

1. Introduction

What does ethical consumption entail? Today, it often means making purchases that involve more environmentally-friendly materials and laborers working under fair conditions. But how was the concept of ethical consumption different during the Early Modern period in pre-capitalist Europe? **The objective of this project is to analyze the relationship between consumption and ethics.** We used philosophical and religious understandings of ethics to analyze specific consumption items. We used sentiment analysis to understand the sentiments surrounding each consumption item and cosine similarity to see how consumption items relate to each other. Our initial dataset of 60k texts came from Early English Books Online (EEBO), and after filtering for relevant texts that are within our date range (1580-1630), we had a dataset of 10.1k texts.

2. Preliminary Text Organizing

Text Cleaning and Normalizing

- Cleaned for Bag-of-Words (BOW) model
- Normalized spelling with VARD

Topic Modeling

- Document Term Matrix to calculate frequency of terms + Latent Dirichlet allocation (LDA) to match text to topic
- Filtered for relevant texts using topic modeling by creating a lexicon

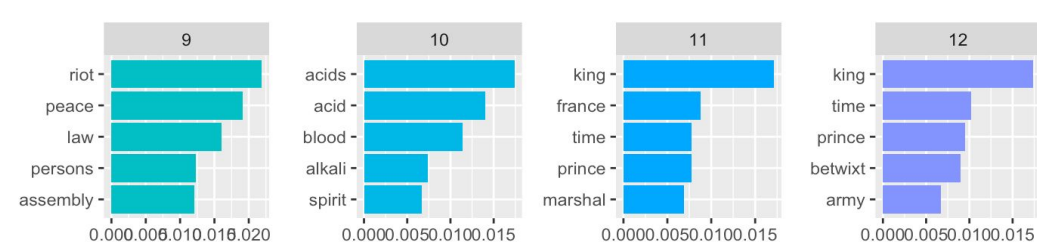


Fig. 1: visual of topic modeling output in R

3. Methods and Results

Methods

- Created “context windows” (5 words before and after a word) around consumption words we wanted to analyze
- Conducted dictionary-based sentiment analysis using VADER

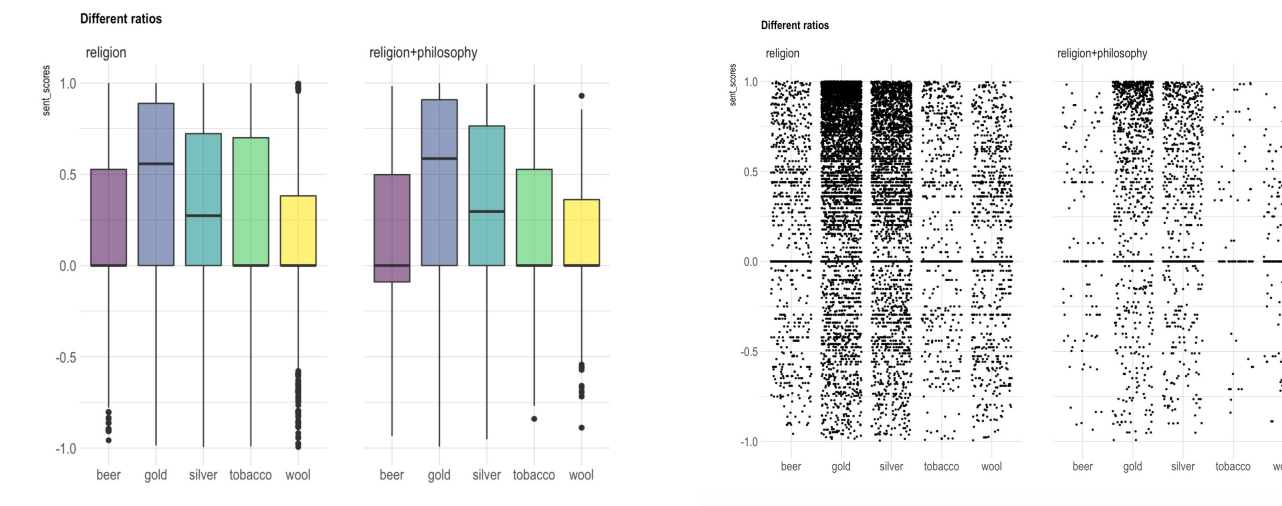


Fig. 2 & 3: descriptive statistics (left) and distribution (right) of sentiments for five key consumption items

Results

- Beer and Tobacco are mostly associated with positive sentiments-- likely because these intoxicants were considered sophisticated
- Wool has negative outliers possibly due to metaphors and landowners evicting tenants to increase wool production

Cosine Similarity

Methods

- Used Word2Vec to create embedding models
- Used cosine similarity heatmap to choose relevant words for cosine similarity graphs in results section

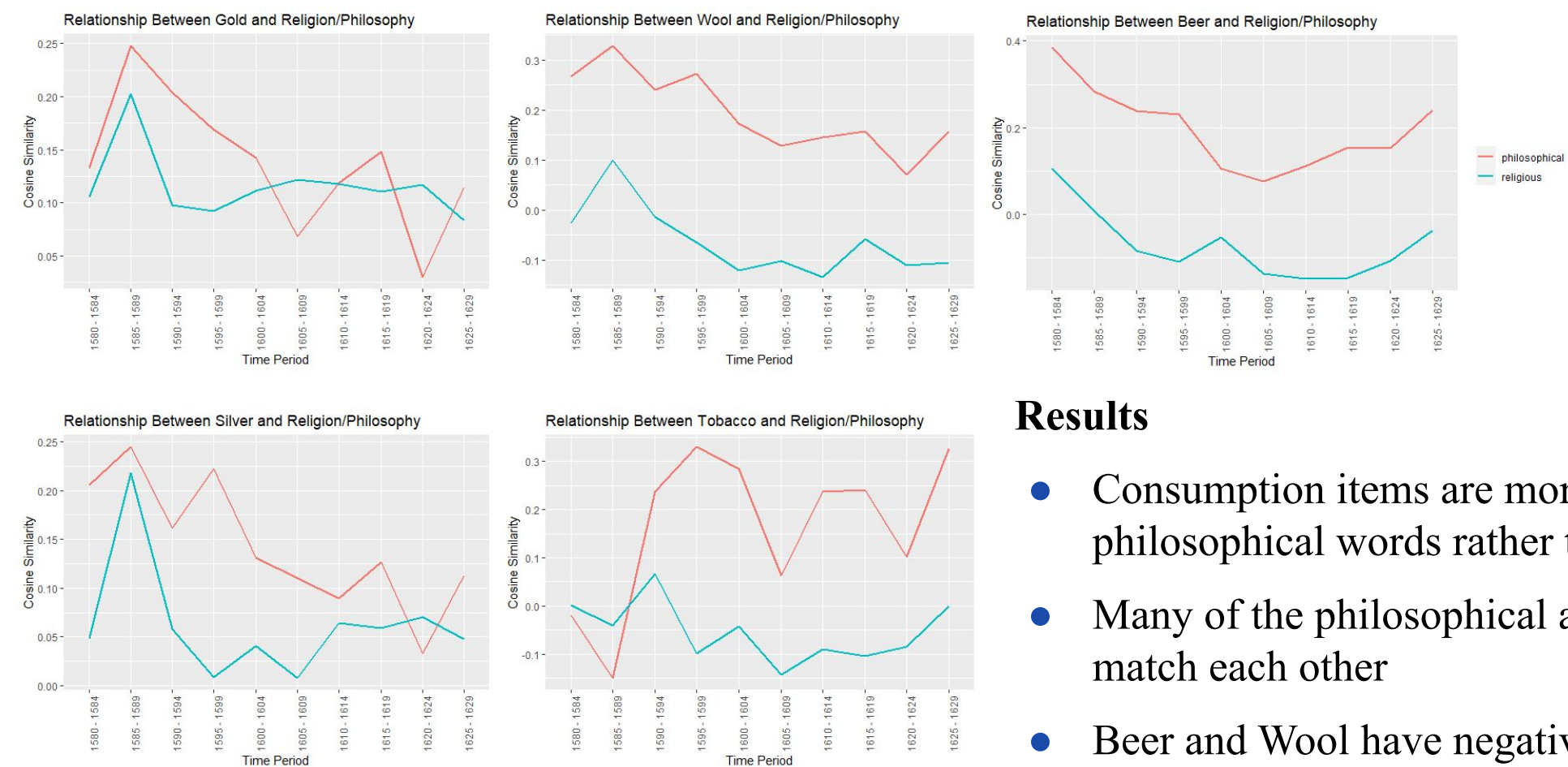


Fig. 4 - 8: Cosine similarity between consumption items and religious and philosophical terms over time

Results

- Consumption items are more related to philosophical words rather than religious words
- Many of the philosophical and religious trends match each other
- Beer and Wool have negative cosine similarity to religious words

4. Future Directions and References

Next Steps

- Explore negative cosine similarity relationships
- Develop Word Frequency Graphs to discover other consumption items for analysis
- Research ways to distinguish metaphorical language from literal language
- Restructure lexicons for text filtering

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Other Links

To see our references and details about our work, please check out our website and our github.

Website:



GitHub:

