Knowledge Mapping Analysis on Chinese Opera Term Translation Studies in China: Research Based on Cite Space

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Abstract: This study utilizes the CNKI database and Cite Space visualization software to analyze 58 papers on the translation of Chinese opera terms, aiming to reveal research hotspots, historical development trajectories, and main fields. The study identified three main focuses: studies on Peking opera terms, research on translation strategies, and term and cultural communication. Additionally, the study observes that theoretical and practical examinations of Chinese opera term translation have progressed in tandem, with case studies and strategic analyses advancing collectively, highlighting the integrated advancement of this field.

Keywords: Chinese Opera Terms; Term Translation; Cite Space; Visualization; Bibliometric analysis

1. Introduction

Chinese opera is a vital part of China's traditional culture, boasting a rich history and profound cultural and artistic essence. Opera terms, serving as a crucial linguistic medium for the art of opera performance, encapsulate a wealth of cultural information and traditional knowledge [1]. As cultural exchanges between China and the rest of the world become increasingly frequent, and with the global dissemination of opera art, the translation of opera terms has emerged as a significant area of research focus. Accurate translation of these terms can enhance audiences' understanding of the plots, characters, and cultural contexts, thus elevating the expressiveness and appeal of opera art and allowing audiences to immerse themselves more deeply in the world of opera. Some domestic scholars have already conducted preliminary research on Chinese opera terms and their translation, achieving initial results. This study utilizes the CNKI database and the Cite Space visualization tool to conduct an in-depth analysis of the literature related to the translation of Chinese opera terms. It aims to reveal the current state, development trends, and core topics in this field, constructing a comprehensive research map. By organizing and analyzing past research findings, the study seeks to identify key term, thematic evolution, shifts in research focus, aiming to uncover the present research status for the translation of Chinese opera.

2. Data Sources and Research Design

2.1. Research Questions

This study aims to answer the following questions:

(1) What is the current state of research on the translation of Chinese opera terms from 1995 to 2023?

(2) What have been the focal areas in the research on the translation of Chinese opera terms during the same period?

2.2. Data Sources

This study selects the China National Knowledge Infrastructure (CNKI) database as its primary data source. Given the vast diversity of traditional Chinese opera, which encompasses genres from the Song and Jin Dynasties' Za Ju, through the various forms of Za Ju from the Yuan, Ming, and Qing dynasties, the Southern operas of the Song and Yuan dynasties, the legendary tales of the Ming and Qing, to the

modern regional operas, puppet shows, shadow plays, Nuoxi, as well as from the four major vocal systems of the Yuan and Ming dynasties, the regional vocal systems of the Ming and Qing, to more than 300 existing regional opera genres including Kunqu, Peking opera, Henan opera, Cantonese opera, and Shaoxing opera[2], this study, against such a backdrop and after comprehensive consideration, has chosen "xi", "opera", "legendary tale", "vocal system", and "qu" as commonly used keywords. By utilizing the advanced search function in the CNKI database and entering "xi * term * translation", "opera * term * translation", "legendary tale * term * translation", "vocal system * term * translation", "qu * term * translation", and "Chinese opera * term * translation" as subject terms (with "*" serving as a logical operator indicating "and"), and setting the search timeframe as unlimited up until February 20, 2024, a total of 108 documents were retrieved.

After careful reading and selection, papers with low relevance, duplicates, and non-research materials such as book reviews were excluded. Ultimately, 58 papers closely related to the theme of this study were identified, ensuring the accuracy of the literature base and facilitating an in-depth analysis and discussion of the current situation and challenges in the translation of Chinese opera terms.

2.3. Research Methodology

The primary statistical tools used in this study include the visual bibliometric analysis software Cite Space, CNKI Scholar, and Microsoft Excel. Cite Space is a software for information visualization developed in Java language, which relies on methods such as the theory of co-citation analysis and the path-finding network algorithm to perform a metrological analysis of the literature collection of a specific field, with the aim of revealing the main evolutionary paths and knowledge turning points within subject areas [3]. Cite Space is specifically used for conducting co-occurrence and cluster analyses to create visual maps, facilitating a more intuitive understanding of data structures and relationships. The CNKI Scholar tool is employed for querying, organizing, and ranking relevant literature by publication year, journal, authors, and institutions, whereas Microsoft Excel is used for table creation and for charting data generated by Cite Space, thus aiding in data presentation and analysis.

This study focuses on analyzing the hot topics and temporal evolution trends of Chinese opera term translation from 1995 to 2023. By employing co-occurrence and clustering analysis methods, closely related literature is categorized, and then, using Cite Space software based on information such as literature keywords, cluster labels are extracted. This approach sheds light on the leading topics and their carriers within the designated timeframe, offering insights into the academic trajectory and development frontiers of this field.

3. Literature Overview

3.1. Distribution of Annual Publications

In the field of quantitative analysis, the number of papers published annually is a key indicator of research dynamics and academic focus. By compiling statistics on the number of papers related to the translation of Chinese opera terms, published across various years within selected data sources, we elucidate the temporal trends in research within this field. Research began in 1995. For some time afterward, the annual volume of papers published in this field remained at a lower level, with some years even seeing no relevant papers published. However, starting from 2010, the number of publications began to increase year by year, reaching a significant peak in 2019. This rising trend reflects the wide application of new-era technologies such as computers, the internet, and big data, providing new research perspectives and technical support for term translation studies. As Xu Mingwu and Luo Peng (2021) pointed out, advancements in these technologies have provided powerful tools for solving complex issues in term translation, thus promoting widespread interest in this field of research [4]. The trend shows that the application of big data technology and the refreshing of research perspectives have prompted the term translation research to expand its focus to the field of Chinese opera. However, the analysis also shows that after the research peak in 2019, there was a decline in the volume of papers published in the following two years, until 2022 and 2023, when research interest and the number of papers published once again showed a rebound trend. This fluctuation reflects the cyclical changes in research interest or be influenced by external factors such as policy and funding.

3.2. Analysis of Literature Sources

By summarizing and analyzing papers related to the translation of Chinese opera terms published in various academic journals, we found that the "Jingju of China" journal has the highest number of published papers in this field, significantly leading other journals. Following closely are "Chinese Theatre", "China Terminology", "Chinese Science & Technology Translators Journal" and academic journals from several higher education institutions. This indicates that the academic output of research on the translation of Chinese opera terms is mainly concentrated in journals focusing on drama and film, foreign languages and literature, literary theory, and interdisciplinary studies.

This phenomenon not only reflects the distribution of research on the translation of Chinese opera terms within the academic community but also highlights the interdisciplinary nature of this field. Particularly, the "Jingju of China" as a leading platform for publishing such research, emphasizes the importance and vitality of term translation studies within the realm of Peking Opera. The coverage by journals such as "Chinese Theatre", "China Terminology" and "Chinese Science & Technology Translators Journal" indicates that research on the translation of Chinese opera terms spans a wide array of areas, from specific dramatic art forms to scientific term, showcasing a trend of integrating science and culture in research.

4. Knowledge Graphs

4.1. Keyword Knowledge Graphs

4.1.1. Keyword Co-occurrence Graph

To find the core hotspots and development trends of Chinese opera terms research from 1995 to 2023, this study conducted a statistical analysis of the keywords annotated in each paper within the collected dataset. By accurately importing into Cite Space software and selecting "Keyword" as the analysis dimension in the "Node Type" option on its main interface, while setting the time slicing range to cover from 1995 to 2023 with a time slice conducted annually, this study generated a keyword co-occurrence network graph using the built-in algorithm of the software (see Figure 1).
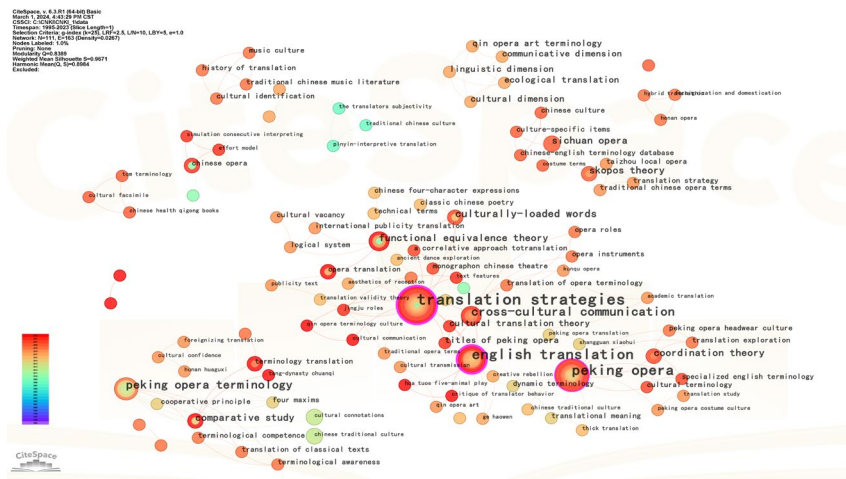

Figure 1: Keyword Co-occurrence Graph of Chinese opera term Translation Research from 1995 to 2023.

In the co-occurrence graph, the size of the nodes intuitively reflects the cumulative frequency of each keyword's appearance across the entire dataset, while the font size of the nodes represents the degree of association between keywords. According to the graph, the keywords represented by larger nodes and with larger font sizes, in order, include "translation strategies", "English translation", "Peking Opera", "Peking Opera terminology", "cross-cultural communication" and "functional equivalence theory". The lines between keyword nodes indicate their co-occurrence relationships. According to the results displayed in the graph, after excluding generic category terms, "translation strategies" shows the most significant co-occurrence strength as a keyword, highlighting that within the field of Chinese opera term translation research, topics focused on which strategies to use for translating are the most widespread. Meanwhile, the relatively close co-occurrence relationship between "Translation Strategies", "English

Translation", "Peking Opera", and "Cross-Cultural Communication" further reveals the interconnectedness of these themes within the research domain. It underscores the importance of developing effective translation strategies for English translations of Peking Opera terms, in order to facilitate cross-cultural communication. This relationship highlights the critical role that translation plays in bridging cultural divides, allowing Peking Opera, a quintessential element of Chinese cultural heritage, to be shared and understood by a global audience. It indicates a strong interest and focus on how translation practices and strategies can be optimized to convey the nuanced meanings and cultural depths of traditional Chinese theatre terms to non-Chinese speaking audiences, thereby enhancing mutual understanding and appreciation between different cultures. The appearance of "functional equivalence theory", "culturally-loaded words", and "comparative study" indicates a nuanced and complex approach to the translation of Chinese opera terms. It suggests that researchers are deeply engaged in understanding how to maintain the function and meaning of terms when translating between cultures, particularly for words that carry significant cultural connotations.

4.1.2. Keyword Clustering Graph

Cluster analysis within Chinese opera term translation research categorizes the discipline into multiple sectors, also enabling an understanding of the field's evolutionary trends through such categorization. The modularity index Q value and the silhouette index S value can be used as the basis for evaluating the effectiveness of the graph drawing. The Q value should be above 0.3, and the S value should be greater than 0.5. As shown in Figure 2, Modularity Q=0.8666, Silhouette S=0.9801, indicating that the structure of the obtained keyword clustering graph is significantly reasonable.
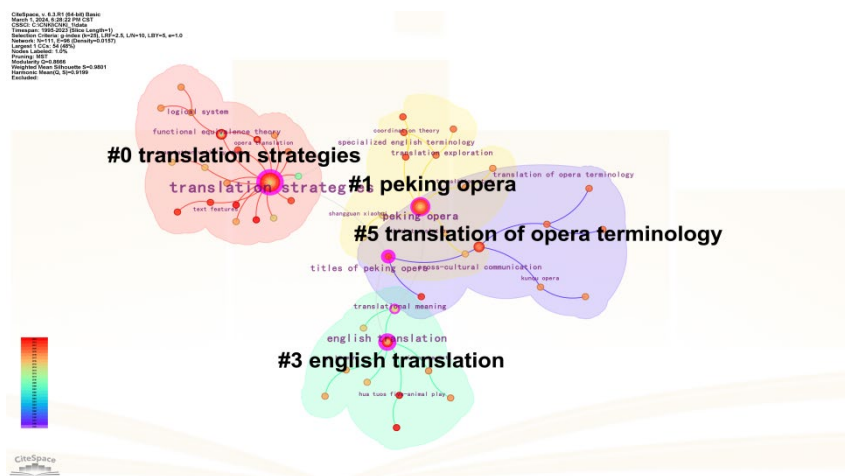

Figure 2: Keyword Clustering Graph of Chinese opera term Translation Research from 1995 to 2023.

Based on the results, with a Modularity Q value of 0.8666 and a Silhouette S value of 0.9801, both significantly exceed the aforementioned standard thresholds. This not only demonstrates the effectiveness of cluster analysis in distinguishing between different research themes but also underscores the structural validity and accuracy of the constructed keyword clustering graph.

According to the cluster graph, from 1995 to 2023, the field of Chinese opera term translation has been characterized by four prominent research clusters, which are focused on "Translation Strategies", "Peking Opera", "English Translation", and "Translation of opera terminology". The clusters reflect the diversity and differences in research interests within this field, while also revealing the interdependence and interactions across themes.

Among the four clusters, the "Translation Strategies" cluster focuses on the different strategies and methods employed during the translation process, especially on how to balance literal translation with free translation, and the localization of cultural elements. The "Peking Opera" cluster highlights the significant position of Peking Opera as a symbolic genre within Chinese opera in the research of opera term translation, emphasizing the academic concern for the accurate translation and cultural transmission of Peking Opera terms. The "English Translation" cluster showcases the specific practice of translating opera terms into English, reflecting the academic aim to enhance the global recognition of Chinese opera and its functionality in cross-cultural communication. The "Translation of Opera terminology" further explores how to accurately convey the professionalism and cultural connotations of opera term, as well as the understanding and acceptance of these terms across different languages and cultural backgrounds.

4.1.3. Keyword Timezone Graph

To further capture the diachronic development and evolution of research hotspots within the field of Chinese opera term translation, a keyword timezone graph was generated using Cite Space software (as shown in Figure 3).
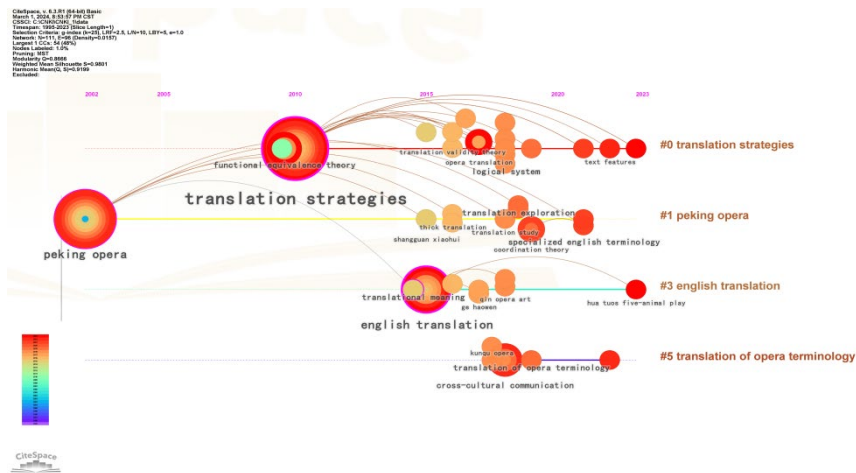

Figure 3: Keyword Timezone Graph of Chinese opera term Translation Research from 1995 to 2023.

Through timezone graph, it is evident that research on the translation of Chinese opera terms from 1995 to 2023 exhibits a significant diachronic development trajectory. Initial studies primarily focused on the translation of Peking Opera terms, with academic discussions during this phase concentrating on the specific operations and methodologies of translating Peking Opera terms, revealing scholars' preliminary attempts and methodological explorations in disseminating the essence of traditional Chinese opera culture. Over time, especially since 2010, the core of Chinese opera term translation research gradually shifted towards systematic studies on translation strategies, signifying a notable expansion and deepening of research methods and perspectives. This shift reflects researchers' growing emphasis on the diversity and complexity of strategy selection during the translation process and how to promote accuracy and cultural adaptability through effective strategies. Around 2015, the research domain further broadened to encompass a wider range of Chinese opera genres, including Peking Opera and their English translation studies, indicating researchers' ongoing expansion and diverse exploration of the scope in Chinese opera term translation. This trend not only facilitated a comprehensive understanding of term translation practices across different cultures and contexts but also provided richer research materials for cross-cultural communication. In subsequent research period, the expansion and deepening of the research domain were further confirmed by incorporating translation theory and Chinese opera theory, enriching the theoretical foundation of term translation and promoting innovation in translation methods and the practical application of theories.

Overall, the Keyword Timezone Graph reveals the diachronic development and knowledge evolution path in the field of Chinese opera term translation research, from exploring specific term translation practices to in-depth studies on translation strategies, embracing the diversity of Chinese opera cultures, integrating translation theory, and valuing the role of term translation in cultural dissemination.

5. Results and Discussions

In the evaluation of "Introduction to terminology Translation Research", Tao Li-Chun explicitly points out the undeniable importance of term translation research, whether approached from the perspectives of term and translation studies or considering translation as an interdisciplinary activity [5]. Looking at the current research status of Chinese opera term translation, it can be observed that it has distinct characteristics, including clear research focuses, diverse research areas, innovative research methods, an increasing number of researchers and research institutions each year, a positive development trend, significant research potential in certain areas, and broad research prospects. The research hotspots mainly revolve around the following three core areas.

(1) Research on Peking Opera term

Through the analysis of keyword co-occurrence and clustering graphs, it can be observed that the

keyword "Peking Opera" appears as a prominent node with a larger font size in the graph. This phenomenon not only reflects the significant role of Peking Opera as an important component of Chinese traditional culture in cultural inheritance and international dissemination but also highlights the efforts made by the academic community to deepen the research on Peking Opera term translation and promote its internationalization process.

(2) Research on term translation strategies

As another important branch of the field of opera term translation, this area focuses on exploring various translation strategies and their application effects. Keywords such as "functional equivalence", "Skopos theory", "domestication and foreignization" highlighted in the co-occurrence graph indicate scholars' attention to the principles and methods behind term translation and their in-depth thinking and research on the adaptability and effectiveness of term in cross-cultural communication.

(3) Term and cultural communication

Keywords such as "cross-cultural communication", "cultural communication", "cultural transmission", "cultural translation theory", "Chinese traditional culture", and "cultural terminology" demonstrate that the translation of Chinese opera term is not merely a linguistic conversion but also involves the cross-cultural dissemination of cultural values, ideas, and artistic aesthetics. These keywords reflect scholars' understanding of the role and impact of term in cultural communication, as well as their reflections on cultural differences and commonalities in cultural exchanges.

6. Conclusion

Research on the translation of Chinese opera term is not only a branch of linguistic and cultural studies but also represents the challenges and strategies associated with the standardization and normalization of term translation in Chinese traditional culture. It plays a crucial role not only in facilitating the international dissemination and exchange of Chinese traditional culture but also in protecting and inheriting cultural heritage, promoting the innovative development of Chinese opera art, and enhancing international cultural confidence. Through examining the research hotspots, historical development, and main research areas, we found that these research studies mainly focus on three areas: Peking opera terms, translation strategies, and cultural dissemination. Concurrently, theoretical and practical research on the translation of Chinese opera terms has advanced hand in hand, with case analysis and strategy research moving forward together, and research hotspots evolving alongside societal development and emerging technologies.

Acknowledgements

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