



A TEXTUAL ANALYSIS OF THE GREAT DEPRESSION:

DH100: THEORY AND METHOD IN THE DIGITAL HUMANITIES | DR. ADAM ANDERSON | JULIANA TORRES | SUMMER 2021

From Liberalism to the New Deal in words:

When FDR became president in 1933, he encountered a nation that had nosedived into despair. The Great Depression was entering its fourth year, and the unemployment rate was at 24.9%, the highest in the country's history. Around 26,000 businesses failed. Stock prices plummeted. It transformed American life.

His predecessor Herbert Hoover was a classic liberal and believed that economic downturns were part of a capitalist economy and were to be expected. As he said in a speech in 1931, government assistance weakened the American character. Hoover hoped that the solution to the Depression would come from voluntary aid and "associational action" by community members and business people and by maintaining a positive mind frame, often making public statements that "the tide had turned." In the eyes of many Americans, President Hoover's response seemed inadequate and uncaring. His nineteenth-century approach to Liberalism no longer served the nation's needs, and FDR's New Deal marked the beginning of a new relationship between Americans and their government.

FDR openly opposed that sentiment and invited the country to establish a new relationship with its federal government. During Franklin Delano Roosevelt's 12-year-long era as president, he gave 27 fireside chats to address a nation recovering from an depression and walking into a world war. Contrary to Hoover, FDR hoped to more government intervention and a change in expectations from the people and the presidency.

My project seeks to find linguisttic evidence of this sentimental shift between Hoover's Liberalism and FDR's New Deal. By analyzing the most frequently used words, sentiment, and topics of the speeches, I hope to find what made one so comforting while the other seemed so out of touch.

What is my data?

My data consist of the 27 full-text speeches given by FDR from 1933 until 1939, the end of the New Deal.

Additionally, I will analyze 16 speeches giving by Hoover from 1929, the first year of the Depression, and 1933, his last year as president. These speeches have been made available online by UCSB's American Presidency Project and by the University of Virginia.

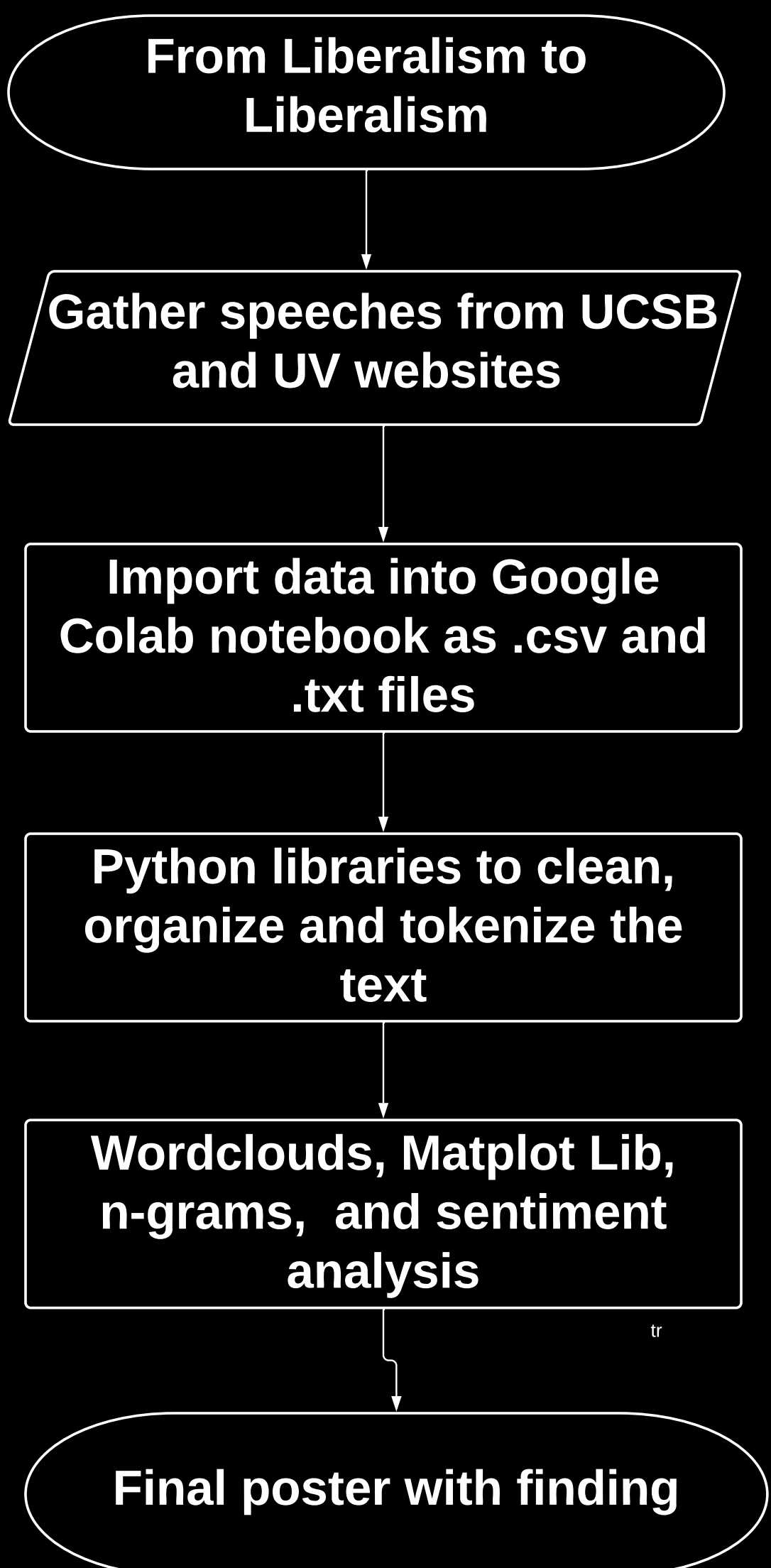
The data will be organized by date in order to provide a chronological analyzes of tone and themes.

What is my question?

Can we find evidence of the shift from classical Liberalism to the New Deal in language?

To answer these questions, I will analyze:

- 1) What were the most used words on their speeches?
- 2) How did they created sentences and who was the focus of their messages? What are the most repeated expressions?
- 3) What is the general sentiment of their language?



I. TOOLS AND METHODS

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Data Preparation:

My first step was to gather the data from the UC Santa Barbara and University of Virginia websites. Since I was dealing with a reasonable amount of data, I manually copied and pasted the speeches for both presidents. I created a .csv file for each president containing all of their speeches organized by data.

I also created a master .txt file with all of the speeches for FDR and another one with all of the speeches for Hoover.

I then used Python libraries and functions to clean, organize and tokenize and standardize the speeches:

```
##basic libraries
import numpy as np
import pandas as pd
from os import path
import re
from collections import Counter

##libraries to clean and organize my text data
import unicodedata
from string import punctuation
import nltk
from nltk.tokenize import word_tokenize
from nltk.tokenize import sent_tokenize
from nltk.corpus import stopwords
from nltk.corpus import words
from nltk.stem.snowball import SnowballStemmer
nltk.download("stopwords")
nltk.download("averaged_perceptron_tagger")
```

Data Analysis and Visualization:

I plan to present the data in steps. First the data in a Pandas dataset to give an idea of basic data organization. Then I will use the following libraries to analyze and present the data:

```
##visualization library
import matplotlib.pyplot as plt
%matplotlib inline
plt.style.use('seaborn-bright')
from PIL import Image
from wordcloud import WordCloud, STOPWORDS
from nltk.util import ngrams, bigrams, trigrams
import spacy
import seaborn as sns
```

1. Text Frequency Analysis:

I will use Matplotlib and Wordcloud to create visualization of the most frequently used words on their speeches.

2. N-Grams:

Next I will do a closer analysis of word choice by using n-grams to identify patterns in phrase and expression formation. For example: maybe above the wordcloud shows that both presidents used the word "Government" several times. I want to analyze what was the content of those uses. What words were associated with the word "government" by Hoover and which were associated by FDR.

3. Sentiment Analysis:

Finally I will perform sentiment analysis to try to identify the overall feeling of those statements and present it using matplotlib.

II. DATA VISUALIZATION

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Wordcloud

The Wordcloud will be my first line of analysis to identify right away some of the most commonly used words in the text. The code will show either the master wordcloud for each president or the wordcloud for a particular speech, depending on the data entered in the Jupyter code:

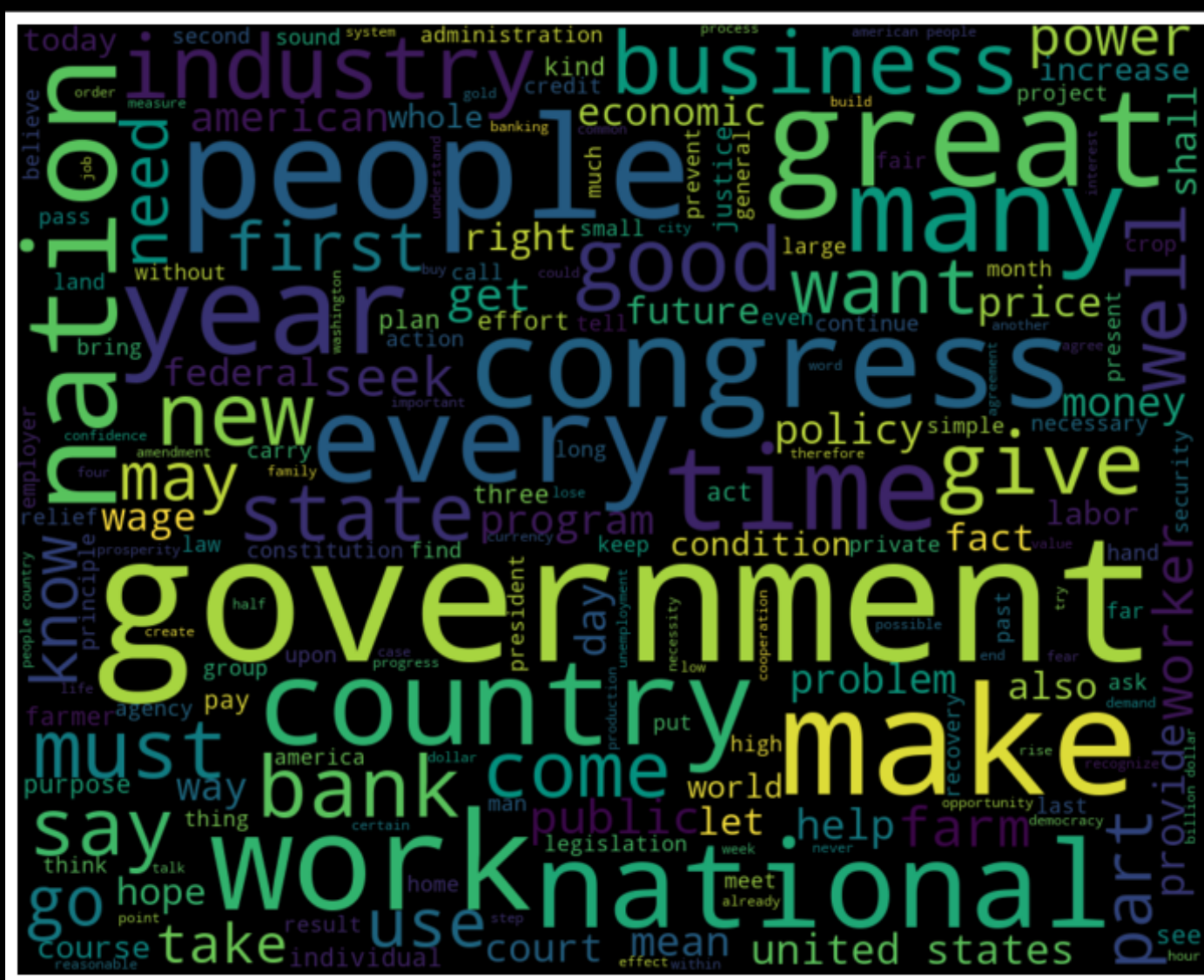


Fig. 1. FDR full text wordcloud

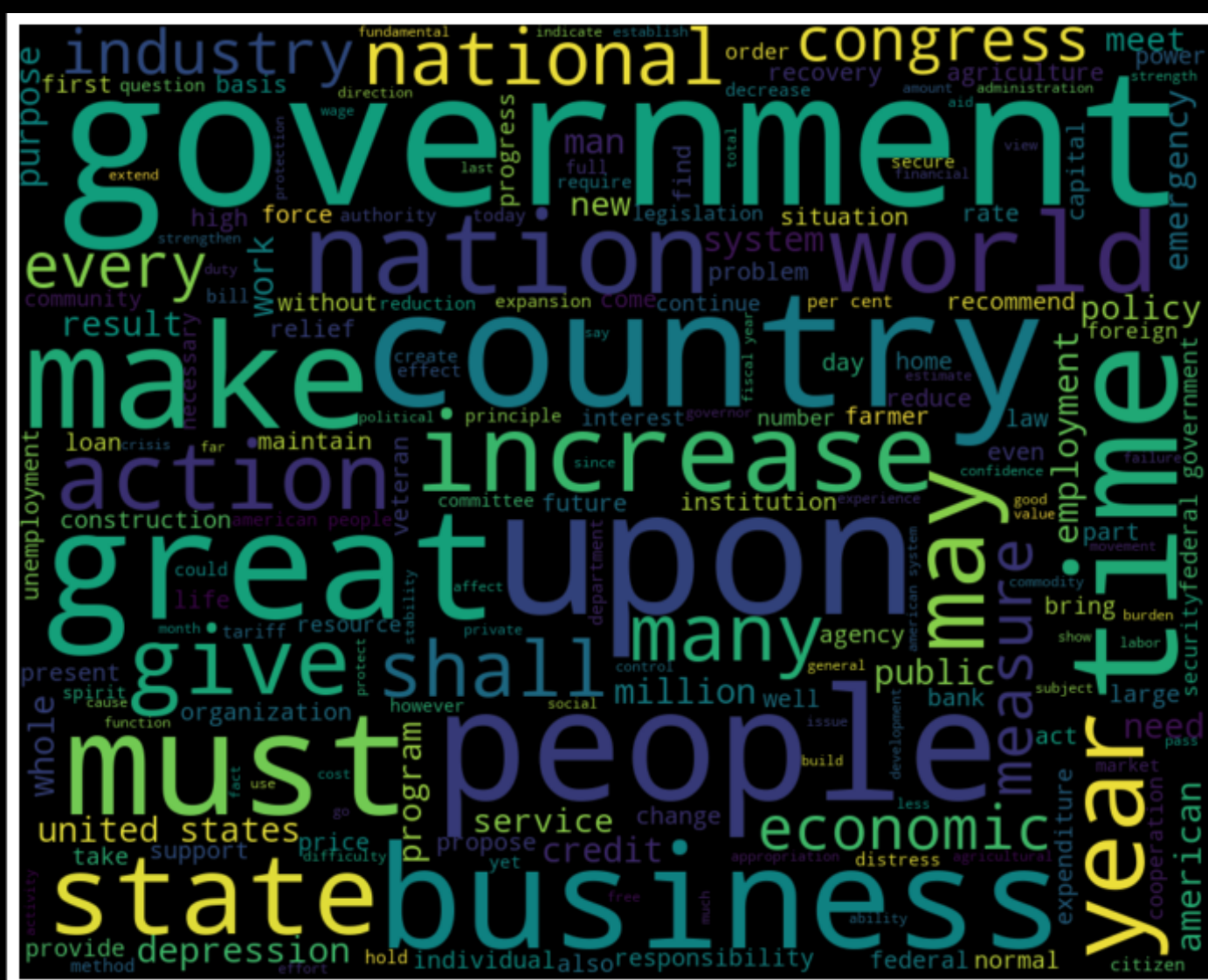
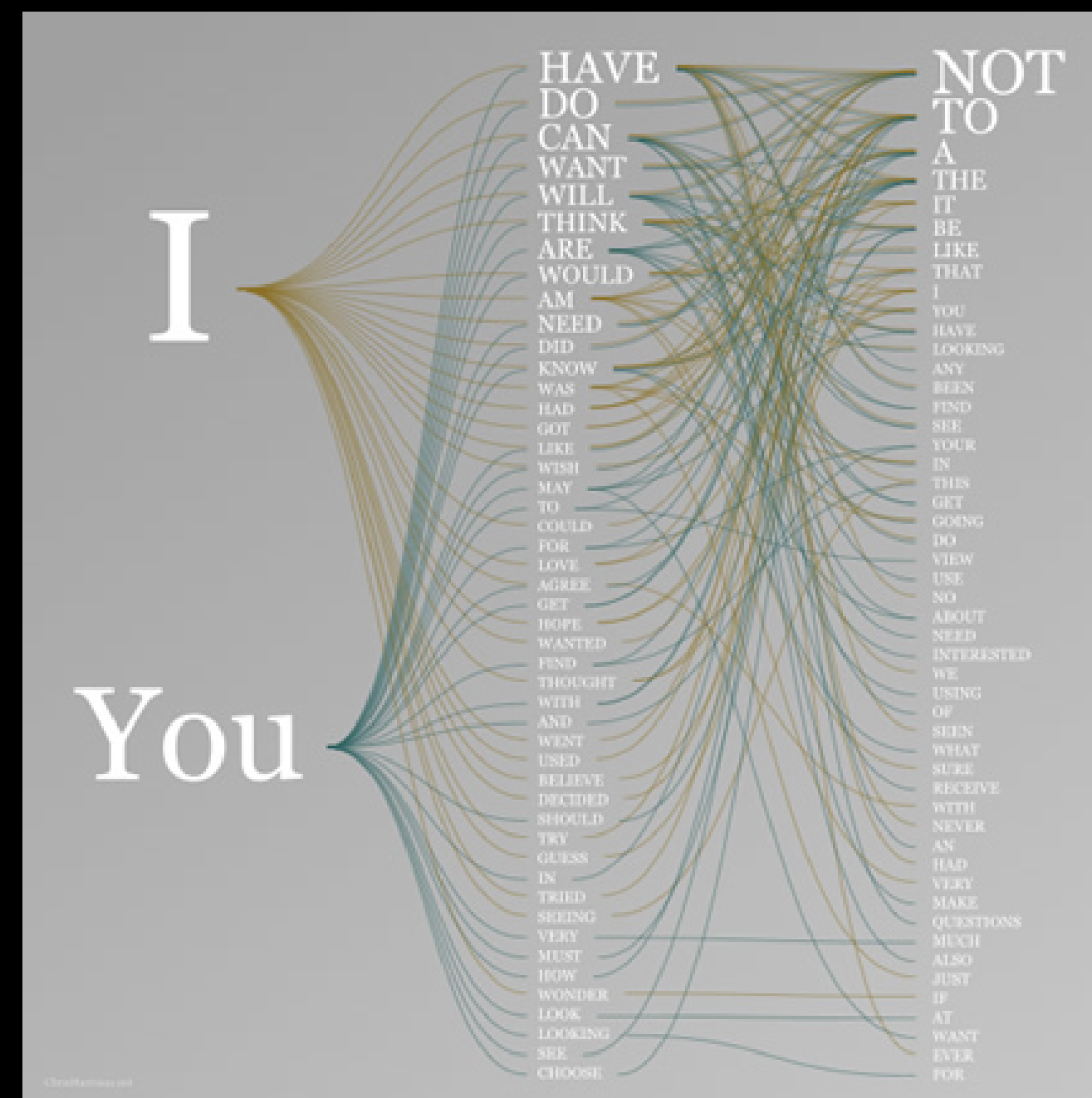


Fig. 2. Hoover full text wordcloud

N-Grams

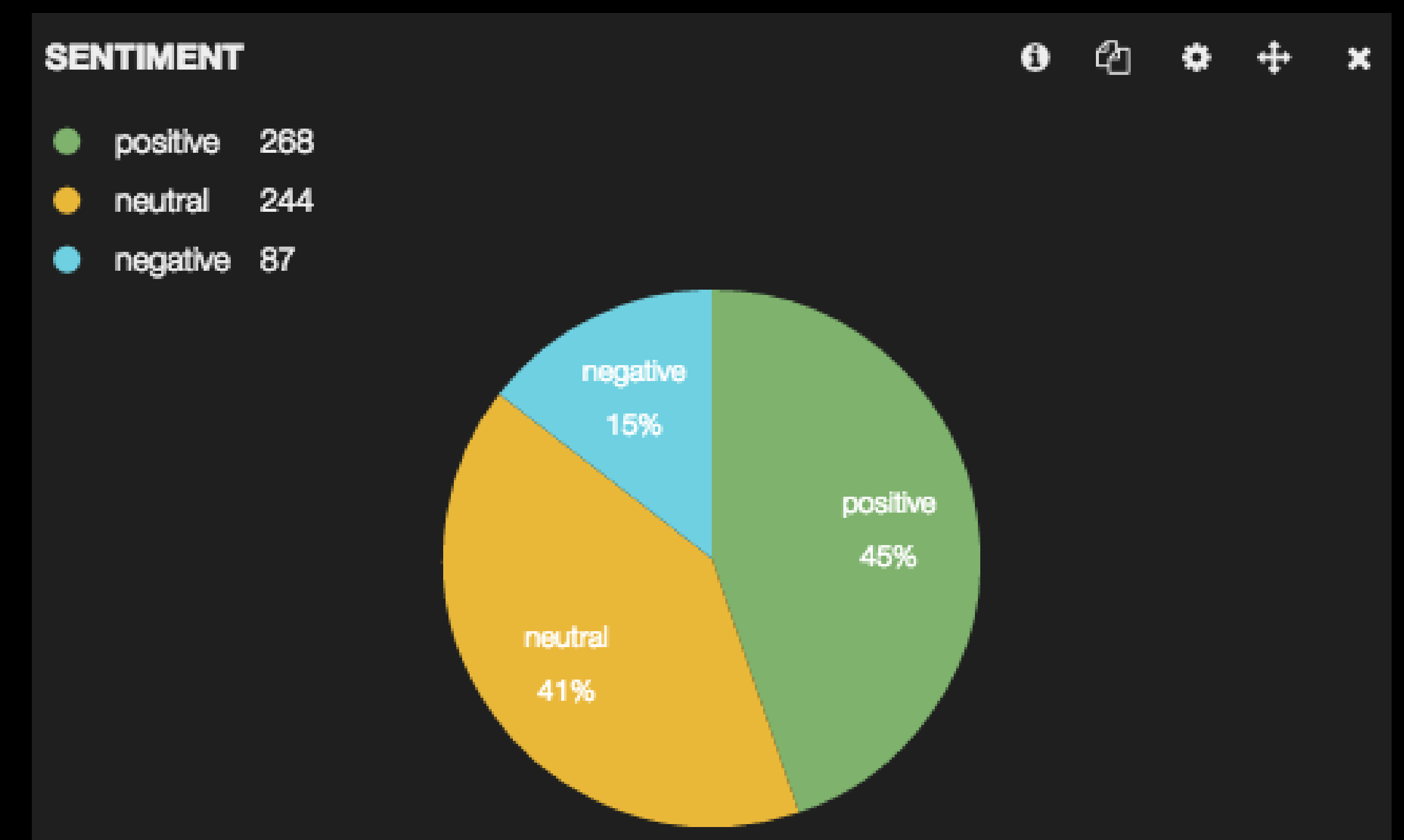
N-grams will be the next step on my analysis of word correlation and the patterns between these correlations. As mentioned before, because of the nature of these documents (they are all governmental speeches) a lot of the initial analysis will show a lot of similarities. With M-Grams I hope to start seeing the fault lines:



Sentiment Analysis:

Finally I will perform a simple sentiment analysis to identify the general sentiment of the speeches. This result might show similar sentiments despite a well known belief that these presidents embraced opposite points of view and overall disposition towards the country's situation and might show a limitation in sentiment analysis when studying the dissemination of ideas.

Or it might show a difference in sentiments that we might be able to correlate with a shift if the population's sentiments as well:





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Who helped me?

Towards Data Science:
<https://towardsdatascience.com/from-dataframe-to-n-grams-e34e29df3460>

Monkey Learn:
<https://monkeylearn.com/blog/sentiment-classification/>

UCSB American Presidency Project
<https://www.presidency.ucsb.edu/>

Cecilia Li, Summer 2020
shorturl.at/kANOP

What is my takeaway?

By analyzing FDR's and Hoover's speeches, I hope to understand if we can see a transition from classical Liberalism to the New Deal in the language of the presidents.

Taking into consideration that the Fireside Chats are seen as highly successful speeches in setting the tone of the nation and accepting this as true, I

Ideally this model could be replicated to compare and contrast different speeches and understand the reflection of those sentiments in the real world.

Where to go from here?

Speech can be extremely personal. Even clearly consequential speeches can be defended as simple freedom of speech. How has presidential communication changed since FDR? Can we identify a clear shift in communication between different presidents? Understanding how people of power use their language might make us better prepare to understand their message.