Practice Problems on Description

1. Imagine a set values x. This might be the income of 1,000 individuals, for example. What does the average or mean describe about these data? What does the standard deviation describe? Larger means indicate what? Larger standard deviations indicate what?

2. Load the data set `nominate.csv` available here.

3. Calculate the mean of the variable `ideology_score`.

4. Calculate the mean for Republicans and Democrats separately. Compare. Hint: You need to separate the cases where `party == "Republican"` and cases where `party == "Democrat"`.

5. Calculate the mean for Republicans and Democrats separately in the 100th and 113th Congresses, also separately. Compare. Hint: You need to separate the cases where `party == "Republican" & congress == 100`, `party == "Republican" & congress == 113`, `party == "Democrat" & congress == 100`, and `party == "Democrat" & congress == 113`. Is one party moving away from the other and becoming more ideologically extreme?

6. Repeat the question above using the standard deviation. Are the parties becoming less ideologically diverse (i.e., representatives within each party more alike)?