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# English translation research based on a multimodal corpus of Cantonese opera: a case study of classic Cantonese opera *Red Boat*

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Cantonese Opera, a prominent genre of Chinese traditional opera, showcases the rich heritage and artistic appeal of Chinese culture through its distinct singing style, gestures, costumes, and facial makeup. Despite its cultural significance, Cantonese Opera faces challenges in reaching international audiences due to linguistic and cultural barriers. This paper explores the physical movements and linguistic features of the Cantonese opera Red Boat during its performance, based on a self-built bilingual multimodal corpus of Cantonese opera. It also conducts an analysis of the coordination between the English and Chinese lyrics and recited lines and physical movements. The study reveals that, although the translation retains the catchy nature in terms of tone and rhythm, challenges still exist in the integration of English lyrics with stage actions. When conducting multimodal translation research on Opera, attention should be paid to the coordination between stage action cues and lyrics recited lines in the English translation. This research provides a methodological reference for the multimodal English translation of Cantonese opera and offers new insights for promoting the international dissemination of Chinese Opera.

KEYWORDS

Cantonese opera, translation studies, Red Boat, multimodal corpus, physical movements

### 1 Introduction

Cantonese Opera, also known as "Guangdong Opera" or "Da Xi," is a traditional Guangdong opera originating from Chinese southern opera and popular in Guangdong, Guangxi, Hong Kong, and Macao, and it was listed in the World Intangible Cultural Heritage List in 2009. It is also occasionally performed in overseas Chinese communities where Cantonese is spoken (Li and Zeng, 2018, p. 18). With the acceleration of globalization and increasingly frequent cultural exchanges, Cantonese Opera, as a world intangible cultural heritage, faces unprecedented opportunities and challenges in its international dissemination. Traditional research on Cantonese Opera translation has often been confined to the textual level, overlooking the multimodal nature inherent in Cantonese Opera performances. This narrow focus hinders the accurate conveyance of the artistic allure and cultural depth of the original works (Zeng, 2022, p. 78). However, recent advancements in multimodal discourse analysis (MDA) approach offer a fresh perspective for Cantonese Opera translation studies. This approach highlights the interplay between language and other modes, such as images, music, and movements, in conveying meaning (Zhang, 2009, p. 25), which resonates with the multimodal essence of Cantonese Opera performances. This study adopted

MDA approach, which emphasizes the analysis of discourse from four dimensions: culture, context, content, and expression and it offers a comprehensive understanding of multimodal communication by integrating different modes of meaning-making.

In recent years, scholars like Corral Fulla and Lladó (2011), Zhu (2015), Dong and Liang (2022), and Li (2019) have applied multimodal corpus techniques to translation studies of traditional operas. Cantonese Opera, despite being a world-class intangible heritage, has received insufficient attention compared to other opera genres, lagging behind in overall research progress (Chen, 2020, p. 19). It is crucial to examine the distinctive translation features of Cantonese Opera and synthesize translation strategies employing both qualitative and quantitative methods, grounded in its multimodal attributes and multimodal corpus techniques. To this end, constructing a Cantonese Opera Chinese-English multimodal bilingual corpus is vital for unveiling the multimodal aspects of Cantonese Opera performances, enhancing the quality of its translations, and facilitating the international spread of Cantonese Opera culture. This study endeavors to establish such a corpus based on the framework of MDA.

This study uses the audio and video materials of the English subtitles in the Cantonese opera Red Boat as the corpus to construct a multimodal bilingual corpus of Cantonese opera. With the help of ELAN audio and video annotation tools, this study explores the musicality of English subtitles, including the interaction between phonology and rhythm and the actions and emotions in dramatic performances, and explores effective ways to convey these features in English translation. The aim is to reveal the internal mechanisms of the musicality of Cantonese opera language and explore strategies for maintaining it during the translation process. By delving into the musicality of Cantonese opera language and its preservation and transmission in translation, it will help promote the development of multimodal translation approach for Cantonese opera and facilitate the international dissemination of Cantonese opera culture. Accordingly, it can enhance the international dissemination of Chinese Intangible Culture Heritage (Jiang et al., 2022).

# 2 Multimodal translation in opera and construction of multimodal corpus

### 2.1 Multimodal translation in opera

Cantonese Opera is a multimodal artistic work that can stimulate multiple senses of audience, including visual and auditory senses. Bassnett (1991, p. 101) proposed that opera translation should consider the "dynamic performance" of opera. Therefore, Opera translation should take into account the potential of the script. As a comprehensive art form, opera performance not only includes linguistic modes but also involves non-linguistic modes such as physical movements, singing, facial makeup, and costumes (Li and Zhang, 2023, p. 103). These modes are intertwined, forming a complete expression of opera art. Hence, opera translation is not only the conversion of linguistic modes but also the comprehensive transmission of multimodal information.

However, traditional opera translation studies often focus solely on linguistic modes, neglecting the significant role of non-linguistic modes in opera art. This limitation prevents translations from fully showcasing the charm of opera art (Li and Liu, 2020, p. 99). To address this limitation, it is essential to establish a clear framework for analyzing multimodal elements in opera. Singing, facial makeup, and costumes, among others, should be considered as integral modes within the operatic expression. To clarify the conceptualization, identification, and operationalization of these modes, this study adopts an approach of multimodality that is grounded in Gu (2013)'s framework, which provides a comprehensive understanding of how various modes contribute to the overall operatic experience. By integrating this theoretical framework, the analysis of multimodal elements in Cantonese Opera translation is grounded in a robust understanding of mode interaction and expression. This approach ensures that the full range of modal elements, including linguistic and non-linguistic modes, is considered in the translation process, thereby enhancing the ability to capture and convey the rich, multifaceted nature of Cantonese Opera art.

Multimodal corpus represents an emerging research direction in the field of corpus linguistics in recent years. By combining information from diverse modes, including language, images, and audio, it offers researchers a holistic and multifaceted data analysis framework. In the context of opera performances, the multimodal corpus holds significant research advantages. It effectively captures and presents the multimodal features of Cantonese Opera performances, addressing the limitations of traditional single-modality (linguistic) corpora that fail to encompass the full range of multimodal information. This comprehensive approach enables researchers to thoroughly analyze both linguistic and non-linguistic aspects of Cantonese Opera performances, providing a more complete understanding of this rich art form.

In recent years, drama translation research has expanded to include non-linguistic modalities, while still building on the foundations of linguistic modality research. Corral Fulla and Lladó (2011) explored opera translation methods from a MDA perspective. Similarly, Zhu (2015) introduced a multimodal Kun Opera translation strategy framework based on the MDA framework. This framework aimed to mitigate the loss or diminution (attenuation) of the original lyrics' multimodal elements during the translation process. Using five translations of Kun Opera's iconic work "Peony Pavilion" as case studies, Zhu demonstrated how multimodal features could be preserved and enhanced in translation. Furthermore, Wang and Wang (2018) analyzed the interplay between illustrations and translations in the lost scripts of Cantonese Opera from a multimodal perspective. They integrated the theoretical framework of transitivity with multimodal analysis to interpret meaning construction across different modes.

These studies collectively illustrate the viability of incorporating multimodality into opera research. Despite this progress, a dedicated multimodal corpus for Cantonese Opera performances has yet to be constructed and annotated. Nonetheless, these pioneering researchers have paved the way for new ideas and methods in Cantonese Opera translation research, emphasizing the importance of a multimodal approach.

# 2.2 Construction of multimodal corpus for opera

A multimodal bilingual corpus, compared to traditional monolingual modality corpora, is characterized by focusing not only on textual languages but also on non-linguistic information such as images, audio, and video. This multimodal integration approach enriches the corpus's expression forms and adds a multi-dimensional aspect by encompassing various modes of communication. In the field of opera art research, multimodal corpora have significant advantages. Taking Cantonese Opera as an example, by constructing a multimodal corpus for Cantonese Opera, we can comprehensively capture and present the diverse information in Cantonese Opera performances, thereby gaining a deeper understanding and analysis of this artistic form. This comprehensive data collection method effectively compensates for the shortcomings of traditional monolingual modality corpora in representing multi-dimensional information, providing researchers with a comprehensive and multi-angled research platform.

In the realm of multimodal corpus research, significant strides have been made globally, encompassing corpus collection, the creation of processing tools, and annotation methods (Knight and Adolphs, 2021, p. 355). While research abroad has matured, its application to opera performance remains limited (Liu, 2017, p. 41). Conversely, Chinese research, though later to emerge, has progressed swiftly, with scholars establishing specialized multimodal corpora across diverse domains. Professor Gu (2013), for example, developed the "SCCSD," a multimodal corpus of modern Chinese on-site impromptu speeches, comprising three sub-corpora. Other notable contributions include multimodal corpora for tourism translation (Hu et al., 2022), multimodal interpretation (Liu and Hu, 2015), multimodal foreign language classroom teaching (Li, 2019), and multimodal simultaneous interpretation (Liu and Chen, 2020).

Regarding the construction of multimodal corpora for opera, it is still in its nascent stage. Cai and Cheng (2021) employed Elan software to analyze humor expression in eight traditional Gannan Caicha operas, thereby establishing a multimodal corpus focused on the humorous aspects of this opera genre. Dong and Liang (2022) proposed the development of a multimodal corpus for Cantonese Opera terminology, encompassing bilingual parallel corpora, audio-video materials, and images, and outlined the principles, framework, and steps for its creation. Of particular relevance is Li and Zhang's (2023) construction of a bilingual multimodal corpus of Qinqiang Opera in Chinese and English, which offers valuable insights and methodologies for the present study.

Zhang (2009) MDA framework deserves a detailed examination. His MDA framework is divided into four levels: the cultural level, the contextual level, the content level, and the expression level. At the expression level, the expressive features of different modes are interconnected, jointly embodying the meaning of discourse. At this level, each mode has its own expressive system, such as visual, auditory, and tactile. However, what is more significant and challenging is to discover the relationships among them, including coordination, integration,

and complementarity. Therefore, the current focus of MDA lies in the expressive features of different modes and the relationships between them. Zhang (2009) introduces the concept of 'symbols,' which necessitates a clearer distinction between symbols and modes. In this context, signs are the basic elements used within modes to convey meaning (Castaldi, 2024). Based on Peirce's theory, 'symbols' are one of the three (basic) types of signs, together with indexes and icons (Atkin, 2010, p. 853). Mode, on the other hand, is a socially shaped and culturally given semiotic resource for making meaning. Examples of modes used in representation and communication include image, writing, layout, music, gesture, speech, moving image, soundtrack, and 3D objects (Kress, 2010, p. 87). Kress's definition rests on the assumption that for resources to qualify as modes they need to display the three Systemic Functional Linguistics (SFL) metafunctions (ideational, interpersonal and textual). Singing, facial makeup, and costumes can be considered as modes within Kress's framework because they effectively display the three SFL metafunctions: ideational, interpersonal, and textual. Singing convey specific musical ideas and emotions, establish connections with audiences, and contribute to the coherence of a musical performance. Facial makeup expresses a range of ideas, influences perceptions, and follows patterns that create a visual narrative. Costumes represent characters and contexts, facilitate social interaction, and are designed with elements that contribute to a cohesive visual text. As socially shaped and culturally given semiotic resources, they play a crucial role in making meaning in various contexts of representation and communication.

Despite some advancements in the construction of multimodal corpora in China, Cantonese Opera, as a component of the world's intangible cultural heritage, requires further exploration and development in the field of multimodal translation. Next, we take the classic Cantonese opera *Red Boat* as an example to demonstrate the process of constructing a multimodal corpus. Utilizing the ELAN (EUDICO Linguistic Annotator), we analyze some issues in the translation of the coordination between action and physical movements and lyrics, using multimodal scenes from *Red Boat* as our case study. Based on this analysis, we propose corresponding solutions to address these issues.

### 3 Construction of a Cantonese opera Chinese-English multimodal bilingual corpus

### 3.1 Corpus selection

Red Boat is a classic work of Cantonese opera, featuring a twisting plot, vivid characters, and highly musical dramatic language (Jiang, 2005). The story of Red Boat unfolds in the Lingnan region in Guangdong province during the Qing Dynasty. It narrates the tale of young military officer Lin Yuansheng, who, upon his arrival in Yuezhou, falls instantly in love with Du Caiwei, a distressed woman from the Red Boat Opera Troupe, while watching their performance. However, their path to love is fraught with obstacles. Lin Yuansheng and Du Caiwei successively offend He Zhennan, the commander-in-chief of Yuezhou, leading to a series of complex emotional entanglements. The research

material selected for this paper is the *Red Boat* (bilingual subtitled version in Chinese and English) published by the Guangzhou Cantonese Opera Theater to celebrate the 55th anniversary of the establishment of diplomatic relations between China and France, as well as the 10th anniversary of Cantonese Opera's application for UNESCO's Intangible Cultural Heritage list. This video material is produced by Pacific Audio and Video Company, with Ni Huiying and Li Junsheng as the leading actors. It is divided into six acts, with a total runtime of 150 min.

### 3.2 Corpus processing

The selected audio-visual corpora undergo preprocessing, including audio-video format conversion, editing, and annotation. This step requires professional technology and tool support to ensure the quality and usability of the corpora. We adopt the multimodal corpus annotation tool ELAN, a free open source software for MDA that has been widely used in fields such as spoken language corpora and discourse analysis (Wang and Wen, 2008). Then, we perform audio denoising on the performance videos, import them into the ELAN software, save them in eaf. format for annotation, and use the software Media Player to strip the audio track of the Cantonese Opera performance videos, saving them in csv. format. Data import is performed based on this. By opening the processed audio and video files through the ELAN software, the Chinese and English translated lyrics are manually entered and aligned in the first and second annotation layers according to the lyrics in the audio and video.

### 3.3 Corpus annotation

A comprehensive set of annotation layers is established to capture the multimodal characteristics inherent in *Red Boat* Opera performances. These layers are designed to reflect the rich symbolic resources that constitute the essence of Cantonese Opera. While emphasizing the specialized knowledge of Cantonese Opera, the annotations are meticulously categorized into distinct layers, each serving a specific purpose (Stöckl and, 2022). The layers include:

- 1) Original Text and Translation Layer: aligns the original Cantonese text with its English translation, enabling linguistic analysis and comparison.
- 2) Type and Narrative Structure Layer: distinguishes between monologs and dialogues within the subtitles, providing insights into the narrative structure and character interactions.
- 3) Performance Elements Layer: annotates lyrics and recited lines, clearly delineating singing passages from spoken dialogue, highlighting the musical and dramatic aspects of the performance. Also identifies the singers or speakers of the lyrics, contributing to an understanding of character roles and vocal contributions.
- 4) Phonology and Rhythm Layer: analyzes phonological features of both Chinese and English texts, indicating rhyming patterns and phonetic correspondences. Annotates rhythmic structures, using "/" to mark pauses, and differentiates logical and grammatical pauses based on sentence structures and meaning

- groups, aiding in the study of prosody and rhythmic patterns across languages.
- 5) Imagery and Cultural Significance Layer: annotates cultural imagery unique to Cantonese Opera lyrics, enriching the interpretation of the text's symbolic and cultural significance.
- 6) Action and physical Movements Layer: captures stage actions of actors, including finger pointing, eye gaze, and other meaningful physical movements (also known as postures or routines), vital for understanding the full range of performance techniques in Cantonese Opera, which integrates recitation and singing with physical movement.
- 7) Emotional Tone Layer: annotates the emotional tones conveyed through singing styles, such as cheerful, sad, rising, and falling tones, reflecting the diverse emotional states expressed in Cantonese Opera.
- 8) Facial Makeup and Visual Symbolism Layer: acknowledges the traditional Lingnan Chinese culture embedded in facial makeup, annotating the colors and designs used to indicate character traits, adding depth to the analysis of visual symbolism.
- 9) Costume and Cultural Elements Layer: annotates the variety of costumes worn in different theatrical scenes, categorizing them to illustrate the rich visual and cultural elements of Cantonese Opera performances.

Among these annotation layers, the tone layer, action and physical movements and performance elements layers present the greatest challenges due to their unique and specialized nature within Cantonese Opera performances. To ensure the scientific rigor and accuracy of the annotations, it is recommended, following the research suggestions of Li and Zhang (2023), to consult with Cantonese Opera scholars prior to commencing annotation. To guarantee reliability, two researchers have independently annotated both language and non-language modality layers, after which two additional researchers have reviewed the annotations. The annotated and categorized multimodal information has been stored in a database, constructing a Cantonese Opera Chinese-English multimodal bilingual corpus. This database offer efficient search and query functions, enabling researchers to easily access and utilize the corpus resources for in-depth analysis and study.

# 4 Translation analysis based on multimodal corpus of Cantonese opera

# 4.1 The coordination between Chinese and English lyrics and physical movements

In the performance of Cantonese Opera *Red Boat* Cantonese lyrics and actors' performance movements complement each other, collectively forming an expressive artistic whole. As emphasized in theatrical performances by the phrase "singing, reciting, acting, and acrobatics," physical movements serve as a crucial complement to vocal language, with their coordination and accuracy being vital for portraying characters' emotions, personalities, and the development of the plot. Cantonese Opera is an art form that carries a profound tradition of impressionism, and its physical movements fully exhibit the artistic characteristics of "pursuing

likeness in spirit, transcending form, and integrating spirit and form" (Yu and Shi, 2005, p. 60). More importantly, the integration of these movements with the lyrics paints a captivating audiovisual picture for the audience. Every meticulous movement of the actors, whether it be a subtle gesture or an instantaneous change in expression, skillfully conveys the deep affection and rich connotations of the lyrics to the audience.

This research explores several examples by examining specific rhythmic changes and movement notations. In the fourth act of *Red Boat*, when Du Caiwei sings "攀星揽月翱翔" (Climbing to the stars, embracing the moon, soaring high), especially at the phrase "embracing the moon, soaring high," she stretches out her hands with fingers pointing toward the moon in the sky. In the translation of this lyric line, as the original Chinese lyrics lack a subject, the translator has added "we" as the subject in English. The phrase "take to the sky" (embrace the moon) is placed in the latter part of the sentence, closely coordinating with the actor's physical language and movement performance. This fully demonstrates the harmonious unity between rhythm and movement, which is the core characteristic of musicality, and also highlights the effective integration of multiple modes in dramatic performances.

In terms of rhythm, the physical movements of Cantonese opera are in harmony with the lyrics and music, creating a harmonious and unified artistic effect. Take the lyrics "恼阑珊灯 火流动,裙带飘飘掩玉容"。(The lights of the night are flowing, and the dresses are fluttering, hiding the beauty of the jade" as an example. This line of lyrics itself contains rich emotional colors and dynamic imagery. When performing this part of the lyrics, the actor needs to accurately adjust the amplitude and speed of their movements to match the rhythm of the music. In the part of "恼阑珊灯火流动" (The lights of the night are flowing), the actors express the loneliness and desolation of the lights of the night through slow and powerful movements; "裙带飘飘掩玉容" (and the dresses are fluttering, hiding the beauty of the jade), the graceful and elegant movements are used to show the feminine beauty and sorrow of women. However, when translating the play into English, it is necessary to pay attention to the coordination between the direction of stage movements and the lyrics.

### 4.2 The translation of the coordination between physical movements and lyrics

The coordination between physical movements and lyrics on stage requires corresponding adjustments in the English translation to match the physical movements on stage, otherwise it will mislead English audiences. Firstly, there are instances where the translated lyrics contradict the physical movements. In a scene where Lin Yuansheng invites Du Caiwei and her maid Qingyi to his residence for a chat, he sings as he walks behind them: "有那天仙轻轻送,不惊夜寒露冻。弱质纤纤柳,怎禁得冷风夜露浓" (A celestial maiden gently guides me, unafraid of the cold night dew. Delicate and fragile like a willow, how can she withstand the dense cold wind and night dew?) Based on the context and content of the lyrics, this passage clearly depicts Lin Yuansheng praising Du Caiwei from his own perspective. However, when Lin Yuansheng sings "有那天仙轻轻送, …… 弱质纤纤柳" (A celestial maiden gently guides

me...Delicate and fragile like a willow), due to the infrequent use of explicit subject personal pronouns in Chinese syntax, the translator added the first-person subject "me" and "I" in the translation, rendering these two lines as "Some fairy must have guided me here" and "I am weak as the willow," respectively. Nevertheless, this translation conflicts with Lin Yuansheng's actions. As he sings and points to Du Caiwei in the distance with his finger, the linguistic "me" and "I" shift the focus to himself, resulting in a discrepancy between his actions and words. Secondly, both the context and the directional indication of the movements in the lyrics describe Du Caiwei. However, the addition of personal pronouns in the English translation transforms it into a self-description by Lin Yuansheng, which deviates significantly from the plot and situational context, potentially confusing English speaking audiences.

Secondly, there are errors in the translation of the lyrics, particularly in the reference to characters. In the sixth scene of the play, the troupe leader Brother Sange and Lin Yuansheng escort Du Caiwei to the pirate ship. Upon arrival, they find that Du Caiwei has committed suicide. Brother Sange was filled with grief and anger. He grabbed Lin Yuansheng's collar and shouted, "Lin Yuansheng, you killed her!" Then he changed the scene and angrily sang,"你不该死,你不该绝,人心多狡黠,你偏性刚烈, 不为弯, 宁为折; 你不该绝, 天该绝". The corresponding English translation is "You should have died a long time ago; People are mostly cunning, but you are so strong-headed; You stand fast by your principles; Heaven would end, if you would not." The first sentence in the translation, "You should have died a long time ago," uses the subjunctive mood, which means "You should've died long ago". This sentence usually carries a strong negative emotion, expressing dissatisfaction or surprise at someone's longterm survival. According to the context of the Chinese lyrics, it is found that the object referred to by "you" in the lyrics of Brother Sange should be Du Caiwei, while the translation "You should have died a long time ago" clearly refers to someone other than Du Caiwei. When translating, the translator mistakenly pointed the language object in this sentence to Lin Yuansheng instead of Du Caiwei. The reason why the translator made such a mistake may be that the translator was standing in the position of the protagonist, who was very angry at the time, and used this sentence to vent his extreme anger toward Lin Yuansheng for indirectly killing Du Caiwei; Secondly, it may also be due to the translator's neglect of the context of the lyrics sung by the Brother Sange.

Despite the linguistic differences between Chinese and English, translators should be more cautious when dealing with texts with obvious directional movements in Opera, carefully analyzing the context of the lyrics to avoid similar contradictions. By maintaining the coordination between language and action, the viewing experience and understanding effect of English-speaking audiences can be enhanced. Therefore, the translation "Some fairy must have guided me here" is adjusted by changing the first person "me" and "I" to the third person "her" and "she" to ensure consistency with the original Opera context and action. The translation "You should have died a long time ago" can be attempted to be modified to "You shouldn't have died". In this way, English-speaking audiences can deeply appreciate the tacit cooperation between "lyrics and recited lines" and "action and physical movement" when watching subtitles, thereby enhancing their viewing experience and understanding effect.

### 5 Conclusion

This study provides a new perspective and case study for multimodal translation research. Firstly, it emphasizes the significance of multimodal translation research in Opera translation. Opera, as an art form that integrates literature, music, and stage performance, requires full consideration of its linguistic musicality and coordination with physical movements when translating dramatic texts for the stage. Performers in Cantonese Opera must precisely grasp changes in rhythm during their performances. This mastery not only demands seamless coordination between the lyrics and music but also requires synchronization with physical movements, creating a harmony. This synchronicity not only makes the entire performance appear more fluid and natural but also profoundly reveals the inner world and emotional changes of the characters. Specifically, we can approach this from the following aspects: to begin with, when translating operatic lyrics, it is essential to ensure that the language aligns with the characters' actions, avoiding the addition of subjects that may create contextual contradictions. Furthermore, it is important to note the challenge of accurately understanding character references in the lyrics to prevent translation errors that could potentially affect the audience's comprehension of the plot. This aspect requires careful consideration in the translation process. However, this study does not further analyze the rhythm analysis of Chinese and English subtitles and the emotional connotations of Chinese and English phonology. Meanwhile, future research can further explore how to utilize technical means such as multimodal corpora to optimize the translation quality and dissemination effect of dramatic arts like Cantonese Opera, thereby enhancing the international understanding and appreciation of Cantonese Opera art and improving the quality and level of opera translation.

### Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

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