

Cumulative Sentiment Line Chart

Andrew Mayo

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- `library(dplyr)`

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- `library(dplyr)`

- `library(tidytext)`

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- `library(dplyr)`

- `library(tidytext)`

- `library(gutenbergr)`

- `library(ggplot2)`

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- `library(dplyr)`

- `library(tidytext)`

- `library(gutenbergr)`

- `library(ggplot2)`

- `library(stringr)`

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```
gutenberg_works(str_detect(title, "Frankenstein"))
```

```
## # A tibble: 1 x 8
```

```
##   gutenberg_id
```

```
##           <int>
```

```
## 1           84 Frankenstein; Or, The Modern Prometheus
```

```
## # ... with 6 more variables: author <chr>, gutenberg_id <int>, title <chr>, language <chr>, gutenberg_bookshelf <chr>, right <chr>
```

```
## #   language <chr>, gutenberg_bookshelf <chr>, right <chr>
```

```
## #   has_text <lgl>
```


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```
afinn <- get_sentiments("afinn")  
frank <- gutenberglload(84)
```

Unpacking Words

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```
f_words <- frank%>%  
  unnest_tokens(word,text)  
colnames(f_words)  
  
## [1] "gutenberg_id" "word"  
  
f_words$word[500]  
  
## [1] "may"
```

Adding Word Numbers

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```
nrow(f_words)
```

```
## [1] 75175
```

```
f_words$word_number <- 1:75175
```

The Inner-join

```
frank_sent <- inner_join(afinn, f_words)
```

```
## Joining, by = "word"
```

```
frank_sent$gutenberg_id <- NULL  
head(frank_sent)
```

```
## # A tibble: 6 x 3
```

```
##           word score word_number
```

```
##      <chr> <int>      <int>
```

```
## 1  abandon     -2      30647
```

```
## 2  abandon     -2      69663
```

```
## 3 abandoned     -2       1996
```

```
## 4 abandoned     -2     41559
```

```
## 5 abandoned     -2     74516
```

```
## 6    abhor      -3     30461
```

Arranging Words in Book Order

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```
frank_sent <- frank_sent%>%  
  arrange(word_number)  
head(frank_sent)  
  
## # A tibble: 6 x 3  
##           word score word_number  
##       <chr> <int>         <int>  
## 1    rejoice      4           24  
## 2         no     -1           28  
## 3   disaster     -2           29  
## 4      evil     -3           43  
## 5      dear      2           57  
## 6 confidence      2           64
```

Getting the Cumulative Sentiment I

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```
frank_sent$accum_sent <- cumsum(frank_sent$score)
head(frank_sent)
```

```
## # A tibble: 6 x 4
##       word score word_number accum_sent
##   <chr> <int>      <int>      <int>
## 1 rejoice     4         24         4
## 2      no    -1         28         3
## 3 disaster   -2         29         1
## 4     evil   -3         43        -2
## 5    dear     2         57         0
## 6 confidence  2         64         2
```

Changing Sentiment Throughout Frankenstein I

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```
plot <- ggplot()+  
geom_line(data = frank_sent,  
          aes(x = word_number,  
              y = accum_sent))
```

Changing Sentiment Throughout Frankenstein II

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