



A Comparative Analysis of the Application of Human Translation and AI Translation—A Case Study of *Shengshengman* Translation

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Abstract. Recent progress in artificial intelligence translation technology has brought about a marked increase in the speed and convenience of translation work. This essay selects Li Qingzhao's *Shengshengman* as the research subject, using the Three Beauties theory presented by Xu Yuchong as the framework to examine differences between traditional human translation and current mainstream AI translation tools (DeepSeek, ChatGPT) in terms of the translation of beauty in sense, beauty in sound, and beauty in form. The study finds that human translators can effectively consider all the sides, including beauty in sense, sound, and form. However, at the level of beauty in sense, AI translation technology can achieve imagery expression but fails to create emotional tension. AI translation cannot actively construct beauty in sound or form. These limitations present challenges for machine translation. Therefore, translators can effectively use AI translation to do preliminary translation work, and then polish and refine it by themselves, thereby making it a powerful tool to enhance their own work efficiency.

Keywords: AI Translation; Three Beauties Theory; *Shengshengman*

1 Introduction

1.1 Significance of the Research

Classical Chinese poetry, serving as the treasure of China's excellent traditional culture, embodies profound cultural depth and unique aesthetic qualities. Li Qingzhao, an outstanding representative of Ci poetry in the Song Dynasty, is famous for her unique Ci style. Her Ci works have long been celebrated for their subtle and enduring imagery, refined and exquisite language, distinctive rhythmic patterns, and profound emotional intensity, leaving a deep impression on readers. The cross-cultural translation and dissemination of such works have long been a significant topic in the field of translation studies.

Artificial Intelligence technology, which has made great progress in recent years, has shown its advantages in several territories, especially in translation. With their efficient processing speed and formal output standardization, they have provided a new

technical pathway for text translation. However, the intervention of AI technology also poses challenges to traditional translation theories.

Against the backdrop of increasingly deepening global cultural exchanges, systematically comparing the effectiveness of classic human translations and emerging AI translations in conveying the aesthetics of classical Chinese poetry is of great theoretical and practical significance. Such a comparison not only helps improve the quality of Chinese literature in foreign translation in practice but also contributes to exploring new models of human-machine collaborative translation and their roles to play in the digital age.

1.2 Literature Review

Recent studies on AI translation have proved that the performance of AI translation varies when translating different types of text. In terms of informative texts, AI translation can achieve the task no worse than human translation. A study by Alhumsi and colleagues on social science provides quantitative evidence that the BLEU score of ChatGPT translation reached as high as 0.988. It even outperformed human translation in the handling of material processes [1]. Scholars in China also have reached similar conclusions. Wei Zichun and others, in their study on industrial development information texts, pointed out that AI translation is already capable of producing relatively high-quality output, and the core role of human post-editing is to ensure the final quality rather than to correct a large number of errors [2]. However, when it comes to literary texts, especially poetry translation, AI translation performs well in fluency while showing notable drawbacks in handling core aspects of literary texts. For example, although AI translation can preserve the basic meaning of the poem, it falls short in areas such as rhyme and poetic form [3]. Some scholars have further suggested that AI translation remains limited in its understanding of deep cultural structures and its mastery of formal strategies [4].

Over the years, research on Li Qingzhao's Ci poetry has flourished. On the one hand, from the perspective of translation history, Liu Jinhui and others have traced the earliest origins of the translation of Li Qingzhao's ci into the English-speaking world, shedding light on the beginnings of its cross-cultural dissemination [5]. On the other hand, from the perspective of translator style, researchers have conducted systematic comparisons through the construction of self-built corpora of the translation styles and strategies of different translators, such as Xu Yuanchong, Zeng Peici, and the Western translator Kenneth Rexroth [6].

1.3 Research Objectives

Based on the above analysis, existing research has achieved considerable progress in the construction of human translation theories and the exploration of the limitations of AI translation technology. However, existing research on Li Qingzhao's Ci poetry mainly focuses on literary studies of the original works or on analyses of human-translated versions, with little attention paid to the emerging field of AI translation. To address this gap, this study takes Li Qingzhao's *Shengshengman* as a specific case and conducts a comparative analysis of the translations by Xu Yuanchong with translations

generated by ChatGPT and DeepSeek, aiming to compare the different aesthetic performance of AI and human in classical Chinese poetry translation and discuss the future cooperative way of both human and AI in poetry translation.

2 Theoretical Framework

This study will compare three types of translations: human translation by Xu Yuanchong, AI translation by ChatGPT, and DeepSeek by employing Xu Yuanchong's Three Beauties Theory as the framework. When it comes to translating classical poetry, the Three Beauties Theory stands as a foundational framework, and it's usually broken down into three interconnected dimensions: beauty in meaning, beauty in sound, and beauty in form. Beauty in meaning is essentially about getting across both the surface content and the broader artistic atmosphere of the original work. The translator needs to faithfully capture the poem's emotional register, its central imagery, and whatever deeper intellectual or philosophical layers may be present. There is beauty in sound, which focuses on reproducing the original's rhythmic flow and rhyming patterns so that the translated version sounds pleasing and natural to the ear, ideally it should have a smooth, almost musical quality when read aloud. Beauty in form, on the other hand, concerns itself with the external structural features of the poem. This means paying attention to how lines are measured, how stanzas are patterned, and how the overall visual shape of the piece on the page is preserved. Xu establishes a clear hierarchy among these three aspects. Beauty in meaning takes precedence, followed by beauty in sound, and only after that comes beauty in form. The idea here is that conveying the original poem's conceptual world and artistic vision has to come first. The translator should then try to accommodate the aural and structural aspects wherever possible, but never at the expense of that core faithfulness [7]. Li Qingzhao's writings are a textbook example of the Three Beauties Theory at work. When this theoretical model is deployed as an analytic lens, it not only furnishes a set of reliable criteria for conducting side-by-side comparisons but also provides a viable path for assessing the extent to which AI technologies, when confronted with literary texts of notable artistic density, are genuinely capable of engaging with the aesthetic core of classical poetry.

3 Findings and Discussion

3.1 Beauty in Meaning

Beauty in meaning is the core of the "Three Beauties Theory," emphasizing that the translation should reproduce the artistic conception, emotion, and cultural connotation of the original poem. A comparison of Xu Yuanchong's translation, ChatGPT's translation, and DeepSeek's translation reveals significant differences in imagery transmission, emotional tension creation, and cultural metaphor processing.

Example 1. Original text: 寻寻觅觅，冷冷清清，凄凄惨惨戚戚。

ChatGPT translation: Seeking and searching, / So lonely, so desolate, / So miserable, so grief-stricken.

DeepSeek translation: Seeking, searching, cold and clear, / So sad, so miserable, so broken and dreary.

Xu Yuanchong's translation: I look for what I miss, I know not what it is. / I feel so sad, so drear, / So lonely, without cheer.

For the opening reduplication, Xu Yuanchong uses the symmetry and repetition of phrases to simulate the effect of the original text's cyclical recurrence, conveying the state of wistful longing and distracted searching. For the immediately following emotional reduplications, Xu repeats 'so' three times, combined with the semantic progression of "sad-drear-lonely," outlining a clear emotional track that shows a gradual shift from the desolation of the external environment to the inner world's solitary sorrow, more in line with the layered emotional atmosphere of the original words. In ChatGPT's translation, the parallel arrangement of 'so' also creates a sense of accumulating emotion, but the overall effect is closer to a listing of emotional states, failing to reproduce, as Xu's translation does, the choked and interrupted emotional qualities of the original within the variation of phrases. The DeepSeek and ChatGPT versions look much alike, as both rely on a parallel enumeration structure. When placed alongside Xu's work, the AI systems do show promise in getting words right and keeping sentences smooth. Yet they still fall short when it comes to the deeper emotional pull and the kind of contextual logic that gives classical poetry its weight.

To sum up, human translation cares more about layers of feeling, cultural hints, and leaving the poem open to reading by shifting a phrase or building meaning step by step. AI translations, by contrast, favor lexical precision and structural fluency but struggle to reproduce the full artistic conception. For instance, Xu Yuanchong manages to bring back the poem's sobbing rhythm and its gathering sense of loss. ChatGPT picks up on the beat but makes it sound too uniform inside. DeepSeek goes for clarity but loses the whispers in the process. These contrasts indicate that while AI systems manage semantic coherence adequately, they encounter persistent difficulty with context-rich dimensions like tenor and mode. That gap, ultimately, is why the emotional charge of a machine's version feels different from a human's [8].

3.2 Beauty in Sound

In Xu Yuanchong's view, beauty in sound has to do with a translator's ability to catch the rhythmic flow of the original poem and find prosodic equivalents in the target language. The aim is to restore the phonological charm of the source text—often by working with effects like alliteration, assonance, and repeated sound patterns.

Example 2. Original text: 梧桐更兼细雨，到黄昏，点点滴滴。

ChatGPT translation: Drizzle on parasol leaves, / Drop by drop, at dusk— / This time, how can one word "sorrow" suffice?

DeepSeek translation: The plane trees, with a fine rain falling, / At dusk— / Drip, drop, drip, drop.

Xu Yuanchong's translation: On parasol-trees, leaves, a fine rain drizzles. / As twilight grizzles.

Literally, these lines mean that a fine rain keeps falling on the parasol tree leaves, and as dusk comes on, the drops go on, drip by drip, drop by drop. The Chinese phrase "点点滴滴" uses two sets of repeated syllables to imitate the broken rhythm of rain

against the leaves. This makes the sound of the words blend directly into what the ear would hear. The overall effect is strong.

The original couplet is not strictly rhymed verse, but the repeated pattern of "点点滴滴" gives the lines a clear musical push. In Xu's translation, the two lines settle into a tidy end-rhyme. By adopting "Drizzles" and "grizzles", Xu achieved the balance of sound. "Drizzles" for the soft, steady fall of fine rain, "grizzles" for the blurred dimness of oncoming dusk, making sound and sense click together. The thick consonant clusters and liquid sounds in "parasol-trees leaves" also go some way toward catching the grainy feel of rain hitting leaves.

ChatGPT shows a certain ear for sound. "Drizzle" and "Drop" start with the same consonant, hinting at unbroken rain. The phrase "Drop by drop" mirrors the original's reduplication with a simple repeat, adding a steady beat. However, the whole passage never settles into a regular end-rhyme. There is no real link between "leaves" and "dusk," and while "suffice" shares a vowel-ish echo with "dusk," it does not build into a solid prosodic pattern. DeepSeek turns "点点滴滴" straight into the onomatopoeic chain "Drip, drop, drip, drop." It is a vivid choice, catching the sound of dripping water right away. The lines before offer nothing to rhyme with it. "Falling" and "dusk" sit apart without any phonic tie, also the passage overall misses a wider rhythmic shape. "Drip, drop" works on its own, but it stays a local touch, not part of a larger sound design.

What stands out more is that Xu's version works with a consistent end-rhyme plan and a deliberate iambic step, building a musical coherence that echoes the poem's sobbing undertone. ChatGPT and DeepSeek do not commit to any steady rhyme scheme. Admittedly, DeepSeek shows some rhythmic instinct with onomatopoeia ("drip, drop"), but neither AI weaves the kind of dense, layered sound pattern that Xu achieves. The gap suggests that current AI systems, when translating poetry, do not really design rhythm in an active way [9]. Human translators, on the other hand, do not just notice beauty in sound, but they also work to build it.

3.3 Beauty in Form

Beauty in form mainly requires translators to echo the length and layout of the original lines or at least aim for a consistent visual shape within the target text.

Example: Original text: 寻寻觅觅，冷冷清清，凄凄惨惨戚戚。

ChatGPT translation: Seeking and searching, / So lonely, so desolate, / So miserable, so grief-stricken.

DeepSeek translation: Seeking, searching, cold and clear, / So sad, so miserable, so broken and dreary.

Xu Yuanhong's translation: I look for what I miss, I know not what it is. / I feel so sad, so drear, / So lonely, without cheer.

Both ChatGPT and DeepSeek accurately convey the basic meaning of the original text without significant semantic deviation. Both attempt to simulate the emotional progression of the original reduplicative characters through the repetitive use of "so...". However, the original seven groups of characters possess an inherent logical progression of emotion—from the action of "seeking" to the environmental "coldness and desolation" to the psychological "misery and grief," each layer deepening the emotional

intensity. The parallel structures used by both AI translations tend toward simple listing, reducing the logical progression to a parallel arrangement and failing to fully restore the emotional layering of the original. Xu Yuanchong's translation, by contrast, renders "寻寻觅觅" as "I look for what I miss, I know not what it is," using phrase repetition to simulate the echoing effect of the repeating, and then forms a parallel structure with "I feel so sad, so drear" and "So lonely, without cheer," reconstructing the emotional progression of the original within the framework of English grammar.

In summary, Xu Yuanchong's translation achieves an effective reconstruction of the original poem's formal aesthetic characteristics through structural reorganization, parallel design, and word order adjustment. ChatGPT's translation demonstrates a certain awareness of formal beauty, particularly in its identifiable rhythmic treatment of the repeated characters through parallelism, but still has room for improvement in syntactic symmetry and overall layout systematically. DeepSeek's translation, while achieving basic semantic correspondence, is relatively the weakest in formal construction and aesthetic self-awareness. The gradient differences among the three translations in the dimension of formal beauty indicate that formal restructuring ability remains an important indicator distinguishing human translation from machine translation [10].

3.4 Discussion

Literary translation is fundamentally different from informative translation. While the latter aims to convey factual information accurately, the former is essentially a cross-cultural act of artistic re-creation. This is especially true for classical poetry, where the artistic value of a text lies not only in "what is said" but also in "how it is said". The organic whole formed by such aesthetic elements as linguistic form, rhythm, rhyme, and structure. As Xu Yuanchong pointed out, poetry translation should pursue the unity of "beauty in meaning, beauty in sound, and beauty in form." This means that a translator cannot be satisfied with mere semantic accuracy; instead, they must take into account image conveyance, rhythmic arrangement, rhyme schemes, and syntactic restructuring in a holistic manner. For this reason, literary translation demands far greater aesthetic judgment and linguistic creativity from the translator than ordinary translation does.

The findings of this study reveal clear limitations in large language models when applied to literary translation, particularly in the case of Song lyrics translated into English. At the level of rhythm and sound, AI-generated translations generally lack conscious rhyme design. While the prosody may sound natural, the translations rarely form coherent rhyme schemes across the entire text, resulting in a relatively weak performance in terms of beauty in sound. At the level of form, AI tends to maintain linear word order and conventional syntactic expansion, seldom performing proactive syntactic restructuring or formal adjustments, thus struggling to recreate the beauty in form characteristic of the original lyrics. The underlying reason for these shortcomings is not difficult to understand. Artificial Intelligence translation is, in essence, probability-based semantic prediction tools. It can recognize and reproduce common collocations found in corpora, but they cannot, like human translators, make aesthetic judgments or engage in global planning based on a full understanding of the original text's artistic conception and formal features. In other words, while AI can accomplish the task of

translation at the semantic level, its limitations remain fundamental when it comes to literary translation, which requires aesthetic awareness and formal re-creation.

4 Conclusion

4.1 Major Findings

The results of the research show that AI translation performs relatively stably in retaining images and conveying semantic meaning yet still exhibits deficiencies in rhythmic construction and structural reorganization. Human translations, by contrast, not only demonstrate proactive organizational features in the dimensions of sound beauty and form beauty but also achieve beauty in meaning. This result indicates that in the field of poetry translation, AI translation is still not fully competent. However, it can be used for preliminary translation work, followed by human polishing and refinement, thereby creating an effective approach to human-machine collaborative translation.

4.2 Limitations

This study has two limitations. First, the findings are based on a single Ci poem, which leads the results may be not general. Second, quantitative data support such as BLEU score comparisons and reader acceptance surveys is lacking. Future research may expand the corpus scale and conduct systematic comparisons of literary texts of different genres combining with quantitative methods to further explore the developmental trends and mechanistic constraints of AI in the field of literary translation.

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