Lecture Notes on Language and Literature (2024)
Clausius Scientific Press, Canada

DOI: 10.23977/langl.2024.070308
ISSN 2523-5869 Vol. 7 Num. 3

Positive Discourse Analysis of Attitude Resources in Chat GPT News Discourse from the Perspective of Appraisal Theory

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Keywords: Chat GPT, Appraisal Theory, Attitude Resources, Positive Discourse Analysis

Abstract: In recent years, China's development and progress in the field of artificial intelligence have become more and more significant. Artificial intelligence is a key technology to promote digital transformation. It plays an increasingly vital role in accelerating China's push for industrial upgrading and promote the in-depth integration of digital economy and real economy. As the first artificial intelligence project similar to Chat GPT in China, MOSS's breakthrough and achievements have also attracted people's continuous attention. Under the guidance of Appraisal Theory, this study takes the news report on Chat GPT from China Daily, a mainstream media in China, as the research object, and uses the positive discourse analysis method to analyse the positive discourse of China's first Chat GPT-like software to be made open source launched by China Daily in 2023. To explore the distribution of affect, judgment and appreciation resources in the selected news reports in the attitude system and the positive significance conveyed in the discourse. The continuous innovation and breakthrough of the moss research team is expected to break the monopoly of foreign large-scale language models, promote the development of domestic artificial intelligence industry and related industries, and actively respond to China's innovative development concept. In addition, the research of MOSS can not only enhance China's independent innovation ability, but also play a very important role in building a responsible image of China.

1. Introduction

This study selected China’s first Chat GPT-like software to be made open source as the research material. At first this report introduces the first software MOSS which is similar to Chat GPT in China. After that, according to its small problems in the first public use, the research team not only puts forward corresponding solutions, but also has great hopes for the project, with great confidence and expectations. The development prospect of MOSS software in China is fully affirmed and praised. At the same time, the scientific team has greatly praised the great progress and open sharing concept of China’s scientific and technological innovation in terms of its benefit to small and medium-sized enterprises in China and the breakthrough progress in the field of science and

technology, even in the field of large-scale language model. The analysis of this report aims to discover and construct the current situation of Chat GPT in news media reports and the development of Chat GPT in related fields in China. It is of great significance to help readers at home and abroad understand China's development in this field and build the image of a responsible country.

Chat GPT (Chat Generative Pre-trained Transformer), as a language generation model based on Transformer model developed by Open AI [1], far exceeds the ability of other language models and includes skills in many fields. Therefore, Chat GPT technology is a double-edged sword, which has many possibilities of embedding into national governance, and also has certain governance risks.

2. Theoretical Framework

Positive discourse analysis is a new proposition put forward by British scholar Martin at the International Symposium on Critical Discourse Analysis in the late 1990 s [2]. This theory is relative to Critical Discourse Analysis. In view of the shortcomings of critical discourse analysis, he puts forward the concept of positive discourse analysis, that is, to treat and solve social contradictions and inequalities with a positive and constructive attitude, hoping to establish an ideal human society through positive discourse [3]. The emergence of this discourse analysis method also provides a new perspective for us to understand the positive changes that are being found in some areas. From this perspective, we use language analysis to determine people's positive thoughts on a new thing, so as to realize the positive role of the thing in promoting people.

The Appraisal Theory focuses on grammar and vocabulary to reveal attitudes and values in discourse. The appraisal system consists of three subsystems: attitude, engagement and graduation. Attitude is the narrator's attitude towards the narrative object in the discourse text language, which can be further divided into judgment, emotion and appreciation system [4]. With the rapid development of this theory, Martin and White (2005) continued to improve the Appraisal Theory and systematically put forward the operation mechanism, focusing on how to use grammar and vocabulary to express attitudes and explain values [5]. Most of the Appraisal Theory focuses on specific words to analyze the emotional views and attitudes of the article, because its discourse analysis function is more powerful and it is an extremely important means to realize interpersonal function. We analyze the emotional views of the discourse through the appraisal theory, reflecting the characteristics of the development of the times. This article explores the emotional attitude of the discourse through the latest reports on ChatGPT in China Daily, so as to better understand the impact of the development of artificial intelligence.

As a systematic theory, the appraisal theory aims to explore, describe and reveal how speakers in communication determine standings and attitudes, and establish relationships through language resources [6]. It is regionalized as three interacting domains — 'attitude', 'engagement' and 'graduation' [7] and three subsystems: affect, judgement and appreciation. This paper aims to investigate the news coverage of ChatGPT in China Daily. It selects the most relevant article and explores the positive implications conveyed through attitude system at the vocabulary level.

3. Discourse Analysis

3.1 Affect System

In attitude resources, emotional resources can express the narrator's or declarator's attitude towards an event or behavior [8]. Emotion is people's cognition and emotional expression of something. It can analyze an objective thing and its influence from the perspective of sensibility. Emotional system can be divided into positive emotional system and negative emotional system.

The expression of emotional words is also varied. The emotional system in Martin's (2005) attitude system reflects people's deep emotional response to things or events. In linguistics, it can be divided into the following four aspects: First, whether it is happy, that is, in the face of things or events, the individual's emotions are high or low. The second is safety or insecurity, that is, whether the individual is confident or anxious about the success of the event in different situations. The third is satisfaction or dissatisfaction, that is, whether the individual feels satisfied in the process of participating in the event. Fourth, the tendency or non-tendency, that is, whether the individual is willing to work hard for the success of the event [9]. The analysis of specific examples is as follows:

Example 1

MOSS has opened up all the technical paths..., before pointing out that the project has received strong support from the Shanghai Artificial Intelligence Laboratory.

In Example 1, the word support means encourage or give help, this is a positive emotional attitude vocabulary. And before word, it is modificated by strong, adding a positive meaning. In this report on Chat GPT, the debut of MOSS, coupled with the details of Chat GPT's related technical solutions have not been made public, so the optimization process of MOSS is not smooth. At this time, people also have doubts about whether the Chat GPT-like model based on teaching technology can be successfully developed in China. However, Qiu Xipeng also said that the successful emergence of MOSS also shows that the domestic scientific research team still has strong strength. And in the process of optimization and improvement, they are not alone. The staff of the Shanghai Artificial Intelligence Laboratory team will also carry out corresponding technical support to continuously improve the project.

Example 2

Making MOSS open source can effectively reduce the threshold for the development and application of pre-trained language models.

In Example 2, the word ' effectively ' is a positive evaluation of the outcome of the event and directly expressed author's attitude towards the perspective of MOSS. In this report, MOSS, as the first project to generate language models in China, came out without learning from foreign countries. Although Professor Qiu Xipeng also said that the development threshold of the pre-trained language model is very high. What is needed is not only a lot of computing power, but also training corpus and manual labeling. Everything is time-consuming and laborious. However, in order not to monopolize large-scale language models like foreign countries, the open source of MOSS can not only effectively reduce the threshold for the development and application of pre-trained language models, but also enable small and medium-sized enterprises to develop various vertical and derivative products on this basis. It breaks through a major bottleneck for the related development of similar Chat GPT projects in China and expresses sincere admiration for the efforts made by Chinese researchers and teams.

Example 3

We look forward to the continued cooperation between the Fudan team and the Shanghai Artificial Intelligence Laboratory, through MOSS and subsequent research and exploration.

In Example 3, the word ' look forward to ' expresses Professor Qiu Xipeng and people's good expectation and great confidence in China's first software MOSS similar to Chat GPT, whether it is the current situation or even its future.

All in all, the use of positive words in the emotional subsystem shows that since the first advent of MOSS, although it has just begun to encounter a storm during the test period, that is, it has been suspended due to excessive traffic to overload the platform. However, it is also a process of finding and solving problems and better improving the users' experience. In addition, the appearance of MOSS also proves that China's scientific research team can develop software that similar to Chat GPT without foreign countries' help, indicating that China's scientific and technological innovation

ability is increasing day by day. With the continuous optimization and improvement of MOSS, China can also break the monopoly of foreign large-scale language models, and China's independent innovation ability is also constantly improving. Finally, through mutual cooperation and concerted efforts between teams, MOSS will not only appear as software, but also reduce its own application threshold, benefit many small and medium-sized enterprises, link and derive a series of intelligent products, and drive the transformation and innovation of the artificial intelligence industry. Therefore, the future of MOSS must be bright, the prospect must be very broad, for China's first similar Chat GPT software is also recognized and praised. In addition, the development and use of MOSS, for China, is not only the innovation and independent development of scientific research, but also the significant enhancement of comprehensive national strength, international image and status.

3.2 Judgment System

Judgment system refers to the judgment of a person's character and behavior. Judgment resources can be divided into social judgment and social constraints. Social judgment is mainly evaluated from the aspects of ethics, morality and psychological state [10]. The judgment system judges the event according to the result and influence of the event, or affirmative or negative. The specific analysis is as follows:

Example 4

Many people were quick to test the software and share their experiences online.

In example 4 the words "test" and "share" express the fast execution of MOSS. They test the effect of the language model by first letting some users test it, which is conducive to the promotion of the language model as soon as possible.

Example 5

The plan is to have MOSS interact with humans for a month so as to optimize it.

In example 5 the word "optimize" in expresses the rigor of MOSS, which takes months to optimize the language system. This measure promotes the optimization and development of large-scale language models.

Example 6

But its advent proves that the domestic scientific research team has the ability to overcome important technical challenges on the way to developing ChatGPT-like products.

In example 6 "has the ability to overcome" and "developing" express MOSS's confidence and determination to promote the language model as soon as possible. Through continuous data analysis and detection, strengthen technical research; overcome technical problems and development bottlenecks as soon as possible, so as to promote the development of related industries.

Example 7

MOSS became the first Chat GPT-like software unveiled in China when it was made available to the public for testing on Feb 20.

The words "first", "unveiled" and "available" in example 7 reflect the originality and innovation of MOSS. As China's first test-like CHAT GPT software, MOSS is at the forefront of the development of the industry and is expected to bring a new spring to the development of artificial intelligence in China.

In this China Daily's latest report on Chat GPT, the positive discourse in the judgment system is mainly reflected in MOSS's positive attitude towards large-scale language models and its expectation of the bright future of the language model in the future. The continuous progress of artificial intelligence technology and its superposition and interaction with cloud computing and big data also make the technical risks faced by human society higher and higher [11]. MOSS, which is

expected to be the first software similar to Chat GPT in China, is constantly testing and innovating, hoping to break the situation that large-scale language models are almost monopolized by foreign countries.

In general, the analysis of the positive discourse vocabulary in the judgment subsystem can find that MOSS focuses on innovation and optimization of development technology. Through the promotion of testing and technological innovation and cooperation with artificial intelligence laboratories, MOSS is hopeful for the development of this large-scale language model. And through the continuous optimization and improvement in the later period, the development and application threshold of this large-scale language model will continue to decrease, and the situation of foreign monopoly will soon be broken. The promotion of this model will also help promote the development of domestic and artificial intelligence-related industries, extend the industrial chain, increase added value, bring economic benefits to artificial intelligence-related industries, and contribute to China's scientific and technological innovation and development.

3.3 Appreciation System

Appreciation system belongs to the category of aesthetics, which refers to the speaker's reaction to things, the composition of things themselves and the value of things themselves, with positive and negative points [12]. In this report, a large number of appreciation resources are positive words. They are used to affirm the development prospect of China's first Chat GPT-like open source software, express the reporter's unlimited trust in China's strength and China's good prospects in this field.

The following is the analysis of specific examples:

Example 8

MOSS still has a lot of room for improvement.

The word "improvement" objectively expresses that MOSS, as the first Chat GPT-like language model in China, has the potential to become widely used alternative software. However, R & D personnel should not be conceited. Looking at the development of global artificial intelligence, MOSS still has a lot of room for improvement. At the same time, it also expresses the author's positive attitude and still has deep expectations for MOSS. It is hoped that the domestic R & D team can improve the performance of MOSS through continuous improvement.

Example 9

But its advent proves that the domestic scientific research team has the ability to overcome important technical challenges on the way to developing Chat GPT-like products.

The word "proves" expresses the speaker's affirmation that the domestic R & D team has the ability to overcome difficulties in the process of developing MOSS. Even if it is monopolized by foreign information resources, the progress made by domestic scientific research teams in the field of artificial intelligence cannot be ignored. This also reflects the author's sincere admiration for the domestic scientific research team.

Example 10

We hope to share MOSS and model codes and development experience with everyone, and hope that China can be at the forefront of the world in terms of large-scale language models.

"Forefront" expresses a positive attitude and expectation, which means that once MOSS seizes the opportunity of the times to constantly update and iterate, it can play its own great advantages to let China walk in the front of the world in terms of language model. The author firmly believes that the Chinese team has the ability to achieve major achievements in this field, and also believes that China will contribute its own experience and achievements to the world.

4. Conclusion

Based on the attitude system in Appraisal Theory, this paper analyzes the related problems of MOSS software in China's first Chat GPT-like software to be made open source by using the method of positive discourse analysis. This paper found that China's scientific research team is committed to scientific and technological innovation, and constantly promotes the development of artificial intelligence and related industries in China. The innovative development of MOSS not only reflects that China always adheres to the concept of innovative development, but also reflects China's strong level of scientific and technological development, and is committed to promoting the development of artificial intelligence technology.

Acknowledgments

This research was supported by 2023 Provincial Student Innovation Training Program: Research on attitude resources in Chat GPT news Discourse from the perspective of Appraisal Theory (Project number: S202312216055); 2022 Anhui Xinhua University "English Writing" Teaching Reform Demonstration Course (No. 2022jgkc02); 2023 Key Teaching and Research Project of Quality Engineering in Anhui Province "Construction of English Writing Evaluation System Supported by Large model".

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