

A Study on the Difference Between Wenxin Yiyan and Chat GPT When Translating Identical Chinese Articles

-- Take Zhu Ziqing's Prose Spring as an Example

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Abstract: With the rapid development of society, artificial intelligence has rapidly entered public awareness and developed at an unprecedented pace. It has significantly improved convenience in people's daily lives and studies. In this study, the passage in the prose *Spring* gives the same instructions to ChatGPT and Wenxin Yiyan software according to the ICIO framework: instruction, context, input data, and output data. After giving the same command, three different results are obtained, and then the translation results obtained by the two software are compared. After comparison, the study finds that ChatGPT's understanding of English words is better than Wenxinyiyan's. For example, there is the word Wenxinyiyan translates to "whisper," which means talking with a shallow voice is not the prose's author's meaning. In the end, the study finds that ChatGPT's translation is better than Wenxinyiyan's because it translates very clearly and shows people a better understanding of the meaning of the words. Therefore, if a reader wants to know the translation of the prose, this paper also gives him some ideas.

Keywords: ChatGPT, Wenxin Yiyan, prose *Spring*.

1. Introduction

With the rapid development of society, artificial intelligence (AI) entered public vision and developed extremely fast. It is convenient for people in daily life and study. It also can be used in teaching, media, logistics, and many other aspects. Humans have lived in an era of artificial intelligence, which is easy to get information and knowledge aggregation [1]. With the increased awareness of combining the skill of translation and AI, the ability of AI to translate the article has an apparent advantage, which is understanding the context and making the passage more advanced. Meanwhile, translation has become a significant skill for many people to advance cross-language communication [2]. AI software, especially in the area of managing natural language, has attracted great attention from various societies [3]. In recent years, many AI software have been launched worldwide, such as ChatGPT, released by Open AI in 2022, which caused a great sensation on the Internet once it was launched and became the most eye-catching AI software [4]. ChatGPT has gone beyond the original translation machine for theory and can help people finish various translation processes in the process of searching, translation, proofreading, etc. [5]. Domestic, there is also AI software based on a

transform structure that has been launched by Baidu called Wenxinyiyan. This software can help people to achieve inspiration, knowledge, information, etc. It also can have effective communication with people to solve problems [6]. It is popular to research the translation ability of AI software in any different part at present. But one thing we cannot doubt is that different domestic and abroad software have completely different corpora, so when people give them a translation prompt, they will generate different translation results.

The prose *Spring* by Zhu Ziqing describes the scene full of his passion when the spring has just come. Although the passage is not long, the way of writing is flexible, and various rhetorical have been used in the passage to make the language more delicate [7]. At the same time, this article combines the emotions of the view into it, gives people a vivid description of the scene at the beginning of the spring, and expresses the love of the spring.

This paper mainly analyzes the general difference between two artificial intelligence software, ChatGPT and Wenxinyiyan, in the translation of Zhu Ziqing's prose *Spring*.

2. Literature Review

AI translation software has different levels of the same text, even if they have certain treatments for the context understanding and polishing of the translation of the article, it still has differences. Youdao translation and DeepL cannot give people an accurate translation of the ambiguous Chinese words. It cannot translate the feelings of people's deep hearts; it just expresses objective facts [8]. In terms of literary translation, AI software makes it impossible to finish the literary translation task because it cannot convey the culture and the beauty of the source language. However, the feeling in the article about the development of ChatGPT has been imported, but it still has the situation of mistranslation and disorderly translation [9]. In terms of dialect translation in the text, Youdao Translation and DeepL AI software cannot express the meaning clearly. It can only give a direct translation so that the readers may get a worried meaning of the passage. Nevertheless, ChatGPT measures to use the undirect translation is understanding the context and the author's meaning of the word and then giving people a translation; this way can be more accurate to translate the Chinese dialect in the passage [10]. Based on the data of the corpus, Xu Hang gave people a result that the Youdao translation has a high proportion of correct translations, and the possibility of grammar errors is lower. In other words, Google Translate has a high percentage of errors [11]. So that people can know that different software will have the problem of mistranslation or misunderstanding when they translate the same passage, but the technology of software continues to make progress therefore, when they translate, it can express the real meaning of the author.

3. Research Methods

According to the framework of instruction, context, input data, and output data (ICIO), the paragraphs from the prose *Spring* are given the same prompt as ChatGPT and Wenxinyiyan software (Table 1). After giving the same prompt, there will be three different results of the translation. Because the two AI software come from different countries and the background of the corpus source is different, the translation results obtained by the two software are compared. According to the framework of ICIO, the paragraphs from the prose "Spring" are given the same prompt as ChatGPT and Wenxinyiyan software (Table 1). After giving the same prompt, there will be three different results of the translation. Because the two AI software come from different countries and the background of the corpus source is different, the translation results obtained by the two software are compared.

Table 1: The prompt according to the framework ICIO.

Framework	Prompt	The translation of the prompt (because of author sent Chinese prompt to the AI)
Instruction	请用英文翻译以下文段。	Please translate under paragraph to English.
Context	根据作者通过对春天的描写,将自己对未来生活的美好期望以及自己对春天的喜爱表达出来的语境,将文本进行再次翻译,且保证用词的优美流畅。	According to the description of the spring, please with the context which is hopefully to the future and the love of spring. Please translate the paragraph again and keep the words fluently and beautifully.
Input Data	“吹面不寒杨柳风”,不错的,像母亲的手抚摸着你。风里带来些新翻的泥土的气息,混着青草味儿,还有各种花香,都在微微润湿的空气里酝酿。	“吹面不寒杨柳风 (Spring breeze touches my face, making me feel warm and cannot feel cold; the slender wicker dances with the breeze)” Great, just like mother’s hands caress you. The breeze takes some scent of the plowed land, mixed the scent of the grass and the fragrance of various flowers, all permeating in the slightly moist air.
Output Data	希望翻译后的最终结果可以将作者的意图进行准确的表达,不出现乱译,错译,漏译等现象,可以准确的传达出作者所表述的情感,保证翻译出的结果可以让读者感受到这段文字的美。	The final results can be more precise to present the author’s meaning and do not appear to misunderstand translation, random translation and miss translation. Please convey the author’s feeling accurately and make sure that the translation result can let reader feeling the beauty of the words.

4. Result

4.1. The First Result of the Translation

Table 2: First comparison.

Software	Result of the translation
ChatGPT	The wind brushing against your face isn’t cold but gentle, like a mother’s tender touch. It carries the scent of freshly turned soil mixed with the fragrance of new grass and various flowers, all mingling in the slightly moist air.
Wenxin Yiyao	The gentle breeze of early spring, like the soft swaying of willow branches, brings no chill to the face; it feels like a mother's hand caressing you. The wind carries with it the fresh scent of newly turned earth, mingling with the aroma of grass and a myriad of floral fragrances, all brewing in the slightly dampened air.

There are different situations after the first simple prompt.

In the word usage aspect, wenxinyiyao has a better understanding of the words. For example, in the original text, “杨柳风” means the wind appeared when the poplar trees and willow sprout, and it also represents that spring has already come, the warm wind blowing in the face is not cold. It also

shows the author's happy, enjoyable, and relaxed emotions, But ChatGPT translates it to "The wind brushing against your face isn't cold but gentle." It does not express the author's emotions directly. But Wenxin Yiyan translates it to "The gentle breeze of early spring, like the soft swaying of willow branches, brings no chill to the face." This translation presents the author's description of early spring, but the word "willow branches" is not suitable. "像母亲的手抚摸着您" ChatGPT uses "tender touch," tender's meaning in Cambridge dictionary is gentle, loving, or kind, at the same time, the word "touch" in Chinese means an extremely simple touch, so it is not an appropriate word (see Table 2).

But Wenxin Yiyan uses "caress." Caress means "to touch or kiss someone gently and lovingly". This explanation is more consistent with the meaning of the original text. It can also show the author's feelings.

Meanwhile, the two software did not translate the word "新翻的泥土", it appeared to be a mistranslation. Both of them translate it to "turned". In the original passage, the author's meaning is not "new turn" of the land, but refers to the land that has just been plowed.

At the same moment, "混着青草味儿" does not mean "new" grass. ChatGPT translates it to the grass, which has grown just now, is not accurate.

In addition, both software appeared to miss translation situations. For example, for the "不错的" translation, two of the software didn't translate it.

4.2. The Result of the Second Translation

Table 3: Second comparison.

AI software	Result of the second translation
ChatGPT	The breeze that touches your face is not cold but soothing, like a mother's gentle caress. It carries the subtle aroma of freshly turned earth, mingled with the scent of new grass and a variety of blooming flowers, all blending in the softly moist air.
Wenxin Yiyan	The gentle caress of spring's breeze, akin to the tender touch of a mother's hand, whispers of warmth without chill. It brings forth the invigorating scent of freshly plowed earth, intertwined with the verdant fragrance of grass and the alluring bouquets of myriad flowers, all conspiring in the subtly dampened air to create a symphony of nature's essence.

For the second time, the two software combined part of the context to translate, and try to keep the fluency of the language, both softwares are different from before.

In terms of wording, ChatGPT has changed its translation of "吹面不寒杨柳风", replacing "wind" with "breeze" from a blunt description of wind to a "gentle breeze", but it is still not very close to the author's feelings for the spring has just arrived which is to make the heart enjoy the warm and the future is full of hope. At the same time, when translating the "新翻的泥土的气息" in the original text, it changed the "scent" in the first translation into "subtle aroma", changed the scent into a slight smell that is not easily detected. The author thinks the translation here is more precise. At the same time, in some aspects, Wenxin Yiyan, as a Chinese main corpus AI software, can catch the prose author's meaning correctly. This software turns "turned soil" into "plowed earth", which changes the newly turned land to land that has just been plowed (see Table 3).

In the second translation, people can feel that ChatGPT added more adjectives based on the original, but the author considered some of its adjectives inappropriate. For example, for the first time, ChatGPT translates "各种花香" to "various flowers". However, the second time, we can see that the answer is "a various of blooming flowers", so the author thinks that it can be considered more accurate

in the first translation because the original text of this article is “还有各种花香”, not all kinds of blooming flowers. At the same time, it has changed "slightly" to "softly" in the second translation, slightly means "a little" but "softly" means "gently" in the original meaning "在微微润湿的空气里酝酿", The author thinks "slightly" would be more accurate, so the author thinks ChatGPT is over-translated here. The second translation of Wenxin's word uses the word "whisper" which means there are two people and their distance is very close when they talk to each other their voices cannot be heard by others. But the author's meaning of this prose is not voiced small, so in the author's opinion is whisper is not appropriate here. Not only here this appear to problem, but it translates "brewing" into "conspiring", conspiring means many people have the discuss their ideals together to make one goal come true, which is not suitable to express the Chinese meaning in the original text. The second translation of Wenxin Yi has become very complex, so I think it is not only a problem of words, but also an obvious phenomenon of disorderly translation.

The sentence structure of Wenxin this time there is a problem: the ancient poem "吹面不寒杨柳风" and the following text like a mother's hand caress you mixed. The order is a worry.

Both software still have the phenomenon of missing translation. The "不错的" in the original text is still not translated.

4.3. The Result of the Third Translation

Table 4: Third comparison.

AI software	Result of third translation
ChatGPT	The breeze brushing against your face is not cold but gentle, like a mother's loving touch. It carries the fresh scent of newly turned earth, mingled with the aroma of new grass and various blooming flowers, all permeating the slightly damp air.
Wenxin Yiyan	The soft breeze of spring, akin to a mother's gentle touch, caresses the face without a hint of chill. It carries whispers of the newly turned earth, mingling with the sweet scent of grass and the rich bouquet of various flowers, all brewing in the subtly moist air to create a symphony of life's rejuvenation.

In terms of words: ChatGPT's words are more precise, though the translation of the poem "吹面不寒杨柳风" is still dissatisfied, but after the final submission of the prompt ChatGPT changed the "softly" to "slightly" one more time, which the author thinks is a better choice. At the same time, replace "blending" with "permeating", which means the scent or smell drilled into the air and spread, the author thinks it better expresses the prose author's intention of "在微微润湿的空气里酝酿" in the original text. After the last prompt to Wenxin Yiyan, the word "whispers" is still not changing, and the author thinks that many unnecessary adjectives are added, and the translation of the paragraph is too cumbersome (see Table 4).

Although the "blooming" of ChatGPT does not change once, I think carefully, and then author gets a question how can the flowers appear when they are not in full bloom? So although the sentence is over-translated, it is also a little bit reasonable. In the words of Wen Xin Yiyan, the translation of“混合着花的香气” is not so appropriate. "the rich bouquet of various flowers" means many flowers become one bouquet, but the prose author does not mean "the bouquet" here. There is an obvious mistranslated phenomenon in Wenxin Yiyan's translation. "to create a symphony of life's rejuvenation", this sentence should not appear in the translation because this is the author's prompt.

The worry sequence of sentences in Wenxin Yiyan is still a problem.

In the end, both software still have the phenomenon of missing translation. “不错的” still did not give a translation.

4.4. Summary

According to the results of the three times of translation of the two software, we mainly analyze whether the words of the two software are mistranslated or not.

Because Wenxin Yiyan is software with a Chinese corpus, the author initially hypothesized that Wenxinyi's translation results might be better than ChatGPT. Because the author believes that as Chinese prose, the software from Chinese will get the prose meaning better and give a more accurate translation. However, through the comparison of the three translations, it is found that the author has ignored two problems: English vocabulary and English expressions are not native when the software with a Chinese background translates, and this software also has an inaccurate grasp of the meaning of English words; the translation mistranslation problem is obvious; the translation order of sentences structure is not true and the phenomenon of missing translation has not been solved.

As a software with English as its main corpus, ChatGPT has a more accurate understanding of English without too many mistranslations, and in terms of the use of words is better. The language is concise and clear, it does not appear a redundant translation.

Therefore, the research results show that the translation result of Wenxinyi is no better than ChatGPT, and the research hypothesis is false.

5. Conclusion

The study found that ChatGPT and Wenxin Yiyan both have advantages and disadvantages.

As an AI software with an English corpus, ChatGPT shows its advantages directly. This software has a high level of understanding of English words and the use of the word and the structure are clear. However, it has a greatly simple understanding of Chinese, and although it did not appear in many apparent translations, it still cannot give an accurate word to express the author's meaning. If the readers read the translation of the ChatGPT it will not have general problems. However, it also has a miss translation situation.

As for Wenxin Yiyan, the grasp of the Chinese is more accurate. From the three results of the translation, Wenxin Yiyan should be better than ChatGPT. This software may be because of the background of the Chinese corpus, it does not have enough vocabulary in English. We can see the results of this software, Although it wants to show us its rich vocabulary, to be frank, it cannot grasp its meaning. If the reader reads this translation will have many misunderstandings of the article. And the order of this result makes a mistake. We can see the translation become more and more complex. The English translation of Wenxin Yiyan is not accurate. So the suggestion to Wenxin Yiyan is to include more native English expressions in Britain and America, increase the input of English corpus, and improve the grasp of the meaning of English words. The suggestion for ChatGPT is because this software's understanding of Chinese is not very accurate, and the Chinese thought logically is not enough. It can include some Chinese articles to improve the understanding of the Chinese context and give more vivid expressions.

The second is advice for users. In the information age, the use of AI software is gradually common. For these two software, the translation of ChatGPT can be used as the main reference. Because its understanding of English words is more accurate, but it does not have a deep understanding of Chinese, so the use of some words can be learned from the translation of Wenxin Yiyan.

This study has some limitations, for example, this research just continued three times and it cannot fully give proof of the performance of ChatGPT and Wenxin Yiyan. In the future, we can repeat

prompts several, hoping to get more accurate results. and can make reasonable and credible recommendations for users.

References

- [1] Wang Chutong. (2024.4). *Translation, publishing and communication, problems and prospects in the era of artificial energy recovery.*
- [2] Yu Yuxiu (2024). *Application of translation technology based on AI in translation teaching*
- [3] Yang Zhan, Zhang Xiao (2024). *A comparative study of ChatGPT and common translation software -- a case study of medical texts.*
- [4] Liu Chencheng, Wang Dan, Liang Weiyi, Wang Youmei (2023). *"Aladdin's Lamp" or "Pandora's Box": The potential and risks of ChatGPT educational applications.*
- [5] Zhu Yu. (2024). *Future prospects and countermeasures of translation practice in ChatGPT era.*
- [6] Zheng Haoran. (2024). *Study on large language model and translation major: Based on Wenxinyi Translation application.*
- [7] Zhang Fang (2023). *The artistic beauty of writing Zhu Ziqing's prose "Spring"*
- [8] Xiao Fei, Zhu Yanyan. (2021). *A comparative analysis of question processing of Chinese ambiguous words by machine translation software: A case study of Youdao Translation and DeepL Translation.*
- [9] Song Yan, Hou Jie. (2024). *Literary translation in ChatGPT era from the perspective of translation aesthetics: A case study of The Book of Songs · Guanju*
- [10] Wang Xiaoyan, Pang Yaxin. (2023). *translation quality of ChatGPT in the context of large language model: A case study of Shaanxi Native literature Life (Excerpt).*
- [11] Xu Xing. (2020). *A corpus-based comparative analysis of skeleton and Youdao Translation -- Gone with the wind.*