

NLProcessed Library Report

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Text Sources

- *Ronald Reagan - Tear Down This Wall (1987)*
 - Obtained from [Reagan, 'Tear Down this Wall' | The History Place](#).
- *Ronald Reagan - Evil Empire (1983)*
 - Obtained from [Reagan, 'Evil Empire' | Voices of Democracy](#).
- *Nikita Khrushchev - Secret Speech to 20th Party Congress (1956)*
 - Obtained from [Khrushchev's Secret Speech, 'On the Cult of Personality and Its Consequences' | Wilson Center Digital Archive](#).
- *Leonid Ilyich Brezhnev and Todor Zhivkov - Meeting between Comrades (1980)*
 - Obtained from [Comrades Leonid Ilyich Brezhnev and Todor Zhivkov | Wilson Center Digital Archive](#).
- *Joseph Stalin - Election Speech (1946)*
 - Obtained from [Stalin Election Speech | Michigan State University](#).
- *John F. Kennedy - Ich bin ein Berliner (1963)*
 - Obtained from [Kennedy, 'Ich bin ein Berliner' | JFK Library](#).
- *Harry S. Truman - Truman Doctrine (1947)*
 - Obtained from [Truman Doctrine \(1947\) | National Archives](#).
- *Dwight D. Eisenhower - Atoms for Peace (1953)*
 - Obtained from [Atoms for Peace Speech | IAEA](#).
- *Vladimir Ilyich Lenin - Power to the Soviets (1917)*
 - Obtained from [Vladimir Ilyich Lenin, 'Power to the Soviets' | Speakola](#).
- *Karl Marx - Extracts from the Communist Manifesto (1848)*
 - Obtained from [Extracts from The Communist Manifesto | Alpha History](#).

Insights from the Cosine Similarity Heatmap

According to the Cosine Similarity Heatmap, the two most similar texts in terms of word usage were John F. Kennedy's "*Ich bin ein Berliner*" and Ronald Reagan's "*Tear Down This Wall*". Both speeches frequently discuss Berlin, since the erection of the Berlin Wall split the city into democratic and communist divisions. In his speech, Kennedy expressed his solidarity with the people of West Berlin, which was governed by the German Democratic Republic. He denounced the oppressive nature of communism while reassuring the people of West Berlin by emphasizing the United State's commitment to the principles of democracy. In Reagan's speech, he directly challenged Soviet General Secretary Gorbachev to demolish the Berlin Wall. While Reagan's words did not cause the Berlin Wall to fall, it signified its eventual collapse and the beginning of the end of the Cold War. The Berlin Wall was a potent symbol of the battle between democracy and communism, providing many opportunities for Western figures like Reagan and

Kennedy to emphasize their support for democracy while criticizing and challenging communism. Since both of their speeches contain similar themes of the freedom of Berlin and criticism of communism, it makes sense why the Cosine Similarity Heatmap deemed these the most similar.

The Cosine Similarity Heatmap shows that the two least similar texts are an excerpt from Karl Marx's "*Communist Manifesto*" and Harry Truman's "*Truman Doctrine*". The Communist Manifesto discusses how class struggles result in revolutionary changes and how the communist goal is the forcible overthrow of social conditions that cause such problems. This excerpt explains how ruling classes will tremble at the prospect of a communist revolution, inspiring struggling classes to unite globally under communism. The Truman Doctrine contains very different messages than the Communist Manifesto. Truman explains the importance of American involvement in supporting freedom in nations under the influence of communism. He emphasizes his commitment to dismantling totalitarian regimes and assisting representative governments and individual liberties. The Communist Manifesto and the Truman Doctrine represent the polar opposite sides of the causes of the Cold War, each denouncing the other's goals while preaching their own. Due to these significant differences, it is clear why the Cosine Similarity Heatmap showed that these texts contained the least similar word usage.

Insights from the Sankey Diagrams

The Sankey diagrams depicting the most common words in each text and word flow within those texts show some interesting insights into leaders' perspectives during the Cold War. Truman and Eisenhower spoke the most about the words "united" and "states", which we know from the Sankey diagram showing most common word flows within the texts that frequently "states" followed "united", meaning that Truman and Eisenhower spoke the most of the United States of America. Truman's main message was that American involvement was essential to maintain the presence of democracy around the world. In Eisenhower's "*Atoms for Peace*", he discusses the importance of the United Nations as well as the United State's commitment to cooperative international efforts surrounding peace. Stalin used the word "war" the most. Stalin was a politico-military dictator who was active most from 1924 to 1953. This time period contained World War II, in which the Soviet Union and the USSR's Cold War with the USA. For the large majority of Stalin's rule, he was involved in war. The speech that was analyzed was his election speech from 1946. Since he was always involved in some kind of worldly tension, it makes sense why he was the one who used the word "war" the most. In Khrushchev's Secret Speech to the 20th Party Congress, he openly criticized and condemned the personality cult surrounding Joseph Stalin. He detailed Stalin's oppressive policies, such as the mass purges and forced labor camps, and emphasized a commitment to de-Stalinization. As a result, Khrushchev was the one who used the word "Stalin" the most.

Insights from the Sentiment Subplots

The Sentiment subplots compare the subjectivity (where 0 represents an objective text and 1 represents a very subjective one) and polarity (where -1 represents a very negative sentiment and 1 represents a positive one) of each text. The texts that straddle the middle of the x-axis have even displays of polarity; they may not be fully neutral, but they balance negativity and positivity evenly. Most texts are mostly neutral with slight shifts towards positivity. Such examples include the speeches by Eisenhower and Khrushchev and Reagan's command to tear down the Berlin Wall. Stalin's election speech had a slight shift in the negative polarity direction which is understandable since he frequently discusses the catastrophes of the previous wars the USSR had been involved in. Most texts show a wide range of subjectivity; the speeches by Eisenhower, Truman, Stalin, and Khrushchev all show even discussion of objective and subjective messages. This makes sense because they contain facts and historical remarks, which are very objective, and use those to support their goals and opinions, which are subjective.

Conclusions

Overall, we can conclude that the framework used to analyze these texts provided helpful insights into the sentiments and historical context of important speeches and conversations from democratic and soviet perspectives. The Sankey diagrams showed important differences in the most used words and phrases in each text, highlighting distinct patterns of emphasis and vocabulary within the speeches. The Cosine Similarity Heatmap showed which texts discussed the most similar topics which led us to conclude that the most similar texts were from the same political standpoint, while the least similar texts were from opposing sides. Even though the democratic and soviet perspectives discussed different themes, we know from the Sentiment Subplots that there were plenty of similarities in the range of subjectivity and polarity between speeches from opposite political standpoints.

Author Contributions

Jeremiah: wrote class framework (the parsing and storage of the data), handled class exceptions, wrote ngrams-sankey framework, aided in writing wordcount sankey, sentiment subplot, and cosine similarity visualizations.

Madelyn: altered the clarity and aesthetics of cosine similarity heatmap and sentiment subplots, wrote report, edited presentation, added commentation and function docstrings to improve organization and comprehensibility

Sahana: wrote framework for cosine similarity heatmap, word count sankey, and sentiment subplots, modified/added docstrings and commentary, created/edited presentation, edited report

GitHub Repository

<https://github.khoury.northeastern.edu/payeurjeremiah/textastic>