**Presidential Popularity: A Matter of Sentiment?**

George Gallop was the forerunner of survey sampling techniques and creator of the statistical method of survey sampling for measuring public opinion. In the late 1930s, he focused his attention to politics, gauging the approval ratings of presidents and presidential candidates. (1)

Of course, many that predict opinions as well as individual poll results are imperfect and inaccurate. However, the aggregate approval rating is generally accepted by statisticians, as a statistically valid indicator of the comparative changes in the popular United States mood regarding a president.

In terms of predictions, to many the results of the 2016 presidential race were very surprising. Yet since the election, the majority of point in time polling suggests that the sitting president consistently polls around 30% to 40%, which is pretty low and flat compared to other presidents during their tenure. (2) From my antidotal observations, today’s political administration seems to have a contentious and negative message that emphasizes conspiracy and deregulation over hope and progressive change.

The ranked approval ratings of presidents, along with my perceived negative overtone of the political environment today caused me to want to explore the following question. Does a president’s sentiment have an effect on their popularity?

In order to explore the question posed above, I intend to do a text analysis of the State of the Union speeches and see if there are topics or tone that cluster or correlate with presidential approval. I will use the average Gallop approval ratings per president and compare them with the text analysis results of the State of the Union addresses per president.

Given time and resources, I will start with a comparison of the cumulative average approval rating across the duration of each presidency with the text analysis for all States of the Union speeches together, grouped per president. Additionally, given that point in time Gallop polls started in the late 1930s, my analysis and comparison will start with F.D. Roosevelt, the 32nd President, to the 45th president, currently sitting. If it’s allowed, I will use the “SOTU” package in R, which provides the raw text from each State of the Union. (3)

To complete the study, I will employ text and sentiment analysis techniques as well as descriptive statistical analysis. In my text analysis, I intend to look at the top 5 – 10 words for each president, as well as percent of positive vs. negative sentiment. I am exploring the use of R packages to help with grouping and assigning sentiment. I will then compare the variables of positive and negative sentiments with popularity in order to see if there are any correlations. I would also like to do a word cloud for the most popular and least popular president as well as some line and bar graphs to visualize approval ratings. Finally, I will create graphs that represent the findings of the sentiment vs. popularity study.

**References**

1. "George Gallup Biography". Encyclopedia of World Biography. <https://www.notablebiographies.com/Fi-Gi/Gallup-George.html>

2. <https://news.gallup.com/poll/116677/Presidential-Approval-Ratings-Gallup-Historical-Statistics-Trends.aspx>

3. <https://cran.r-project.org/web/packages/sotu/sotu.pdf>