

Data 620 Spring 2019

Assignment 12.1

Text analysis with Python

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Executive Summary

Repetition is powerful. Repetition is a convincing technique often used by politicians, journalists, and advertisers – but why is it so effective? According to several psychological studies, the repeating of simple words and phrases can convince us that they are right even if they aren't. This reasoning is because people tend to take repetition as a social cue; when a person hears something more than once they are inclined to accept it as accurate because the rest of the group may believe it as authentic. In speechwriting, this can be particularly effective if a person wishes to convince a group of people that their agenda is the correct agenda. In this analysis of United States Presidents State of the Union Addresses, the speeches or written letters to the American people are analyzed to see if the repeating of words helps drive an overall theme throughout the years. The repeating of words is a powerful tool that draws the listeners attention, make their ideas more memorable and move the reader or listener to a particular thought process. This technique can be used to convey a message to stakeholders or a group of people to get a message across to them without creating redundancy.

Introduction

According to Literary Devices Editors (2013), a literary device refers to the typical structures used by writers in their words to convey his or her message directly to the audience. The technique of repetition is used in that the same words appear a few times to make an idea stronger and more striking. The function of repetition can, in speeches, be used to set the pace or create a rhythm, draw the attention of readers to a particular idea, and generate an overall theme for the speaker. This analysis uses Python to detect the frequency of words used in the United States President's state of the union address and Tableau to display the results of those findings. The Presidents chosen for this analysis are Theodore Roosevelt, John F. Kennedy and Donald J. Trump and the speeches are provided by Gerhard Peters and John T. Woolley of The American Presidency Project (Peters, G & Woolley, J.T.). Often in statements such as the State of the Union Addresses, given by the current sitting United States President, the literary device of repetition is used to convey the president's message to the American people in the upcoming year. During the analysis of the State of the Union Addresses stop words were removed using NLTK (Natural Language Toolkit) in python and words with similar root words were grouped such as ('America,' 'American,' and 'Americans'). The reason for the group and removal of stop words is because it provides a clearer picture of the more important words to be analyzed and reduce redundancy. According to Nick Jobe and Sophia Stevens (Jobe N. & Stevens S.), redundancy is the repetition of a word or phrase that does not add anything to the previous meaning; it just restates what has already been said. The use of repetition is often seen speeches in that it draws the listeners attention, make their ideas more memorable and move the reader or listener to a particular thought.

The word cloud shows (Figure. 1) the most frequently used words from the State of the Union Addresses by Theodore Roosevelt, John F. Kennedy, and Donald J. Trump. The words ‘america’, ‘government,’ and ‘great’ are the top three most frequently used words by the United States Presidents. These words represent an overall theme by the speech maker to convey a global message to its audience with their whole point of view.

Word analysis of the most frequently used words from State of Union Address by Theodore Roosevelt, John F. Kennedy and Donald J. Trump.



Figure 1. Word cloud of Theodore Roosevelt, John F. Kennedy, and Donald J. Trump speeches.

Word analysis of Top 3 words from state of the union speeches by Donald J. Trump, John F. Kennedy, and Theodore Roosevelt from 1901 to 2019.

The word 'America' over takes the word 'government' in 1961. The word 'America' is shown to be in greater usage than any other word between the United States Presidents. While the word 'great' saw its peak in 1905 however never recovered to those levels since.

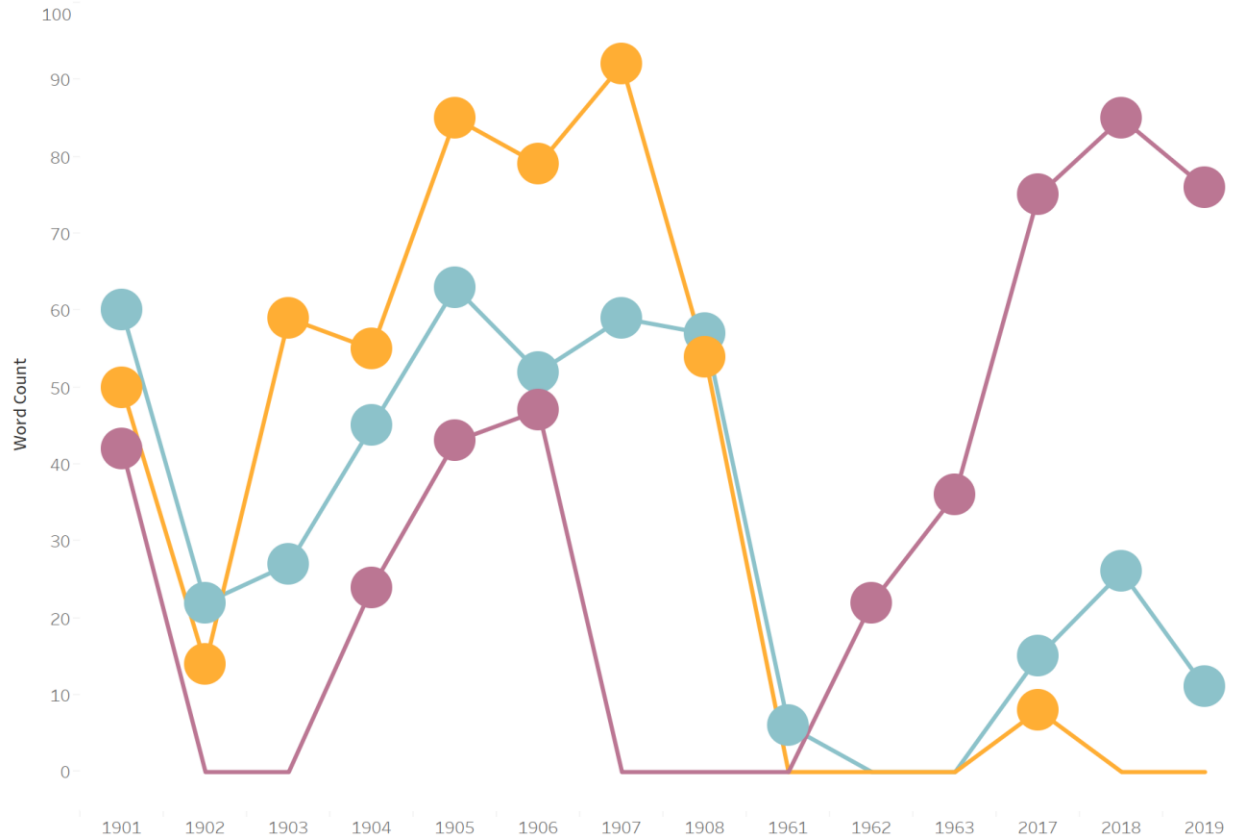


Figure 2. The graph shows a word analysis of the top three words used by United States Presidents.

Throughout the years these top three words continue to see usage by the United States Presidents. These words reflect what the Presidents want to convey in their agenda for the upcoming year via the State of the Union Address (Figure 2). During the years 1901 to 1908, it can be seen that Theodore Roosevelt has a strong message about government while during the Kennedy years the focus shifts from the government as a common theme to America as the word 'America' sees a sharp incline in usage. It is interesting to point out that even though Trump and

Kennedy are separated by several decades, the usage of the word ‘America’ continues to rise throughout the years.

If we take an in-depth look at each president, we can see a different picture created by the words used in their perspective State of the Union Addresses. For example, Roosevelt (Figure 3) the word ‘government’ is used 488 times total through each of his eight states of the Union address, while the word ‘great’ and ‘law’ follow behind which reinforces the idea of law and government being his focus throughout his presidency.

Top 3 most frequently used words by Theodore Roosevelt from 1901 - 1908 during State of the Union Addresses.

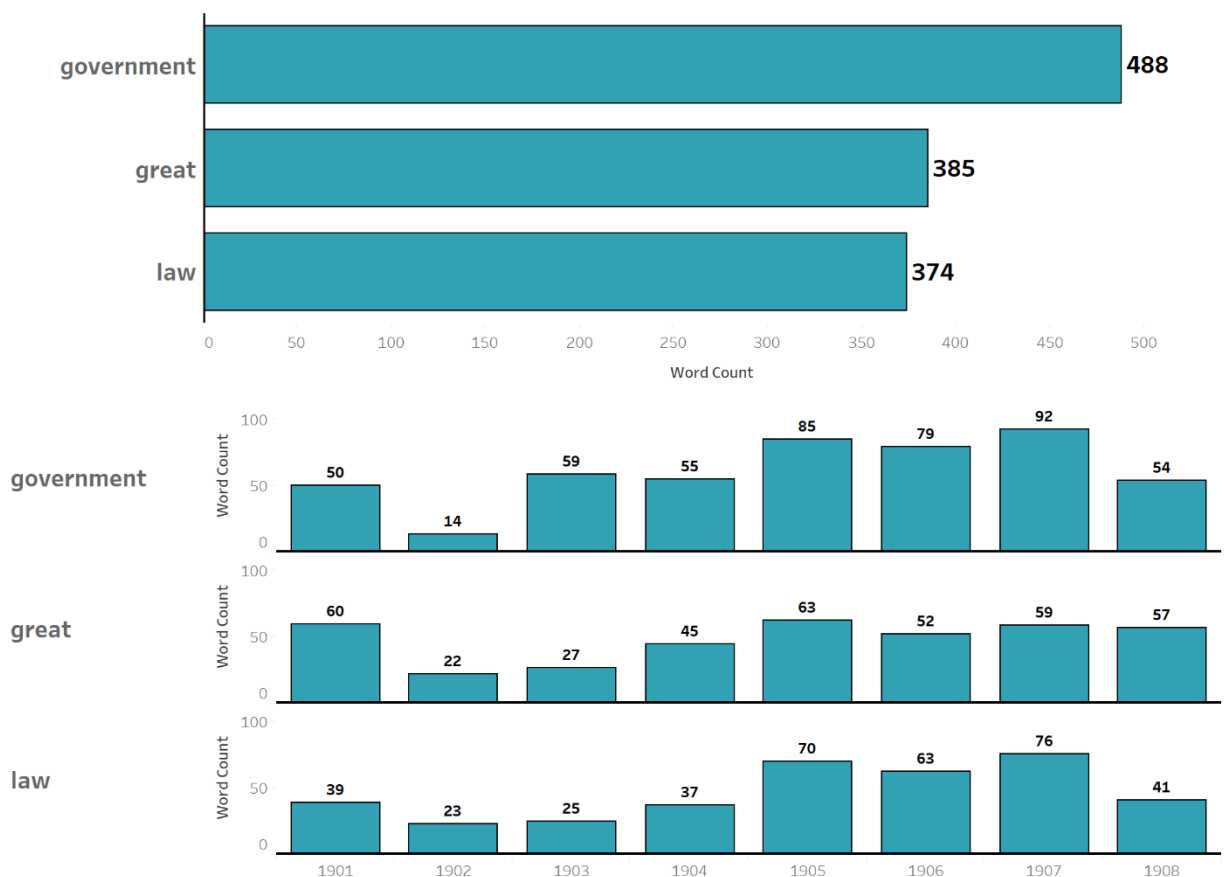


Figure 3. The dashboard shows the frequency of words used in State of the Union Addresses for Theodore Roosevelt.

It should be noted that John F. Kennedy's (Figure 4) most frequently used word is 'years' appearing 77 times from 1961 - 1963, followed by 'free' and 'nations' even though the word 'America' begins to see an increase in 1961 it is not in Kennedy's top three most frequently used words.

Top 3 most frequently used words by John F. Kennedy from 1961-1963 during State of the Union Addresses.

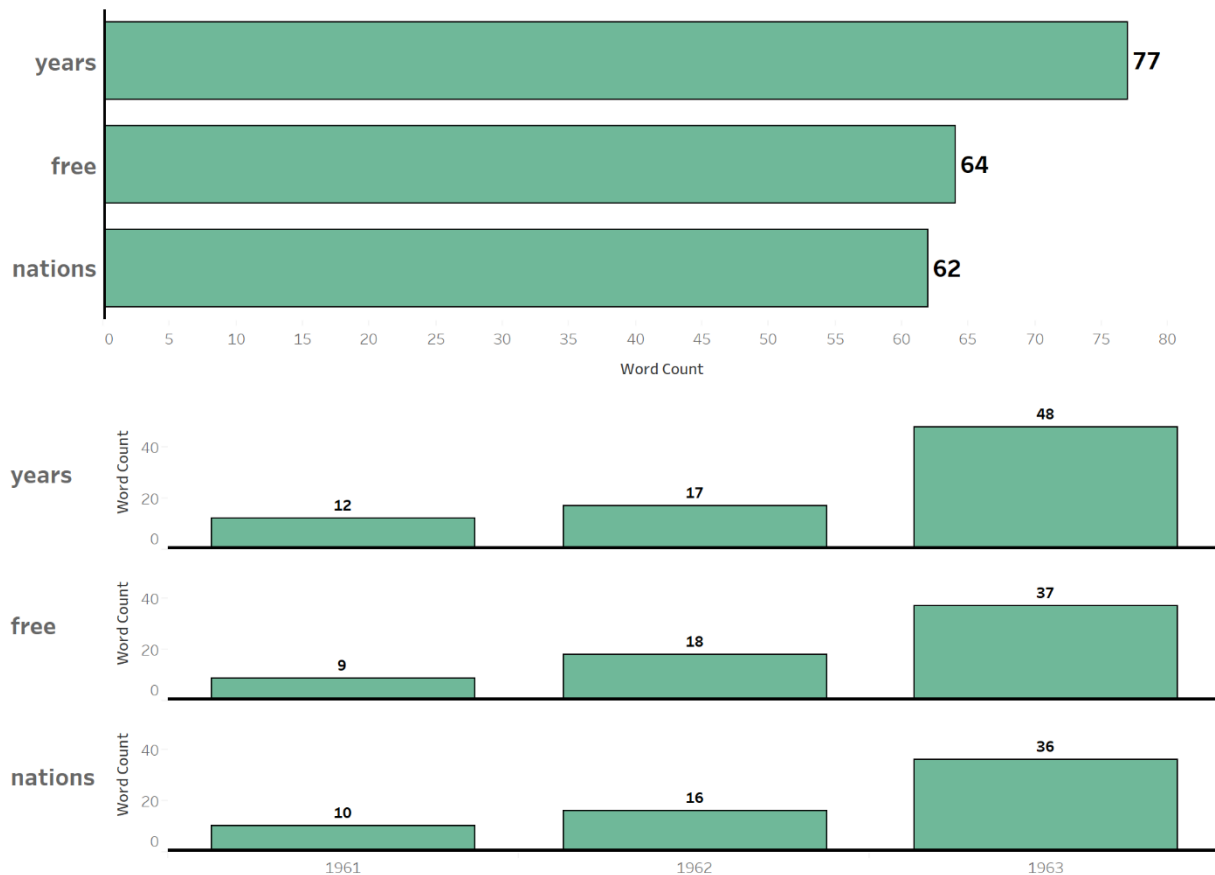


Figure 4. The dashboard shows the frequency of words used in State of the Union Addresses for John F. Kennedy.

The word 'nation' however does appear in the speeches and sees an increase in double of its usage from 1962 to 1963. The word nation could be seen as a substitute for the word 'America' as the country begins to put the country first in front of the government as a theme.

During the Trump Administration, the word ‘America’ is used most frequently a total of 236 times (Figure 5). Even though the word ‘America’ is one of the most frequently used words for all of the Presidents the word ‘years’ interestingly comes in second John F. Kennedy as seen in Figure 4.

Top 3 most frequently used words by Donald J. Trump from 2017-2019 during State of the Union Addresses.

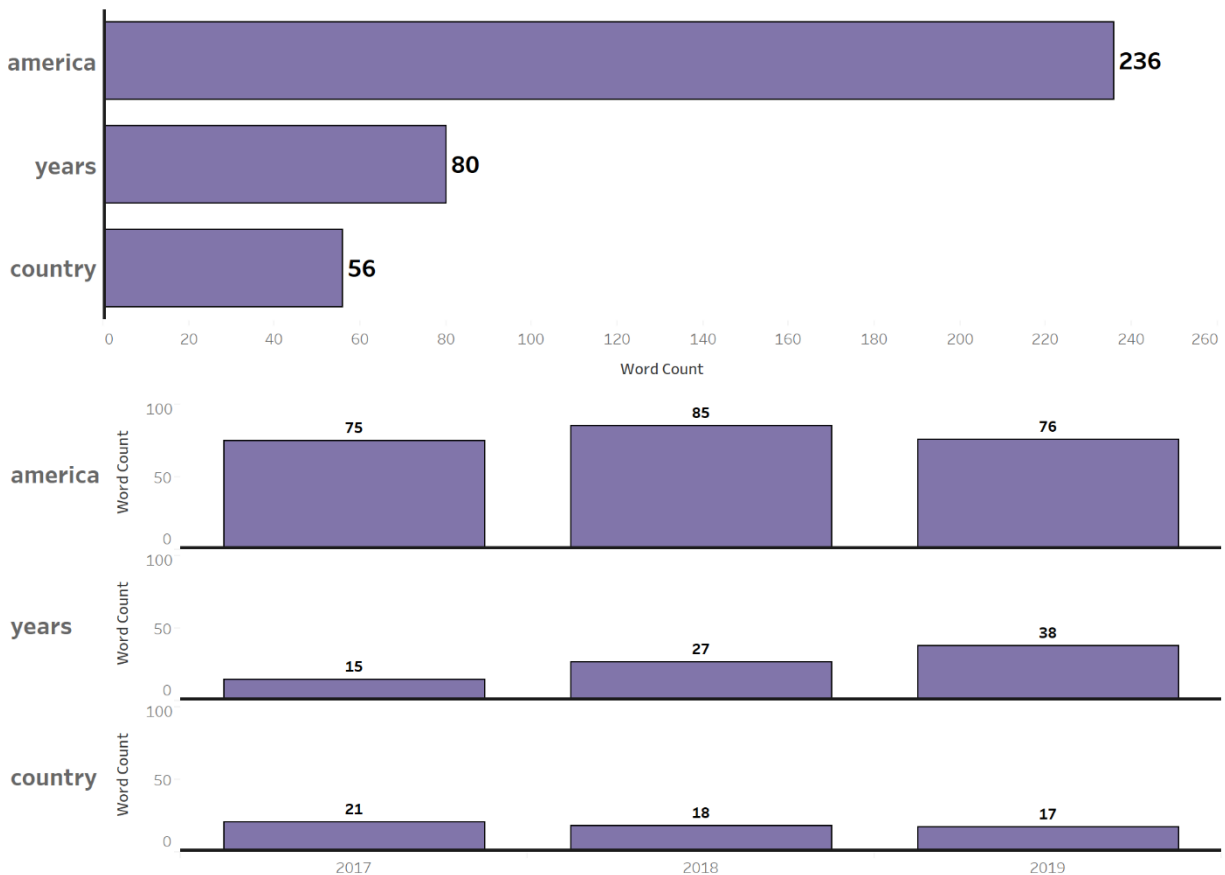


Figure 5. The dashboard shows the frequency of words used in State of the Union Addresses for Donald J. Trump.

Both Trump and Kennedy have similar themes when it comes to their State of the Union addresses; they begin to place the concept of the nation ahead of government (Figure 6).

Throughout the years, you can see a steady increase in usage of each of these words to drive the Presidents message to the American people.

Word analysis of Top 3 words from state of the union speeches by Theodore Roosevelt, John F. Kennedy, and Donald J. Trump

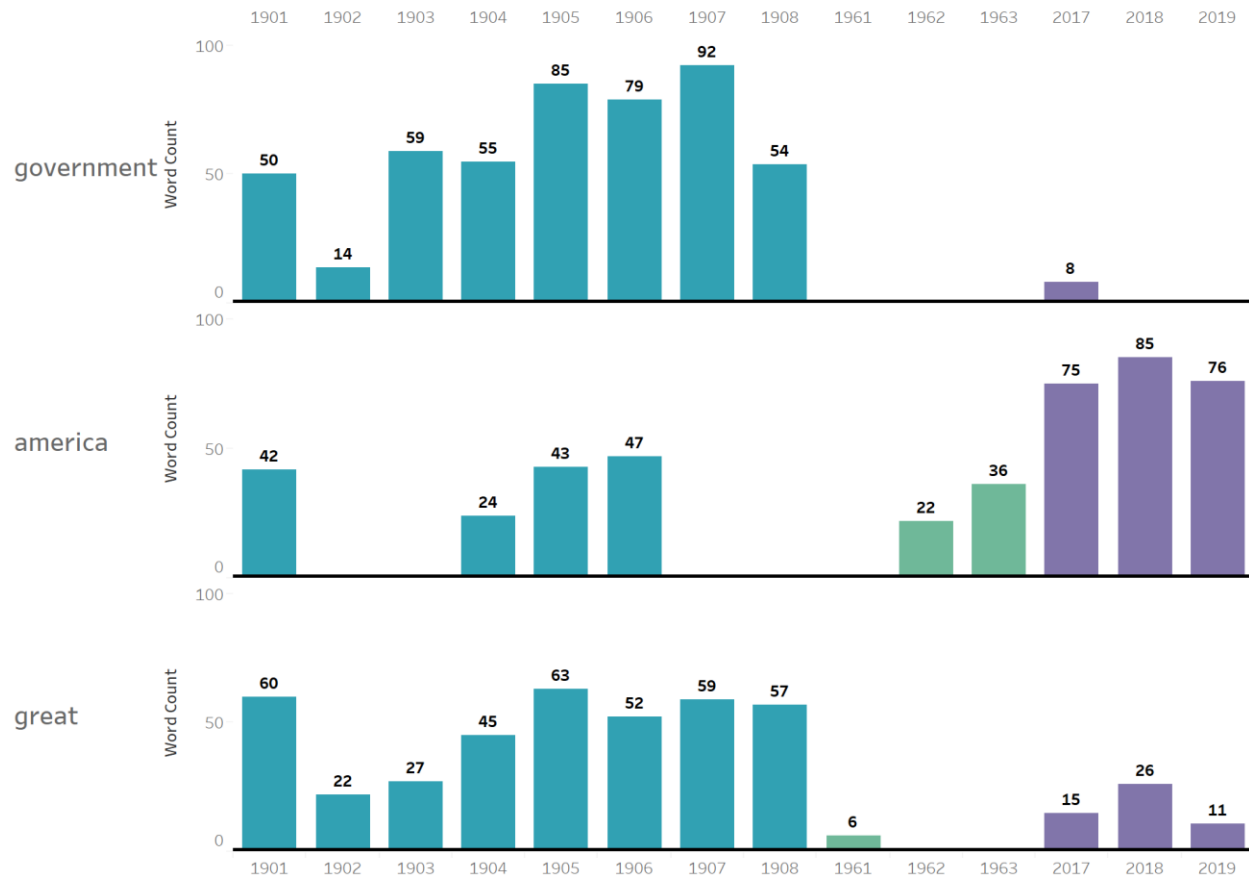


Figure 6. The graph shows a word analysis of the three United States Presidents from over time from 1901 – 2019.

Throughout the Presidents speeches, there are not many redundancies because the message conveyed is concise and easy to understand. To follow their examples listed below are some techniques used in their material to reduce redundancy.

- Avoiding double negatives

- Beware of pleonasm
- Because of using abbreviations
- Use the less is more rule.

Use these techniques as an example in the next speech a person creates to ensure a message gets across clearly.

Conclusion

Using repetition is a powerful tool that can draw attention to the listener, help convey a message, and make a speech more memorable and influential. The essential function of repetition is to lay emphasis and create rhythm. When a line or phrase recurs in a poem or a piece of literature, it becomes noticeable to the readers. By using repetition, the speaker can make their ideas memorable, and draw the attention of readers toward a particular concept without creating redundancy in the information.

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