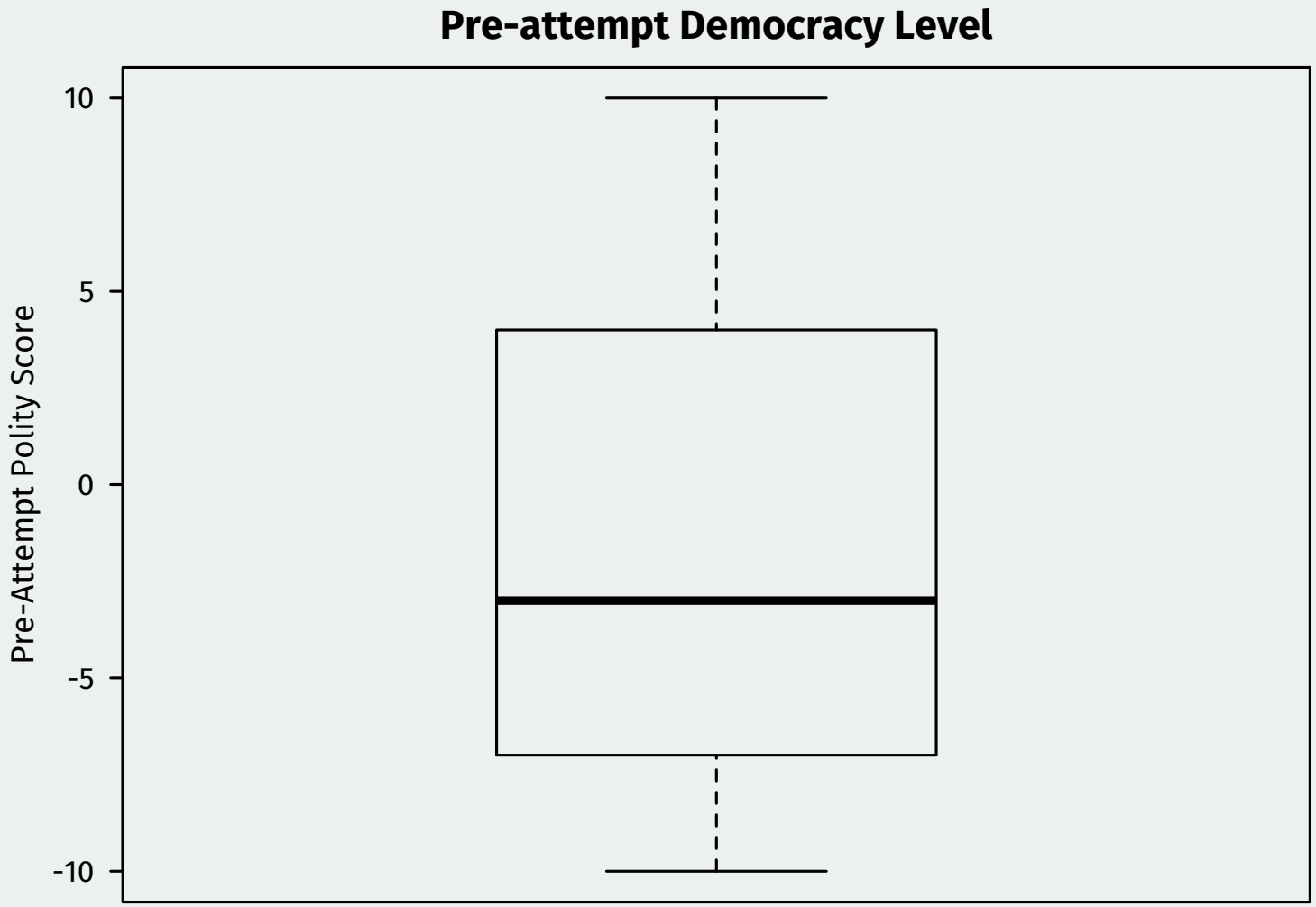
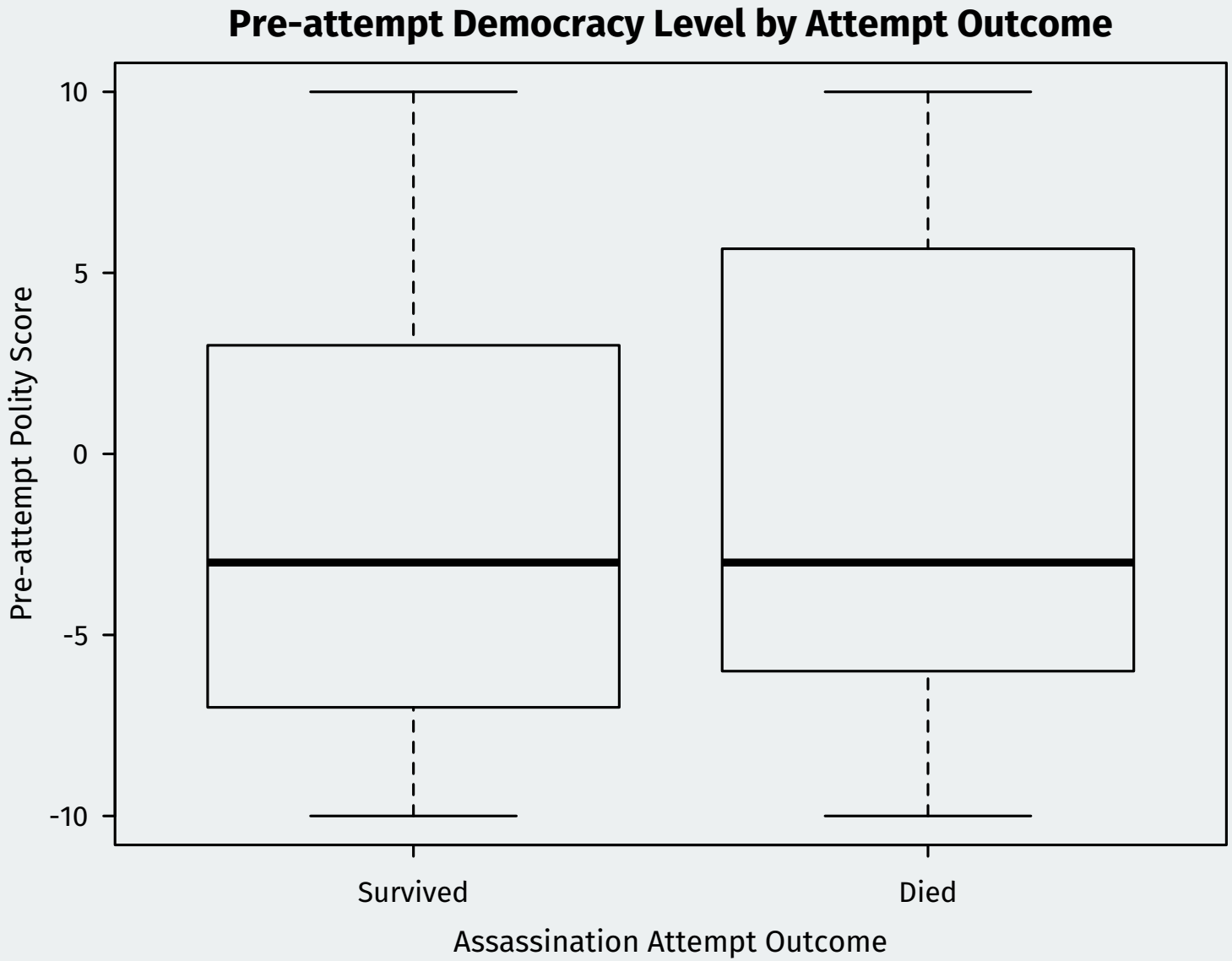
Remember boxplots?

- Boxplots were a tool to help visual continuous data.



Comparing distribution with the boxplot

- What if we want to know how the distribution varies by success?



Boxplot comparisons in R

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boxplot(politybefore ~ fatal, data = leaders,
        names = c("Survived", "Died"),
        main = "Pre-attempt Democracy Level by Attempt Outcome",
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  - `x` is the grouping variable.
  - When using a formula, we need to add a `data` argument.

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    - Flatter slope than 45° line $\rightsquigarrow$ x-axis variable has more spread.

QQ-plot example

```
leaders$polity_change <- leaders$polityafter -
  leaders$politybefore
lived <- subset(leaders, fatal == 0)
died <- subset(leaders, fatal == 1)
qqplot(lived$polity_change, died$polity_change,
       xlab = "Change in Polity, Leader Survived",
       ylab = "Change in Polity, Leader Died")
abline(a = 0, b = 1, lty = 3)
```

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