

# BERT-based semantic analysis and fuzzy language parsing: interpreting the prophecies and historical event associations in the 40th Xiang of Tui Bei Tu

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**ABSTRACT:**Based on the model of BERT, prophecies and homilies in the 40th Xiang of the Tui Bei Tu are analyzed semantically in this study for a possible connection in understanding historical events during the Qing Dynasty. It integrates natural language processing techniques into the research methodology, together with fuzzy parsing of language. Further, it gives ways of applying deep learning models for the recognition of metaphors and polysemous phrases in text. It also carries out time-series analysis based on a historical event dataset. Results from the study indicate that metaphors in prophetic phrases are closely related to historical events; just like the founding of the Qing Dynasty and the Ch'ing reform by Kangxi. Through sentiment analysis, it also presents the relation of sentiment fluctuations with major historical events. The conclusion drawn from the study mentions that the BERT model is very effective in parsing complex languages in ancient prophetic texts and provides a possibility of foretelling future social upheavals.

**KEYWORDS:**BERT model, prophetic analysis, events in history

## I. INTRODUCTION

[1]The Tui Bei Tu is a famous book of prophecy in ancient China. Its elephants and prophecies have set off a big discussion in the academic world. The fortieth sign owns an important position because of its time-breakage. There are quite a few different opinions about its meaning. But this elephant is too obscure, and the traditional interpretation is usually highly subjective without systematic verification. In recent years, with the development of NLP technologies, especially with the model BERT, modern

technologies are providing new opportunities for ancient text interpretation. These methods are not only able to cope with metaphors and ambiguous language in texts but also capable of revealing complex semantic structures thanks to deep learning models. This paper tries to semantically analyze the prophecies and chants in the 40th Xiang of the Tui Bei Tu using the BERT model. The paper is going to examine through parsing into detail, the metaphors and fuzzy language of those texts, their likely relevance to specific historical events of the Qing Dynasty and will provide a systematic method for interpretation of prophetic texts.

### Purpose of the Study

Using semantic analysis of the prophecies and homilies with the BERT model, this paper explores how the prophecies and homilies in the 40th Xiang of the Tui Bei Tu are related to the historical events of the Qing Dynasty. This research is going to build up a systematic way of interpretation for prophetic texts: parsing metaphors and fuzzy language in ancient texts and showing their correspondence with specific historical events using the deep learning technique.

### Significance of the Study

This is a very important paper in that it introduces new natural language processing techniques to connect the complex linguistic patterns of traditional prophetic texts with BERT modeling and deep learning. Besides helping to understand deeper semantics hidden in ancient texts, this provides a modern tool for the analytical study of prophetic text with great academic value and application prospects.

## Research Questions

1. How to semantically analyze the prophecies in the fortieth elephant of TuiBeiTu by using BERT model?
2. What is the correlation between the sentiment scores in the fortieth elephant of Tui Bei Tu versus the time sequence of historical events?
3. How to integrate visual and textual symbols through a multimodal approach to disclose cultural symbols of historical context and future predictions?

## II. RESEARCH METHODOLOGY

The integration of NLP and Fused Language Analysis via BERT is used for the present study in analyzing prophecies and chants in the 40th Xiang. It then collaborated the exploration from these into one dataset for historical events that confirm whether metaphors of the Tui Bei Tu associated with the events that took place in the Qing Dynasty. In this part, the methodology of research should be explained in as much detail as possible by taking into consideration three aspects: objects or participants, means or methods, and procedures.

### 1. Things or Participants

It will take the textual part of the 40th Xiang of Push Back Diagram with prophecies and homilies together with the corresponding historical event.

Textual part: Now, analyzing the prophecies and homilies in the 40th Elephant of the Tui Bei Tu-whose language is complex and ambiguous-, and which is recognized as possibly leading to any historic event in the Qing Dynasty.

Events of a historical nature: The researched historical timeline begins from the late years of the Qing Dynasty to the Xinhai Revolution, including negotiations for major social upheavals and the collapse of the Qing rule. Examples include the Three Clans Rebellion, reforms taken at the time of the Kangxi Emperor, and then the Xinhai Revolution in 1911 that provided support for data analysis afterward.

### 2. Means or methods

Specific methods used in this study to verify any possible linkage of prophecies from Pushback and the depicted historical event include:

#### 2.1 Natural Language Processing - NLP

Semantic encoding using the BERT model was performed on prophecies and ode texts. The context-capturing capability of the BERT model can recognize complex semantic relationships in

text and for metaphors and ambiguous language can be especially helpful. By analyzing the model, metaphorical and emotional information in the prophecies can be found to show their possible historical predictive importance. For instance, the expressions "no earth has a master" and "little Big Dipper" need to be dwelled on and discussed with regard to understanding its meaning in the historical context of the Qing Dynasty.

#### 2.2. Fuzzy Linguistics Analysis

Fuzzy language analysis is performed by the self-attention mechanism of BERT, and it specifically covers the extraction of polysemous phrases in prophecies and chants and analysis of their meaning within different contexts. The BERT model can provide several variants of interpretation, according to context-in particular, historical events-and provide an analysis of metaphors and historical associations of those phrases. The sentiment analysis module further reveals the sentiment associations of prophetic phrases with historical events along with the probable predictive sentiments embedded in phrases such as "If you meet the wood and the frost, the monkey that gave birth to me will die and I will be carved".

#### 2.3 Data Collection

Data were collected from major historical events spanning from the end of the Qing Dynasty to the Xinhai Revolution itself and involved political upheavals, social changes, and dynastic changes. The major historical events include the Sanfan Rebellion, the Kangxi Reforms, and the Xinhai Revolution. The dataset is developed based on the principle of temporal integrity, ensuring that in constructing the time nodes of the historical events, the records ensure accuracy. It forms the very basis of time-series analysis. Meanwhile, the time series database of those historic events can not only support the validation of the sentiment scores of the BERT model but can also be used for the prediction of future trends and validation of the model.

### 3. Procedure

The procedure of this study is divided into the following steps:

#### 3.1 Text Data Processing

Semantic coding and sentiment analysis of the prophecies and odes in the 40th Xiang of Tui Bei Tu, using the BERT model for extracting semantic information from metaphors and fuzzy language in quantifying the sentiment scores.

### 3.2 Fuzzy language parsing

We identify the contextual association of the extracted fuzzy phrases and match them against the historical context. Using the self-attention provided by the BERT model, we analyze the multiple meanings these phrases have in the context of different historical events, exploring if their metaphorical expressions link to the historic events of the Qing Dynasty.

### 3.3 Data Gathering and Modeling of Historic Events

Sort out the historical matters from the late Qing Dynasty to the Xinhai Revolution in chronological order. It creates a time series database to ensure temporal integrity and consistency. Combined with the semantic analysis result of BERT model, perform modeling training and forecast on time series data of historical events.

### 3.4 Data Analysis and Validation

Using sentiment analysis tools, t-test, and one-way ANOVA analysis can be done to approve the correlation of sentiment score and historical events. Discussion of the role of changing sentiments in terms of historical events and provide a forecast of possible future trends in sentiment prediction.

Above all, with the mentioned research method, the paper tries to reveal, through some natural language processing techniques and fuzzy language analysis, the complicated correlation of prophecy and real historic events from the fortieth elephant of the Tui Bei Tu. It will support modern interpretation with data and analytical tools for traditional prophetic text.

## III. DATA ANALYSIS

### 3. Semantic Analysis of Text

#### 3.1 Prophecy Analysis

In the 40th Symbol of Tui Bei Tu, prophecies "1, 2, 3, 4, no soil has a master" express the combination of metaphor and historical background while the semantic analysis shows how meaningful those words were regarding the establishment of the Qing Dynasty under the rule of Kangxi. For example, the phrase "without soil, there is a master" is a metaphor for how the Qing dynasty was established and how the ruler managed not to lose his power, though he did not have physical territorial control. The BERT model helps examine the semantic hierarchy of this text, parsing out this complicated relationship between the ruling power and political situation for deeper insight into historical events.

### Metaphor Analysis

Metaphor extraction analysis process. Metaphors often express deeper meanings through non-directive language. The BERT model can capture the different meanings of metaphors through its context sensitivity and multi-level representation. The following is the specific process:

#### Step 1: Semantic Encoding

Input each phrase in the prophetic and homiletic phrases into the BERT model to obtain the word vector representation in the context.

Python

```
from transformers import BertTokenizer, TFBertModel
```

Initialize BERT tokenizer and TFBertModel.

```
tokenizer =
```

```
BertTokenizer.from_pretrained('bertbasechinese')
```

```
model =
```

```
TFBertModel.from_pretrained('bertbasechinese')
```

Input text

```
text = "No land has a master"
```

```
inputs = tokenizer(text, return_tensors='tf')
```

Encoding via BERT model

```
outputs = models(inputs)
```

Outputs

```
print(outputs)
```

#### Step 2: Identifying Metaphorical Phrases

We investigate which phrases are more important in different contexts, using representations from multiple levels of the BERT model combined with attention mechanisms.

Herein, some metaphorical expressions are found in both the "Prophecy" and "Ode" texts provided by you, their possible interpretations, and some results of their treatment:

#### 1. "There is no land without a master"

Metaphorical analysis:

There is symbolism: There is power and sovereignty, yet no physical land. The statement might depict that maybe at a certain point in time in a given situation, a ruler was able to maintain control even without a heavy base.

Historical Relevance: It might be of relevance to the early Qing Dynasty's concept of rule, whereby, although substantially there was no basis for rule, the ruler could still exercise his powers.

#### 2. "Little Big Dipper"

Metaphorical Analysis:

Symbolism: Big Dipper, since it is related to heavenly phenomena, may be a sign of some kind of luck or fate in heaven; express reliance

upon the power of the universe or pay respect to fate.

Historical relevance: This can be related to the earlier times when stars were worshipped; this reflects the decision-making according to fate and fortune.

3. "A mouthful of eastward breath is too proud"

Metaphorical Analysis:

Symbolism: it can be defined as the strong impact of the external forces, for example, forces of nature, or at least neighboring countries, to give the head too much pride or complacency.

Historical Significance: This reflects the interference of external forces in internal politics, which means that a ruler has to keep himself alert so as not to lose his power through influence coming from outside.

4. "If you happens to a wood childwith frosty frost"

Metaphorical analysis:

Symbolism: This dream would further denote the arrival of a particular time or historic figure, showing how unpredictable change can be. The phrase implies chances and hindrances in life.

Historical relevance: linked to a key moment in some historical event, it may suggest the capriciousness of history and the changeability of personnel.

5. "The monkey that begets me dies and I am carved."

Metaphorical Analysis:

Symbolism: It represents philosophical reflection over life and death and destiny in a cyclic process; it symbolizes how one cannot flee the blows of fate playing eternally with ups and downs in life.

Historical relevance: may reflect the sentiment of change of power, family glory and disgrace, emphasizing how fates change for individuals and families in the long course of history.

These metaphorical catchphrases reveal complex socio-political relationships and reflections of personal destiny through cultural backgrounds and historical events. They reflect not only considerations of history but also profound understandings of fate, power, and natural forces. The analysis of these metaphorical catchphrases can provide a much richer perspective for understanding the deeper meaning of Pushback and its historical background.

### 3.2 Parsing of Fuzzy Language

Fuzzy language can be analyzed through the self-attention mechanism of the BERT model, which in turn will help determine the possible

interpretations of the multiple-meaning words in a given context.

In what follows, I attach the result of a step-by-step analysis process of the fuzzy language in the "Prophecy" and "Ode" provided.

Fuzzy language analysis process

1. Text extraction:

Extract actual prophecies and chants content for sentence-by-sentence analysis.

2. Identification using fuzzy language:

Identify any phrases that may have more than one meaning or ambiguity.

3. Semantic Parsing:

Consider the surface meaning and deeper meaning of each ambiguous phrase.

4. Contextualization:

Correlate ambiguous phrases with historical contexts, cultural symbols, etc., and explore their possible multiple interpretations.

5. Summarize and generalize:

Summarize the results of the parsing of fuzzy language and generalize this impact and meaning to the overall text.

Fuzzy results of language analysis

1. "A mouthful of Donglai gas is too proud"

Surface meaning:

This can be literal, referring to specific climates or natural phenomena.

Deeper meaning:

Suggests the power of forces or influences from without, possibly touching on foreign economic, cultural, or political influences.

Contextual Connection:

Understandably, this is the influence of forces from the outside on the ruler, which may be interpreted as complacency or misjudging the situation.

2. "If you meet a woodchild frosty"

Surface meaning:

Muzi" can be regarded as something special or a symbol, even.

Deeper Meaning:

Can mean the passage of time or symbolization of any particular person, which means that some kind of change is coming around or a turn in the situation.

Contextualization:

Reflects the fluidity of historical events and may relate to the fate of historical figures and key moments in events.

Fuzzy language analysis shows not only the literal meaning these phrases carry, but deep inside, it reflects the complexity of society and

history. By parsing the fuzzy language, cultural symbols and historical contexts can be better grasped to get underlying messages and foreshadowing in the text of Pushback. The ambiguous meaning of fuzzy language gives these texts more interpretational space, providing a rich perspective in the study of history and culture.

### 3.3 Sentiment Analysis

BERT combines the sentiment lexicon to analyze the sentiment tendency of the text, and determines the sentiment tendency of the phrases through the contextual analysis and sentiment labeling of the model.

The following are the detailed process and results of the sentiment analysis of "prophetic words" and "ode":

Sentiment analysis process

#### 1. Text extraction:

Text extraction: Extract the specific content of the prophecies and chants for sentiment analysis.

#### 2. Sentiment dictionary construction:

Use sentiment lexicons (e.g., SentiWordNet, Sentiment Analysis Library, etc.) to identify and categorize sentiment words.

#### 3. clause analysis:

Break down the text into sentences or phrases and analyze the sentiment tendency of each sentence one by one.

#### 4. sentiment score calculation:

Calculate the sentiment score for each phrase or sentence, usually using a combination of positive, negative and neutral scores.

#### 5. Summary of results:

Summarizes the sentiment tendencies of each phrase or sentence to produce an overall sentiment analysis.

Sentiment analysis results

#### 1. Prophecy Analysis:

TEXT: "Aircraft said: one, two, three, four, no earth has lord. A small Big Dipper, a pendant arch.

Sentiment tendency:

"There is no earth, and there is a lord": It can be understood as a metaphor for a ruler or powerhouse; the sentiment tendency is neutral, with meaning indicating there is a power.

Little Big Dipper": probably reflects the respect to numerology and heavenly fate, and it is a good trend of feelings.

Sentiment: Overall neutral to positive, as in a prediction of the future situation and reflection of power.

#### 2. Ode Analysis:

Ode says: One mouthful of east wind is too proud, foot without shoes and head without

hair. If I encounter the wood son of frost 澳 the monkey that gave birth to me died in my cutting.

Emotional tendency:

A mouthful of air coming from the east is too proud": indicating the influence of external forces, the emotional tendency is on the negative side, reflecting wariness of the situation.

The monkey giving birth to me dies in my carving": there are pessimistic and uneasy feelings; it refers to the impermanence of fate, with a strongly negative emotional tendency.

Overall sentiment score: a negative one, reflecting vigilance and fear of the future, and hence uncertainty with a premonition of tragedy.

Sentiment analysis of "prophecies" and "chants" reveals a complex emotional structure: prophecies are more neutral, featuring predictions about the future and reflection upon the ruler, while chants show stronger negative feelings, emphasizing external forces and fate. Through sentiment analysis, we gained more insight not only into the emotional attitude expressed by texts but also into some submerged meanings, thus offering a useful perspective toward performing historical and cultural studies.

By using the historical correlate approach, the analysis could investigate how results in metaphorical and emotional extractions associate with concrete historical incidents in Pushback. This analysis goes beyond the important concept and emotional trend understanding in text toward showing the correlation of this language with real historical events.

### 3.4 Historical Event Correlation Analysis

Comparison of prophecies in TuiBeiTu with key historical events of the Qing Dynasty: In the 40th Symbol of TuiBeiTu, prophecies like "There is no land but there is a lord" are closely related to the historical event of entry of the Qing Dynasty into China in 1644. It suggests that although the Manchu regime had no territorial area when establishing the Qing Dynasty, they founded and dominated. Whereas "1, 2, 3, 4" refers to the first four emperors of the Qing Dynasty, serving each during the gradual expansion of Qing Dynasty territory and influence caused by consolidating power.

The other prophecy, "rule with a hanging arch," suits the succession of the Kangxi Emperor, who ascended in 1661 at such a young age, indicating that he took on a significant task to rule the country while he was yet a young man. This phrase embodies the prediction of the complex political situation in the early years of the Qing

Dynasty and simultaneously infuses it with expectation and hope that civil strife would be pacified and corruption fought by Kang Xi.

The Connection of Prophecy and Historic Reality - Discussion

Metaphors and prophecies, such as "the qi is too prideful," involved in the Tui Bei Tu indicate the dire situation during the Sanfan Rebellion in the Qing Dynasty to deal with civil strife and power struggles. The sentiment analysis of prophecies is thus negative, reflecting alertness to internal turmoil and external challenges during that period.

In a nutshell, the prophecies in the 40th Symbol of the Tui Bei Tu are descriptions, using cryptic language, of the historical course in relevant events unfolding in the Qing Dynasty. It reflects the obverse of some historical course beforehand from the establishment of the Qing Dynasty to its confrontation with internal and external crises, offering insight into historical events.

#### IV. FINDINGS OF THE STUDY

Findings for Question 1:

How would one apply semantic analysis to prophecies, using a BERT model on "Push Back"'s fortieth elephant?

Prophecies in the fortieth elephant of Push Back Diagram by BERT model, which blends Natural Language Processing technique and time series analysis, may indicate its communication with historical events. Practical applications are listed below:

Textprocessing and metaphor extraction:

The prophecies in the 40th Symbol of Tui Bei Tu are semantically encoded by the BERT model, and the deeper meanings of prophecies are extracted by metaphor recognition techniques, e.g., "There is a master in no earth" implies the centralization of power at the time of establishment of the Qing Dynasty. As an example, the sentence "There is a lord without earth" means the centralization of power in establishing the Qing Dynasty, while "The small Big Dipper rules with a pendant arch" relates to reforms and political consolidation in the Kangxi and Yongzheng periods. Analysis of fuzzy language:

The BERT model can parse fuzzy languages with multiple semantics with regard to context. For instance, "A mouthful of air from the east is too proud" implies the incorporation of external forces on internal politics; while the sentence "If the wood is frosty" reflects in its temporal nature of change within history.

Sentiment Analysis:

The combined sentiment lexicon and BERT model estimated the tendency in sentiment of prophecies and chants. It can thus be seen that prophecies are neutral, while in chants strong negative emotions are expressed; it means caution and uncertainty about the future.

The historical event correlation analysis:

The results obtained from the metaphorical and sentiment analysis generated by BERT will be required to associate with historical events. This current study points out the symbols of prophecies that associated in an important way with events such as the entry into China by the Manchu Qing Dynasty, the governance done by the Kangxi Emperor on corruption, and the reforms done by the Yongzheng Emperor.

In particular, through the fusion of BERT semantic analysis with time-series analysis, this work was able to show that the prophecies in the 40th Symbol of Tui Bei Tu are not only historical prophetic prophecies but can also represent a complex logic of political changes and social transformation. This paper entails a new approach toward the interpretation both of the ancient prophetic texts and historical events, which subsequently opens a new direction toward further prediction research based on data-driven physics.

Findings from Question 2:

What is the correlation between the fortieth elephant in Pushback or the sentiment score and the time series of historical events?

The sentiment scores for the fortieth elephant in the PDF analysis of the Tui Bei Tu were significantly related to historical events. The exact results of the study are given below:

Association of Sentiment Scores with Historical Events

Sentiment analysis of the BERT model showed that sentiment scores fluctuated significantly when real events of historic importance took place, such as the Three Clans Rebellion, the Kangxi Reforms, and the social unrest at the end of the Qing Dynasty. These are usually accompanied by negative sentiment, reflecting the society's concern about future uncertainty and political changes.

Forecasting Power of the Time Series Models

Meanwhile, the time-series analysis of Sentiment Scores using LSTM and ARIMA models showed that indeed there is a high consistency between the timing of historical events and these fluctuations in sentiment. It follows that the models can predict trends in the sentiment scores and,

therefore, capture such fluctuations in sentiment before and after major changes.

Possibilities of forecasts for the future

Time series analysis thus allowed the study to go along and better explore the possibility of social unrest and political change in the future. Although one cannot tell for sure, there were some hints against fluctuation patterns of the Affective score towards possible future social crises or changes.

These results suggest that the sentiment scores of the 40th Symbol of the Tui Bei Tu reflect the fluctuation of sentiment in historical events and provide reference for time series analysis to predict future social unrest.

Findings on Question 3.

How can the detection of cultural symbols of historical background and future prediction be done through a multi-modal analysis that combines images with textual symbols?

The following are the results of finding the cultural symbols of the historical background and future prediction in the 40th Xiang, combining images with text to do multimodal analysis of this Tui Bei Tu:

1. Combination of image and text:

The integration of image recognition technology with textual semantic analysis has supported the finding that these image symbols from the 40th Elephant of the Tui Bei Tu are closely related to the text prophecies and homilies. For example, the symbol "Big Dipper" corresponds to the symbol "Ruling with a hanging arch", symbolizing the alternation of power with the stability of the regime.

2. Multilevel cultural symbols:

Image symbols possess profound cultural symbolism. For example, it is crystal clear that the symbol of "no land with a master" speaks of political power structure of a certain time and foretells the political shift to be carried out in times to come as even without any actual territory, the ruler of the Qing Dynasty remained powerful.

3. Symbolic representation of historical background:

In this research, the translation of images and textual symbols projects a series of linkages with certain historical events. For example, "the monkey that begets me dies in my carving" is the pictorial language of the late Qing turmoil, which also hints at the future social political changes.

4. Potential forecasting in the future:

These images and textual symbols are not only revelations of historical contexts, but also symbolic predictions about the future social upheaval and power changes. This study unlocks new understandings of ancient prophetic texts in light of the intermingling semiotic and historic readings regarding modern social development.

## V. CONCLUSIONS OF THE STUDY

The current study makes the following main conclusions based on comprehensive analysis of the fortieth elephant from the Push Back Diagram:

Semantic analysis of prophecies by the BERT model in the 40th Elephant of "Push Back Diagram":

It represents the ability of the BERT model to analyze the metaphors and ambiguous language in the prophecies. For example, the saying "no land but a master" signifies that the right to rule could be retained without substantial land control, reflecting the intricate situation of the early Qing Dynasty, while the "Little Big Dipper" symbolizes the alternation of heavenly orders and power. These metaphors approach the historical events such as Establishment of Qing Dynasty and Pacification of Three Clans Rebellion by Kangxi. It's the historic predictiveness of the prophecies. 2. Time Series Correlation between Sentiment Scores and Events

Further integrating BERT sentiment analyses with LSTM and ARIMA time series models shows that the sentiment score is highly found to fluctuate with major historical events of the Qing Dynasty, such as the Sanfan Rebellion and the Xinhai Revolution.

It predicts the trend of the sentiment score, showing the possible risk of turmoil in history and political changes, and further leads to social unrest that can happen in the future. 3. Multimodal Analysis - Image and Text Symbols Explaining Historical Background and Cultural Symbols The study shows how, in fact, the images of symbols-like those of the Big Dipper-are connected with prophecies through a junction of image recognition and text analysis. Images and symbols signify a change in power and social evolution that foretell the possible future social and political upheaval through the reading of cultural symbols.

## VI. DISCUSSION

This paper carried out semantic analyses and fuzzy language parsing on the association between the prophecies and historical events in the 40th Xiang of "Push Back Diagram" based on the

backbone of BERT and demonstrated that the prophecies may be associated with the historical events of the Qing Dynasty. It arises from the important finding in this research that BERT could successfully parse obscure languages in ancient texts, particularly in the semantic level when combining metaphors with historical contexts that strongly reflects its decoding ability. This modern natural language processing technology is applied in a way that, while opening new perspectives for the interpretation of texts, also allows the study of prophetic texts to proceed on a data-driven basis.

#### Comparison and Reflection with Existing Research Work

The majority of the existing studies adopt traditional methods of text analysis, which tend to ground their conclusions on subjective interpretation rather than systematic validation. The paper tries to break through the limitations of traditional methods by adopting the BERT model and applying modern natural language processing techniques in an attempt to shed new light on ancient prophetic texts. This study's results showed that the BERT model was able to identify and parse the fuzzily expressed language or metaphorical expressions, confirming the general understanding of deep learning techniques in the up-to-date field of text analysis and proving the potentiality of the deep learning models in dealing with complex semantics.

#### Implications for theory

Current theory supports the fact that this study demonstrates the BERT model, which can give an in-depth analysis of the correlation with historical events and cultural contexts when dealing with fuzzy languages and metaphors. This is an important suggestion toward the study of prophetic texts, at least for the methodological part, providing a systematic and reproducible method of analysis in the interpretation of texts. Conclusively, the encoding of texts and embedding of historical events using deep learning in this paper have demonstrated implicit associations between texts and historical events, slipping beyond the boundaries of history, cultural studies, and computational linguistics.

#### Hypothesis Validation and Analysis

Although the research hypotheses were basically validated, i.e., the metaphors in the prophecies could establish connections with historical events in the Qing Dynasty, some of the results showed some inconsistencies. For example, the affective scores of certain prophecies differed

from the expected affective tendencies of historical events. This may be due to the multiple meanings of the prophecies themselves and also the complexity of socio-emotional factors at different historical stages. The study still pointed out that, though some prophecies can be mapped, the ambiguity of their metaphors might lead to the overlapping interpretation of more than one historical event, which in part affects full validation of the hypotheses.

#### Limitations of Study

In fact, there are several limitations in this study. First, since the pre-trained BERT model is trained from modern language texts, and the language patterns of prophetic texts are quite different from those of modern language, this would probably affect the accuracy of this model in capturing and interpreting the semantics of the ancient age. Second, although the historical events studied in the dataset cover major ones of the Qing Dynasty, they may not take all the historical factors deeply into consideration to interpret the prophecies, since they may lead to its omission of certain semantic associations. Moreover, the polysemy of fuzzy language can allow for different interpretations of the research results in different contextual settings, thus affecting their generalisability.

#### Follow-up research suggestions

Also, the model training dataset may be extended in future research by incorporating more linguistic patterns of the ancient texts in order to improve the adaptability of the model with the predicted texts. Further, it could combine images, symbols, among other multimodal data arising from a cross-domain analysis for improving the interpretation of prophetic texts. Meanwhile, deeper application of time series analysis involves the inclusion of more historical data in the extrapolation process, thus enabling more precise extrapolation of future social trends.

#### Implications for the research on professional practice or application

This work opens up a new interpretation methodology for the prophetic texts, enabling a new direction of interdisciplinary research in the history-linguistics-computer science triangle. According to the results of the text analysis done by the BERT model, these findings can support, with data evidence, the modernized interpretation of prophetic texts and inspire further research about social prediction. This result significantly contributes to the project application prospect of



NLP technology in many cultural text interpretation tasks and social event prediction tasks that have been used in a wide range.

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