Thematic Differences in *Analects* and *Mencius*Through Topic Modelling

Background

Analects is a large collection of sayings attributed to the Chinese Philosopher Confucius and his disciples. *Mencius* is the philosophical successor to the philosophy of human nature presented in *Analects*, by philosopher Mencius. Through topic-modeling methods, we can explore the relationship between one of the two most important texts in early Chinese thought. Implementing an intersection of close reading and distant reading, this paper will briefly describe the methods used and expand on specific topics highlighted through the results of the topic modelling.

Methodology

The method used is as follows:

- 1. Text Pre-processing:
 - a. Converted the texts into plain text files (for the purpose of uniformity, English translations of both the texts by the same author, James Legge, are used)
 - b. Identified and removed stopwords (Proper nouns, titles, chapter numbers, etc)
- 2. Ran the texts through MALLET, a Java-based package for statistical natural language processing
- Generated sets topic words and composition percentages (what topics compose each text) for the two texts combined and individually

- 4. Experimented with the number of topics, scaling down from a starting point of 20.
 Deriving from prior knowledge about the texts and by analysing the model outputs, 6 topics produced the most logical and effective results
- 5. Organized the data and labelled the sets of topic words semantically and by referring to the texts (Table 1, 2, and 3)
- 6. Generated an initial visualisation through a word cloud using Python to provide a bigger picture (Figure 1 and 2)
- 7. Produced a heatmap from the composition percentages from the combined text topics (Figure 3)

The word clouds provide a general overview of how *Analects* and *Mencius* thematically differ.

Table 3 provides a summary of the results (the first 5 words carry the most weight in the topic)

Table 4 uncovers anomalies and interesting statistics that inspire further exploration. Only topics that render each of these texts *unique* and *different* from one another are discussed.

Results

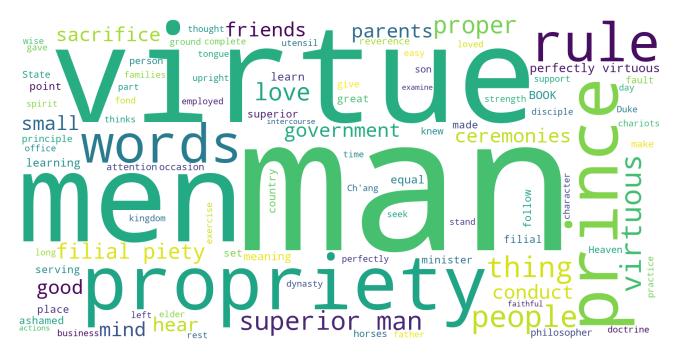


Figure 1 - Analects Word Cloud



Figure 2 - Mencius Word Cloud

Topic Words - Combined Text	Торіс
virtue virtuous rules good love words perfect disciples mourning friends perfectly give anxious ease father sincere truth matters ceremonies ministers	Virtue, rituals and ceremonies
people great state heaven made time years death words present chief ruler serve seek disciple rule grain ministers pleased virtue	Heaven and country
make principles son minister day book officers put officer practice court ground hundred follow thousand regard wishes order carry thought	Family and principles
kingdom sovereign benevolence nature majesty give royal love feeling fields small square reason answer mind throne heart nourish sons honour	Kingdom, king and benevolence
	Superior man, government and conduct
prince men good righteousness case proper office princes parents benevolent scholar sufficient respect brother desire common simply high poetry father	Humanity and righteousness

Table 1 - Topic Words and Assigned Topic: *Analects* and *Mencius*

Topic Words - Analects	Торіс
man propriety prince rules principles book disciples minister years time chief son father proper put truth difficult change righteousness qualities	Conduct and humanity
government love made learning day small sincere sacrifice wishes perfectly kingdom regard food practise act carriage set employ left odes	Government and learning
great make give office present court follow ability retired place hear filial order family knew speech hate horses point rule	Family and governance
virtue superior people men good virtuous conduct find practice person ministers long equal friends dare mourning duties serve ground countenance	Virtue, Superior man and goodness
words country mind officer died full ceremonies carry ruler families business case high serving spirits states sincerity cap hands standing	Country and ruler
things state heaven perfect music learn officers knowledge philosopher bad thing upright parents talents die found lose firm gave carrying	Heaven and country

 Table 2 - Topic Words and Assigned Topic: Analects

Topic Words - <i>Mencius</i>	Topic
sovereign benevolence made mind son small serve proper poetry principle large high age man's wise answer found virtuous hear person	Benevolence, sovereign and extension
people good righteousness office love day put officers thousand propriety account sage disciple wife territory reply regard throne scholars father	Righteousness
time virtue superior princes death years nature give minister present ruler chief ministers leave follow doctrines reason pleasure wishes class	virtue, death and nature of man,
great case scholar book officer hundred conduct thing seek order receive music act path carry philosopher younger mourning turn true	Scholars of virtue and conduct
man prince kingdom state government majesty water feeling proper royal brother desire fields grain ground rule square common matter find	Government, kingdom and country
men heaven make things parents principles words benevolent court practice respect sufficient simply pleased gave talents times left business venture	Heaven and humanity

 Table 3 - Topic Words and Assigned Topic: Mencius

Top 5 Topic Words	Analects	Mencius	Торіс
virtue virtuous rules good love	24%	5%	Virtue, rituals and ceremonies
people great state heaven made	16%	22%	Heaven and country
make principles son minister day	18%	18%	Family and principles
kingdom sovereign benevolence nature majesty	2%	19%	Kingdom, king and benevolence
man superior government men things	30%	14%	Superior man, government and conduct
prince men good righteousness case	10%	21%	Humanity and righteousness

Table 3 - Summary of Results

Topics - Combined Text	Analects	Mencius
Virtue, rituals and ceremonies	24%	5%
Heaven and country	16%	22%
Family and principles	18%	18%
Kingdom, king and benevolence	2%	19%
Superior man, government and conduct	30%	14%
Humanity and righteousness	10%	21%

Table 4 - Combined Topics Composition Heatmap

Analysis

Looking at the word clouds, we can see that *Analects* places more emphasis on virtue, propriety and the idea of the superior man, whereas *Mencius* deals more with kingdom, government and the people. However, both of them deal with humanity, and the nature of man. These themes are evident throughout the texts and the distinction will be clearer in the next section. Based on Table 4, we can identify 3 interesting findings: a) Kingdom, King and Benevolence - *Mencius* has a significantly higher composition than *Analects*, b) Family and Principles - Both *Analects* and

Mencius have equal composition, and c) Virtue, rituals and ceremonies - *Analects* has a significantly higher composition than *Mencius*.

Interpretation

a) Kingdom, King and Benevolence - *Mencius* has a significantly higher composition than *Analects*

This topic is characterised by the following words: kingdom, sovereign, benevolence, nature and majesty. This topic composes 19% of Mencius but only 2% of The Analects. This can be taken as indicative of Mencius's emphasis on necessary practices for good governance and ideal politics. Ideologically, Confucious places more importance on personal cultivation, education and improvement as compared to Mencius. Confucius describes governance and rulership as an extension of family, and family as an extension of self-cultivation. He elaborates on ritual and sacrifice that are essential elements of that self-cultivation practice, which projects leadership and social order. Mencius on the other hand, focuses more on whether a particular action is moral or not, regardless of its benefits or cost beyond the action. Confucious mainly believed that the sovereign and rulers were of the highest importance, and their role was to maintain peace and harmony in the state. But since he placed more value on personal conduct and responsibility to society, the people did not have the right to rebel against the rulers.

Mencius's stance is much a more straightforward and aggressive one. He advocates that the people come first in priority, and declares that people can object, or even rebel if the rulers were failing to fulfill their responsibilities. This is related to Mencius's ideology that society is one of the most essential factors contributing to the nature and character of the people living in it. Both Confucious and Mencius believe in the capability of the ordinary person to take cues from and emulate an extraordinary ruler, which would put society in order. Mencius additionally proposes extensive plans for the kingdom, for example, strategies such as dividing the land into settlements planted with mulberry trees. Though the themes Mencius discusses are inherently

derived from the teachings of Confucious, they differ in principles. Mencius advocated governance through benevolence and moral appeal rather than brute force, which puts moral value before pragmatic value and which seeks to benefit both the ruler and subjects.

b) Family and Principles - Both *Analects* and *Mencius* have equal composition

This topic is equally prevalent in both the Analects and Mencius, however they are addressed slightly differently. Confucious heavily links filial piety in the family to a wider scope of the state in a political context. He highlights a parallel between the responsibilities of individuals in family and the state. "They are few who, being/filial and fraternal, are fond of offending against their superiors./ There have been none, who, not liking to offend against their/ superiors, have been fond of stirring up confusion." (*Analects*, 1.2) This quote suggests that filial piety is equated to being a good member of the community and ideal political participant, amongst other character traits.

Confucius stresses the importance of sacrificing one's own personal desires for their family, projecting the idea of prioritizing the collective wellbeing over the individual wellbeing. He also addresses the conflict that might arise between the family role and state role. He provides an example of a son covering up his father's theft crime. To that he says- "Among us, in our part of the country, those/ who are upright are different from this. The father conceals the/ misconduct of the son, and the son conceals the misconduct of the/ father. Uprightness is to be found in this." (*Analects*, 13.18) This is also the answer to the concern of balancing loyalty to family and loyalty to the state. Additionally, Confucious discusses how family serves as a primary method to maintain and honour traditional customs, if children follow and behave the way their parents did.

Mencius discusses family and principles in the context of humanity and human nature.

Mencius strongly advocates for human nature being inherently good, but he also

recognizes that a supportive and model environment is necessary for these virtues to develop and for children to deepen their self-cultivation. "Therefore, if it receives its proper nourishment, there is nothing which/ will not grow. If it loses its proper nourishment, there is nothing which/ will not decay away." (*Mencius*, 8.3). However he also believed that a hostile environment might hinder the potential for greater virtue and righteousness, but the potential will never die.

c) Virtue, rituals and ceremonies - *Analects* has a significantly higher composition than *Mencius*

In the Analects, these terms describe a theme revolving around important rituals and sacrifices, including ancestor worship and mourning and religion. A bulk of the text contains detailed ritual descriptions specifying the correct way of executing various rites and sacrifices, for example, specifying attire and other specifics. This explains it's heavy weightage of this topic in the text, as compared to the Mencius. Mencius held a more internist stance, which places more importance on independent desires and beliefs. This might explain why he discusses rituals and rites, which pertains to externalism, minimally.

Conclusion

Topic modeling is an extremely effective tool for studying and detecting patterns in texts at a large scale without bias. It is made more powerful when it is combined with close-reading of the text to provide interpretations and perform further explorations. It presents us with a new way to analyze texts and generate novel insights.

References

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