Intercultural Communication of Contemporary Chinese Science Fiction Literature: Focus and Recognition in Readers' Reception of Liu Cixin's Three-Bodies Trilogy

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Abstract: Based on the 'reader reviews' of the bestselling 'Three Bodies' trilogy on Amazon.com in the US, this paper uses sentiment analysis to interpret the comments of overseas readers and quantify their positive and negative attitudes. The analysis shows that overseas readers generally have a positive attitude towards the translation of Three Bodies and have a high acceptance level. American readers were generally concerned about and praised the characters, the narrative perspective, the plot and the translation. Research shows that the combination of the work's own literary and ideological qualities, its full intercultural and universal value, and the translator's faithfulness in preserving and deepening the heterogeneous elements of the original work, have contributed to the book's success.In summary, it was found that the success of foreign dissemination required textual factors such as a brilliant Chinese story and a unique narrative style in the work, plus non-textual factors such as excellent translation.

Keywords: Intercultural Communication; Translation Literature; Sentiment Analysis

1.Introduction

Sentiment analysis, also known as opinion mining or comment mining, is one of the most important branches of natural language processing (Tripathy et al., 2015)[3], and refers to the process of analysing, processing, generalising and reasoning about subjective text with emotional overtones (Zhao Yanyan et al., 2010).[5] The data mining and analysis of product review information through sentiment analysis allows for an understanding of the distribution of readers' attitudinal tendencies towards the product and their feedback on the product, thus improving the quality and service of intercultural communication of books.

This study uses sentiment analysis to examine the acceptance of Three Bodies by overseas readers. Through quantitative analysis, summarize American readers' emotional attitudes and evaluations of the book and answer the following two research questions: 1. In the intercultural communication of the Three Bodies trilogy, how do the areas of strongest concern or high distribution of positive emotions in readers' feedback explain the success of the books? 2. How can the areas of positive reader feedback or noted shortcomings help improve the intercultural communication of Chinese science fiction literature in the future?

2.Literature Review

Research on Three Bodies some scholars have focused their research on the book's content, for example Gaffric & Peyton (2019) uses the political context as an entry point to illustrate the reasons for the critical, academic and even political enthusiasm it arouses today.[1] Liyuan Jia & Lei Du & Fashimpaur James (2018) explores the book's level of innovation and appeal from a thematic and narrative perspective.[2]

In recent years, there has been an increasing amount of literature on the translation process and reader reception of Liu Cixin's novels around the world (Wu You, 2021).[4] However, such studies remain narrow in focus dealing only with a few reviews by professional science fiction fans and publishers are covered, and few general readers are chosen as subjects for study.

3.Research methods

3.1 Data crawl and cleaning

Crawl the US Amazon.com reader reviews of the Three Bodies trilogy via the Google Chrome plugin Instant Data Scraper. Sifting and cleaning reader comments from the United States, the final data volume was 4230.

3.2 Sentiment analysis

Sentiment analysis is carried out using the text analytics cloud platform - monkeylearn. The algorithm treats all reviews as subjective, and each review will have a positive rating value and a negative rating value, the sum of which is 1. When the positive rating/sentiment value is greater than 0.5, the review is considered to be positive rating/sentiment dominant; when the negative rating/sentiment value is greater than 0.5, the review is considered to be negative rating/sentiment dominant. When the positive rating value and the negative rating value were equal, the rating/emotion was neutral.

4.Results

4.1 Statistics for reader book reviews

Amazon.com's reader reviews are made up of two parts." Reader Stars" and "Reader Reviews". The Reader Star is a 5-star scale. Reader reviews are anonymous words posted on the site by readers about a book. The relevant data for the Trilogy are shown in Table 1.

Book Name	Number of Ratings	Number of Comments	Average Rating
The Three-Body Problem	12,573	3,408	4.3(5.0)
The Dark Forest	7,367	1,345	4.6(5.0)
Death's End	5,518	1,146	4.6(5.0)

Table 1. Reader comment statistics

The average star rating for the three books is above 4.3, with an overall range between 5 and 4 stars, indicating 'like very much' and 'like'. This indicates that the Trilogy was well received by the majority of American readers.

4.2 Emotional analysis of readers' book reviews

4.2.1 Results of the overall sentiment analysis

After sentiment analysis, the Three Bodies trilogy has 3,563 positive sentiment ratings, 13 neutral sentiment ratings, and 655 negative sentiment ratings. This shows that the Three Bodies trilogy is generally well received by the general readership in the US, with positive sentiment dominating the reviews and negative reviews accounting for only 15.5% of the total reviews. By reading the top 10% of positive and negative sentiment comments of 50 words or more, it was found that these 400+ readers all mentioned the key points shown in Table 2.

Reader Focus Areas	Number of related comments
Characters	947
Narrative perspective	256
Plot	561

Translation	730

Table 2. Review data for areas of reader interest

4.2.2 Results of sentiment analysis for the four areas of concern

The analysis of the sentiment analysis system resulted in the number of bars and the average value of the sentiment distribution in the four dimensions in Three Bodies, as shown in Figure 1.
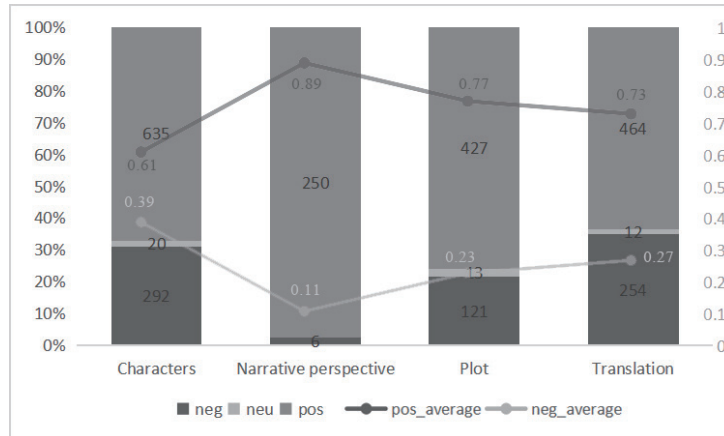

Figure 1. Sentiment distribution and averages

Of the four areas of concern, readers were most satisfied with 'narrative perspective', followed by 'plot' and 'translation'. While "characters" also received a majority of positive ratings, the 0.61 sentiment score was close to neutral.

The collocation of 'character' as the central word reveals a concentration of neutral and negative adjectives on 'flat', '2-dimensional' and 'cardboard', which invariably convey the blandness and lifelessness of the characters. A closer look at the reviews reveals that most of the characters are underdeveloped and many of them seem to exist only for the sake of the plot. Secondly, several readers expressed their dissatisfaction with Liu Cixin's portrayal of female characters. describing these as "submissive", "subordinate" and "paper-thin". The lack of dynamic female characters was seen by some readers as a result of the author's inability to portray female characters in depth, while others suspected that the author might be discriminating against women.

In terms of "plot", the majority of readers gave positive emotional ratings, finding the plot "thrilling", "interesting" and "fascinating". Praise was most concentrated on the realism of the various modern the most significant accolades were for the realistic depiction of various modern technologies and scientific speculations. In addition to praise there are also some dissenting voices. Some readers found parts of the plot poorly organised, with the most frequent reference to the "lengthy descriptions" of the three-body game in the first book, saying that "the book is awful, slow moving and clunky, overly full of scientific nonsense."

Readers' positive comments on the quality of the translation focus on two main aspects. The first is the fluency of the translation, which readers found readable without losing the quirky flavour of the original. The second is the fidelity of the translation. For some words unique to Chinese culture, such as "Zhao Ge" and "Fu Xi", the translator first used a direct translation and then added contextual information and cultural explanations in the footnotes. Readers generally found such notes helpful in understanding the characters and the development of the novel's plot, as well as in enhancing their understanding of Chinese culture. Among the negative comments, the more concentrated feeling was that the translation of the characters' dialogue was slightly rudimentary. The study also found that some readers blamed the translation for their disappointment with the original work, leading to a negative attitude towards both the translation and the original work.

The highest sentiment score was for "narrative perspective". Almost all of reviews were positive, indicating that the narrative from the perspective of Chinese culture and related contexts was not hindered in its reception by the difference between Chinese and Western cultures, but was also perceived by readers as interesting and unique. Some readers made particular reference to the setting of the story of the Cultural Revolution, expressing their delight at being exposed to the beauty

of this different culture from that of the West.

5.Discussion

5.1 Implications for the use of sentiment analysis

This study demonstrates the feasibility of applying sentiment analysis to the study of overseas readership, making it possible to present large-scale readings of overseas readers' comments and to visually quantify their positive and negative attitudes.

5.2 Insights into the intercultural communication of Chinese science fiction culture

Referring to the successful path of the Three Bodies trilogy, Chinese science fiction literature should, on the one hand, grasp the strengths of the genre, especially the "hard science fiction" style with its technical details. On the other hand, the works should trigger the cultural imagination and wide resonance of English-speaking readers on the basis of a narrative with unique Chinese characteristics.

In terms of non-textual factors, translation strategies, translators should faithfully retain and deepen the heterogeneous elements of the original work, adapt to cultural differences, avoid misunderstandings and misinterpretations, and enhance the readability of the work.

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