# Gutenberg Library Analysis









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#### Some of the Latest Books





















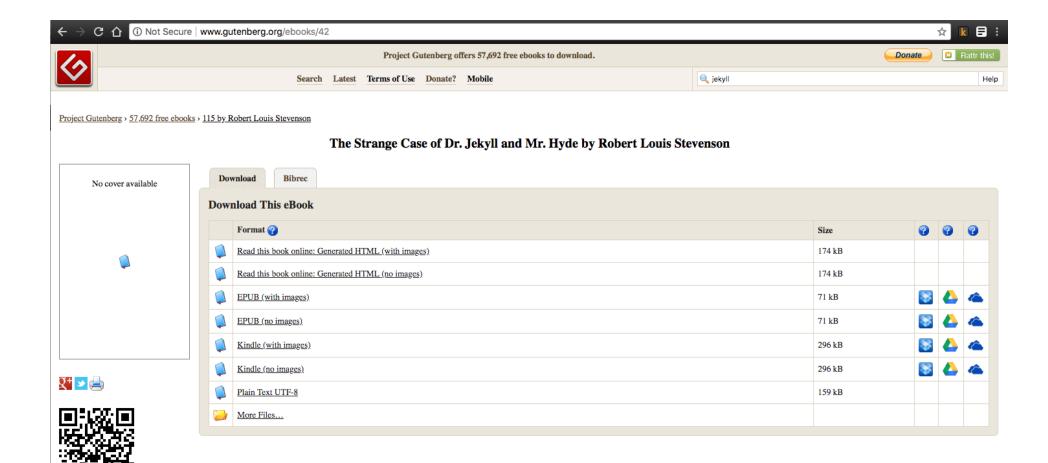
#### Welcome

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#### News







## gutenbergr: Search and download public domain texts from Project Gutenberg

#### David Robinson

#### 2018-01-26

The gutenbergr package helps you download and process public domain works from the <u>Project Gutenberg</u> collection. This includes both tools for downloading books (and stripping header/footer information), and a complete dataset of Project Gutenberg metadata that can be used to find words of interest. Includes:

- A function gutenberg\_download() that downloads one or more works from Project Gutenberg by ID: e.g., gutenberg\_download(84) downloads the text of Frankenstein.
- Metadata for all Project Gutenberg works as R datasets, so that they can be searched and filtered:
- gutenberg\_metadata contains information about each work, pairing Gutenberg ID with title, author, language, etc
- gutenberg\_authors contains information about each author, such as aliases and birth/death year
- gutenberg\_subjects contains pairings of works with Library of Congress subjects and topics

### **Project Gutenberg Metadata**

This package contains metadata for all Project Gutenberg works as R datasets, so that you can search and filter for particular works before downloading.

The dataset gutenberg\_metadata contains information about each work, pairing Gutenberg ID with title, author, language, etc:

## Goals

Topics → Subgenres

Sentiment → Plot

Recommendations

## Topics -> Subgenres

Clean

- Fantasy, Adventure, Fiction, Children, Myth, Folklore
- ~6% of Gutenberg Library

Lemmatize

• The cars are different → the car be differ

**TFIDF** 

• 12,000 term limit

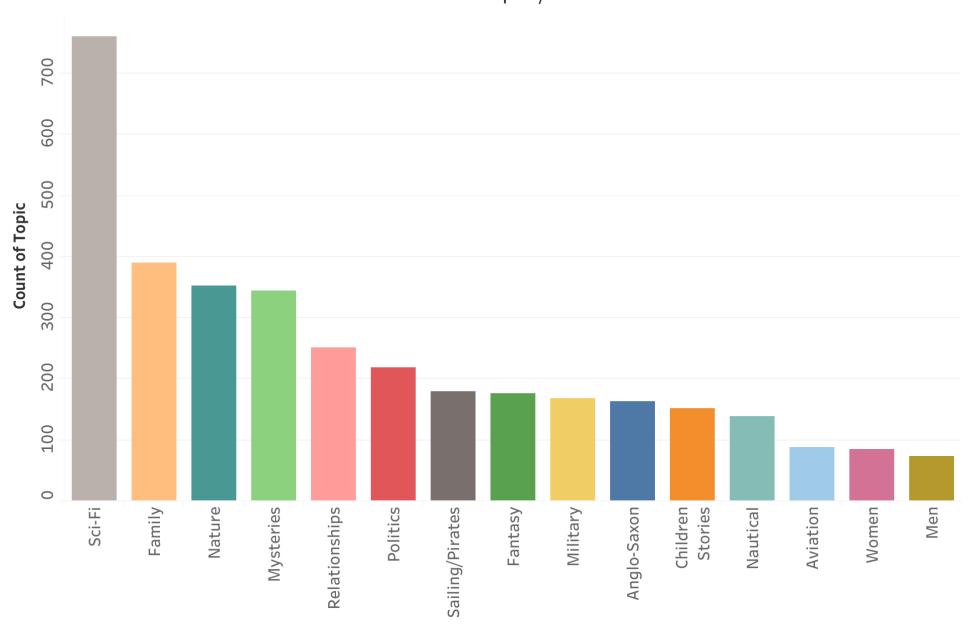
NMF

- <del>LDA</del>
- 15 topics

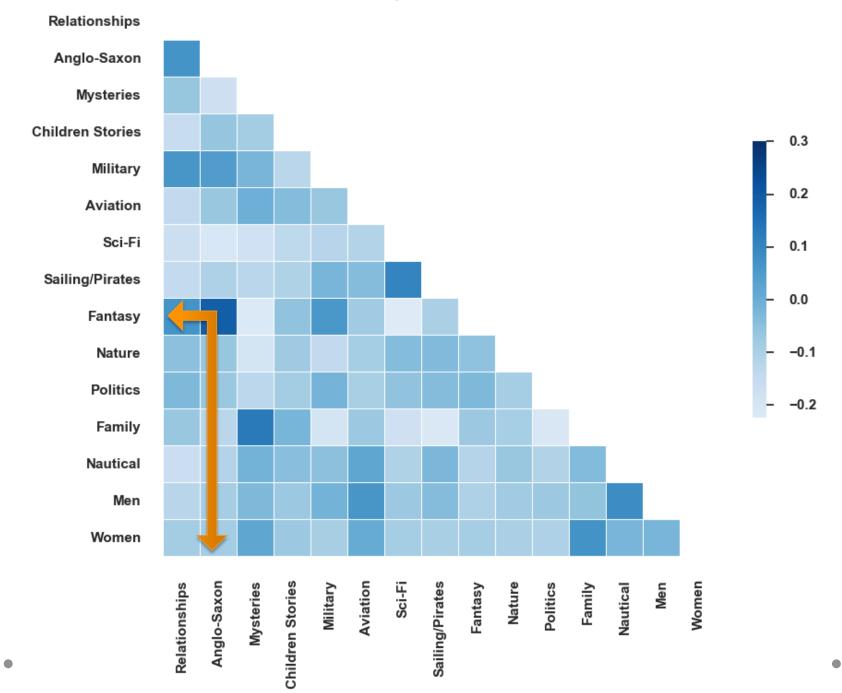
Clusters

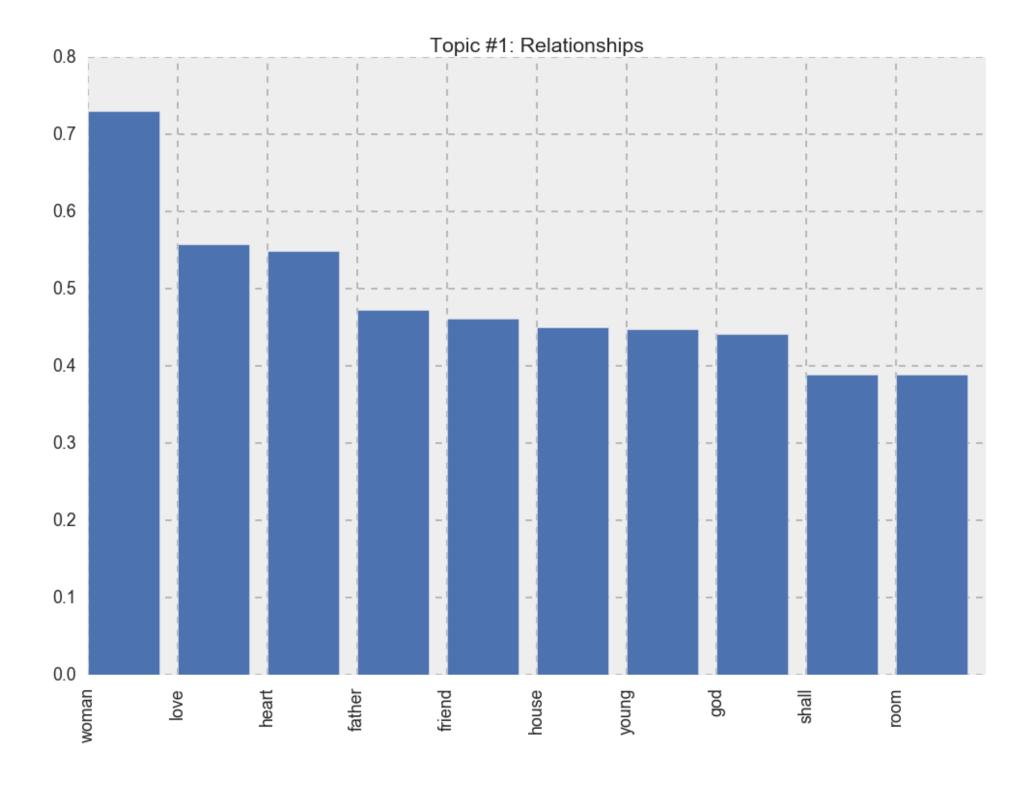
- K-means
- T-SNE

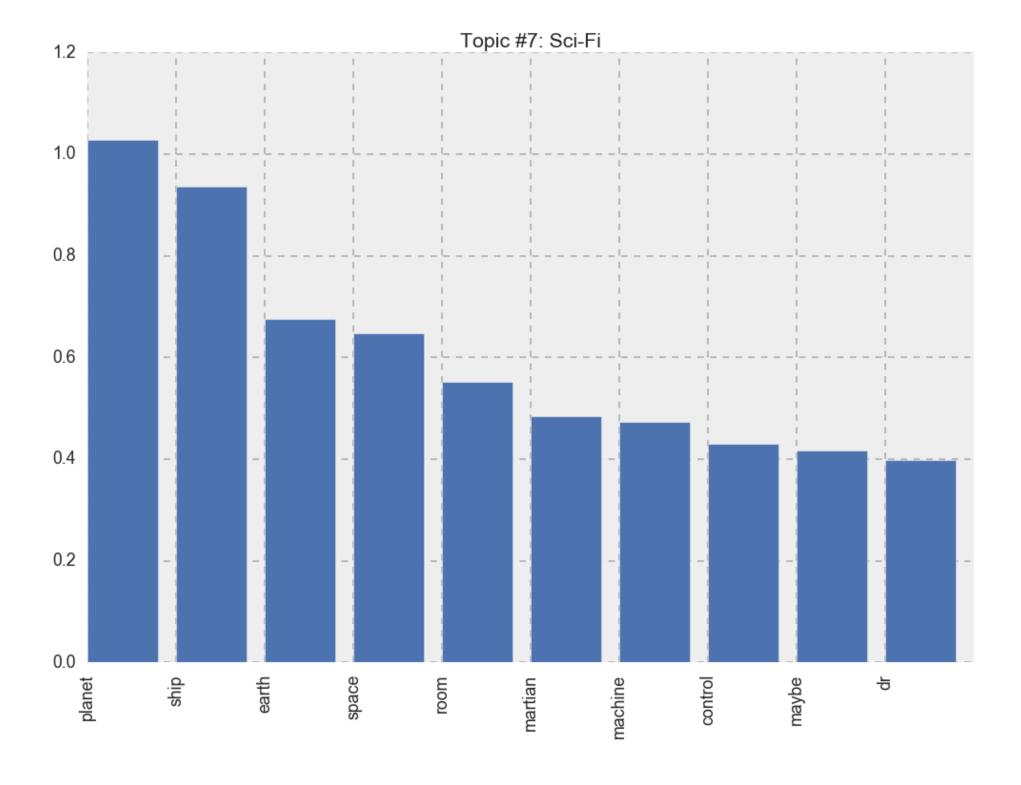
### Distribution of Topics/Clusters

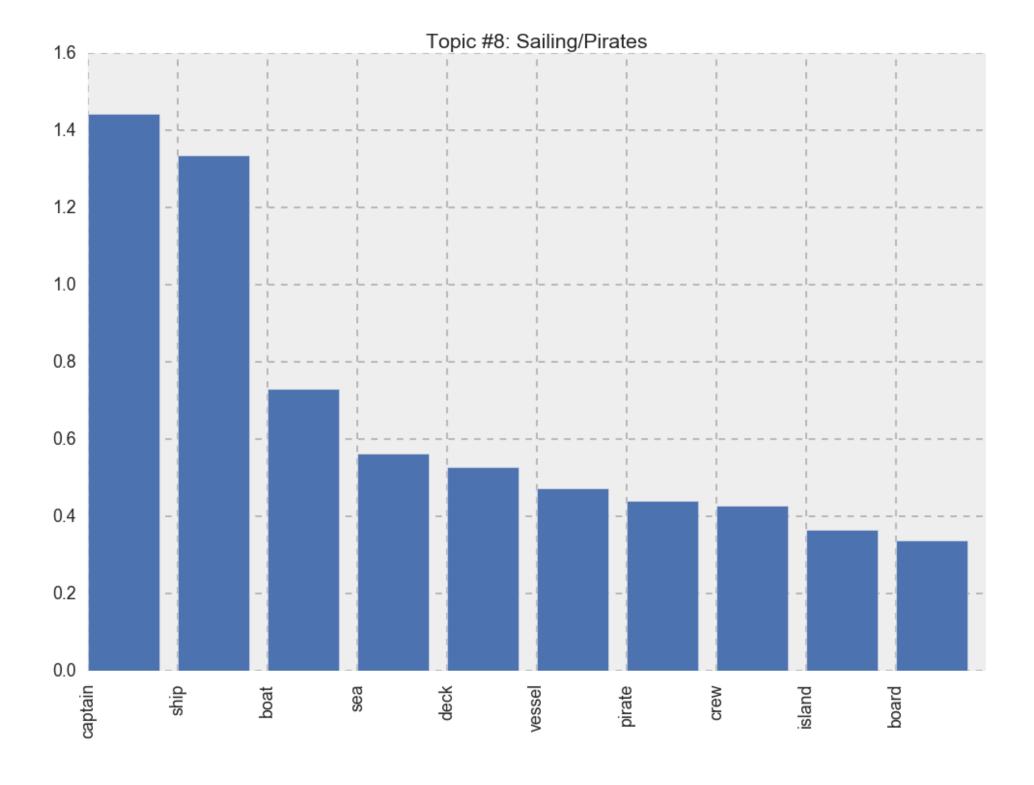


### **Topic Correlation**

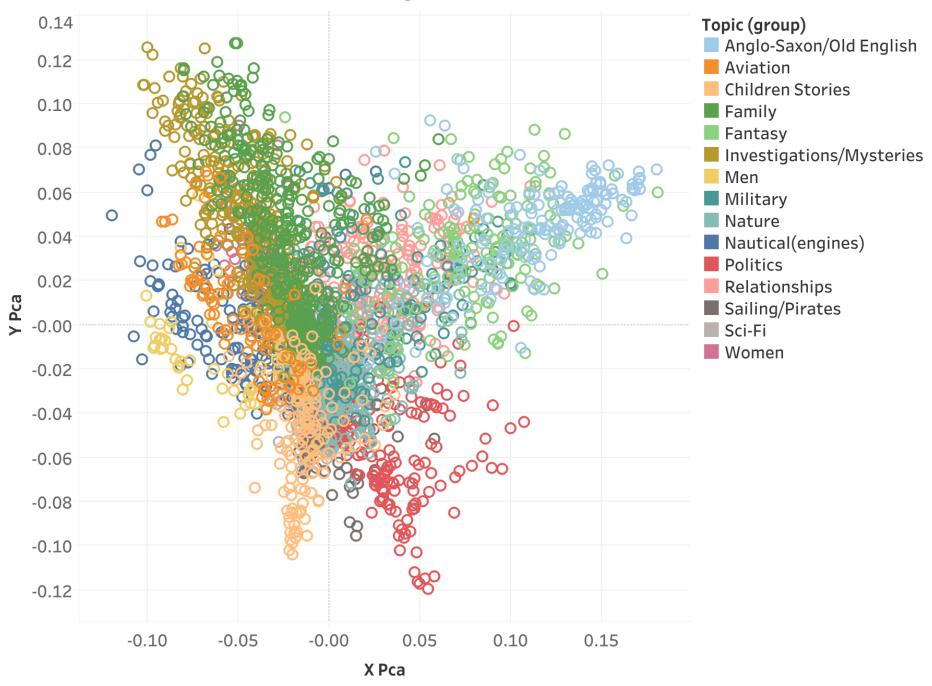


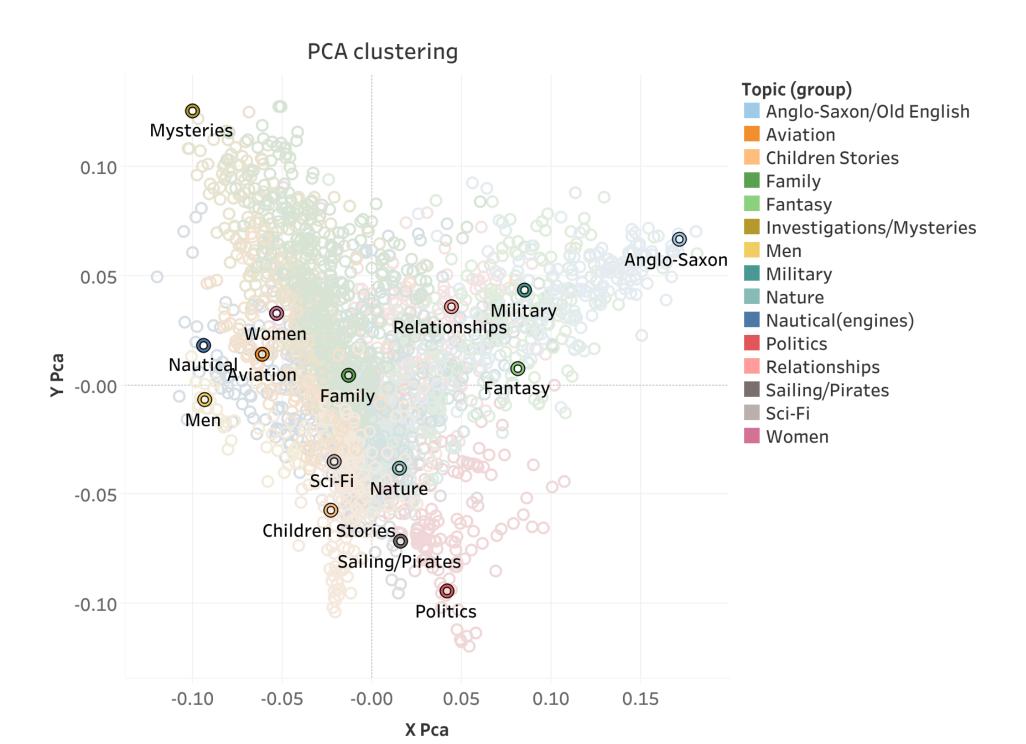




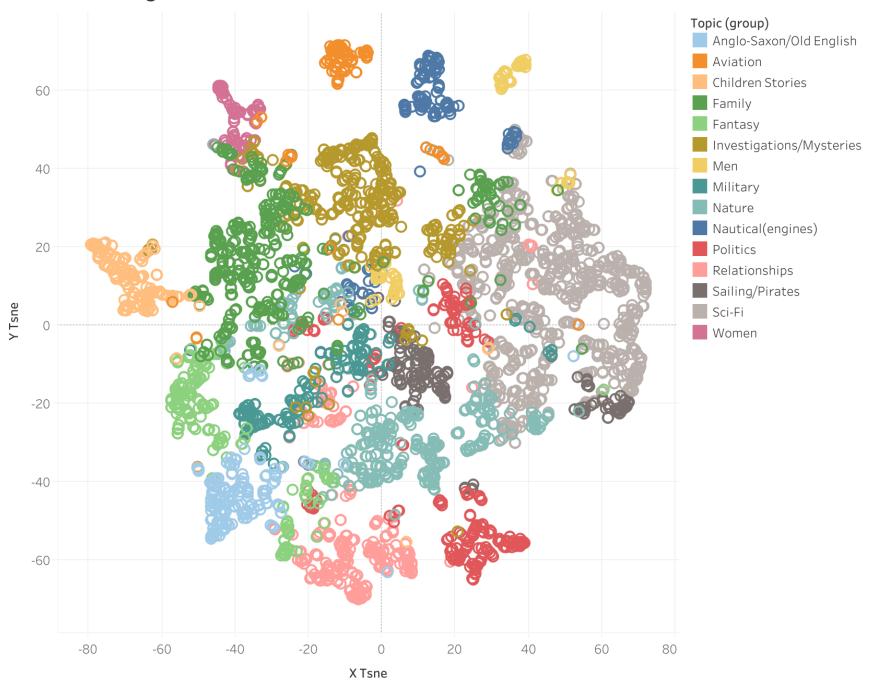




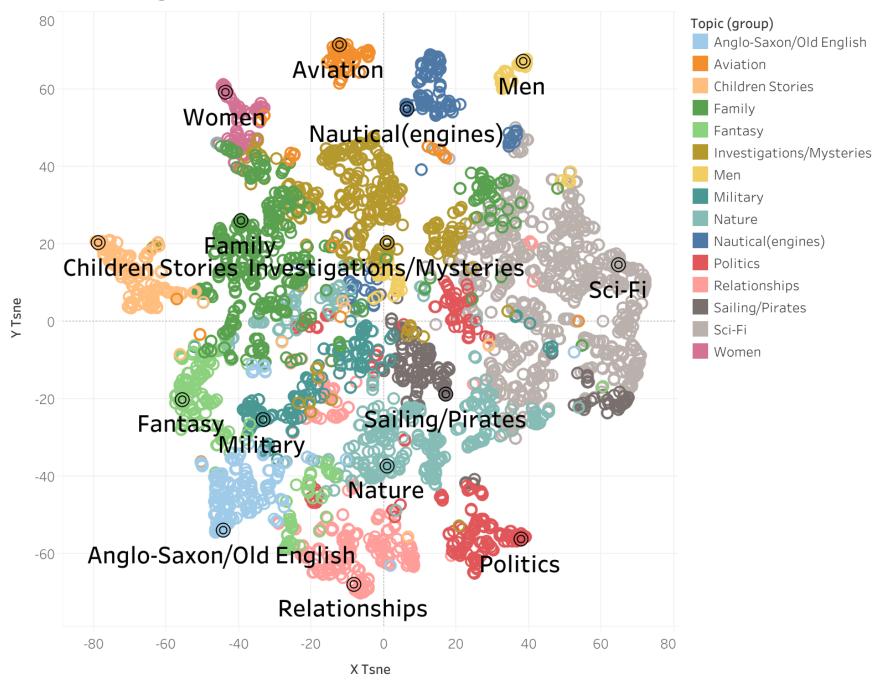




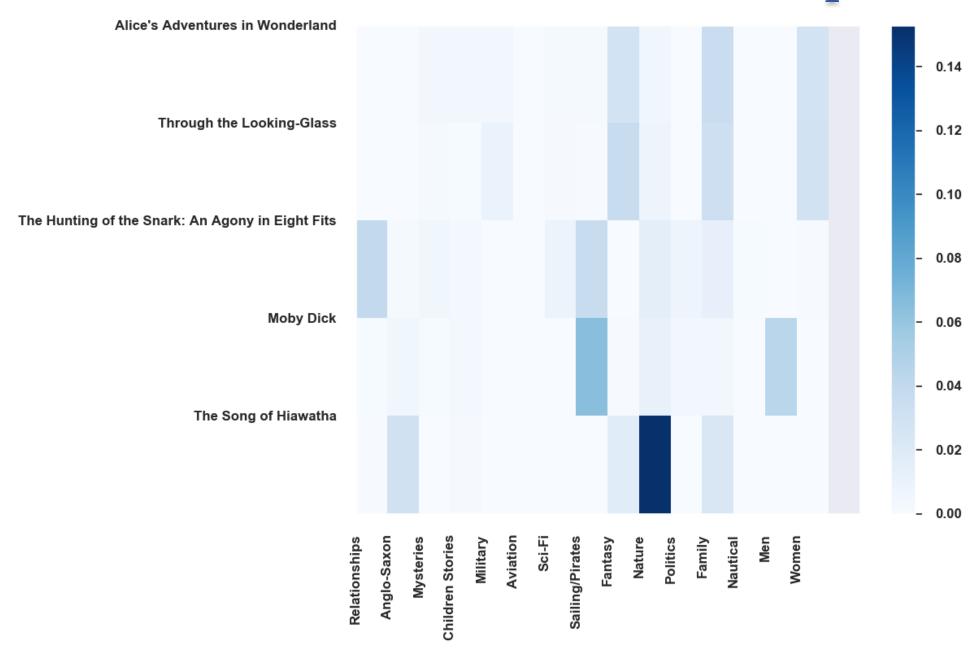
### TSNE clustering



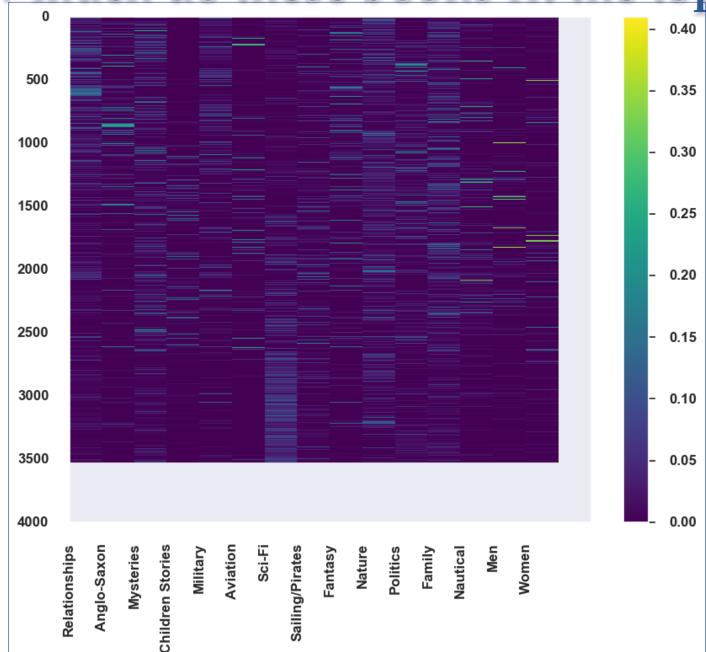
### **TSNE** clustering



## How much do these books fit the topics?

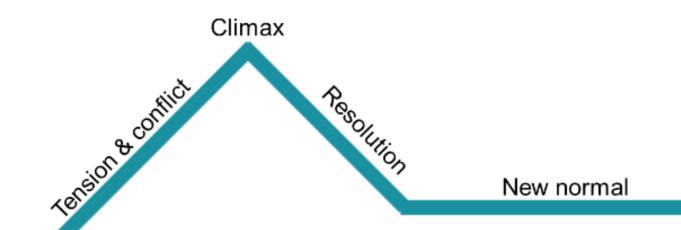


## How much do these books fit the topics?



## Sentiment -> Plot

## **Classic Narrative Arc**



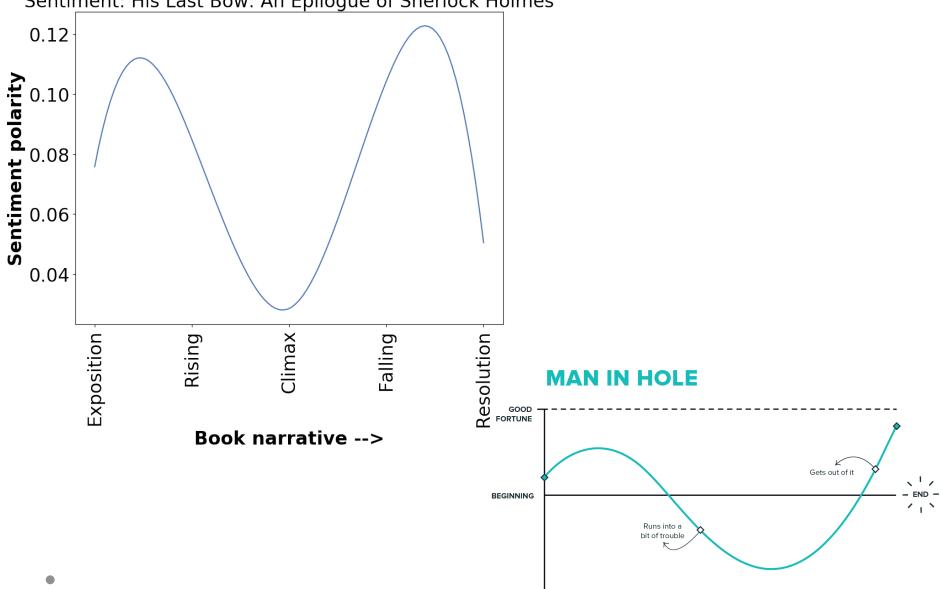
Setting & characters

"THERE'S NO REASON WHY THE SIMPLE SHAPES OF STORIES CAN'T BE FED INTO COMPUTERS."

- KURT VONNEGUT

## Plot shapes

Sentiment: His Last Bow: An Epilogue of Sherlock Holmes



ILL FORTUNE

## Topic Shift -> Complexity

His Last Bow: An Epilogue of Sherlock Holmes (score:2.59)

