Computer-Assisted Translation and International Cultural Communication in the AI-Enabled Era

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ABSTRACT

Computer-assisted translation and localization in the AI-enabled era, as a product of globalization and informationization, have a strong connection with international cultural communication. Based on different cultural backgrounds, it can solve the language barriers, speed up the production cycle of cultural products and enhance the attractiveness of cultural communication, thus promoting international cultural communication. This paper analyzes the current problems and development trends of international cultural communication from the perspective computer-assisted translation, in order to provide recommendations for the development of international cultural communication.

Keywords: AI-enabled era, computer-assisted translation, international cultural communication

1. COMPUTER-ASSISTED TRANSLATION AND LOCALIZATION

Computer-assisted translation, which began in the 1940s, plays a very important role in language services, reducing translation costs, ensuring translation quality and improving translation efficiency. Computer-assisted translation can be divided into rule-based computer-assisted translation, statistics-based computer-assisted translation and neural network-based computer-assisted translation. Many foreign multinational enterprises have deployed customized computer-assisted translation system and introduced "computer-assisted translation+post-editing" into their product internationalization process system. In addition, speech recognition technology, human-computer dialogue technology and computer-assisted writing technology are also undergoing continuous development and improvement, which will have a significant impact or even a disruptive change on the language service industry in the future.

Of all the language, economic, and cultural differences that localization has to deal with, language is the first challenge it faces, and the degree to which it is adapted to the localized product is fundamental to its success, so localization translation is very important. The Localization International Standards Organization (LISA) defines localization as: "it is the process of modifying products or services to account for differences in distinct markets"[1]. The Chinese Translation Association defines it as "the production activity of processing a product to meet the needs of a specific country/region or language market so that it can meet the special requirements of users in a specific market for language and culture" [2]. Localization technology is the collective term for the technologies used in the localization process [2], and it combines information, language, marketing, management, and engineering technologies. With the increasing integration of modern information technology and language services, the traditional language service model is being gradually overturned and a new language service industry has emerged, with intelligent computer-assisted translation technology becoming an indispensable foundation for language services.

2. COMPUTER-ASSISTED TRANSLATION AND LOCALIZATION PROMOTE INTERNATIONAL CULTURAL COMMUNICATION

Language is the carrier of culture, and translation serves as a bridge for cross-cultural communication. The fundamental task of translation is to promote cross-cultural communication, cultural reproduction and mutual appreciation of civilizations, thus contributing to the progress of society.[3]. Localized customers are usually international companies that categorize and segment international markets according to cultural differences in different countries. In the marketing strategy, it can take into account the cultural differences between various countries and regions, and use products, prices, channels, customs, etc. suitable for local needs to meet the needs of different customers around the world. The most important translation system in the localization process is the computer-assisted translation system, which can cover a large number of terms in multiple fields, multiple industries and multiple languages, and translate them in different scenarios, which is unattainable for human translators and can only be deep in a specific field or industry. Computer-assisted translation plays an important role in basic information communication needs, such as

overseas travel and document translation, as well as in cultural trade, cross-language communication and effective communication with foreign countries. Computer-assisted translation and localization technologies have greatly enriched the forms of translation and international cultural communication, improved communication efficiency and expanded communication effects.

2.1. Informationization of international cultural translation forms

As mentioned above, the core work of localization is to localize the translation of products or services. The process usually uses modern translation technologies including translation memory technology, machine translation technology, terminology management technology, etc.. Localization services are usually global services, characterized by large volumes that require rapid delivery and even simultaneous releases. In order to increase efficiency, making full use of previously translated corpus, and ensuring consistency in terminology and translation style, localization companies often use CAT tools (e.g. SDL Trados, Déjà Vue, memoQ, STAR Transit) as well as machine translation and post-editing techniques to increase productivity. In today's big data era of information explosion, the main challenge facing international cultural communication is how to quickly localize the urgently needed cultural information and deliver it to clients as quickly and accurately as possible within the limited time available. The traditional form of translation and publication, which basically stays at the level of manual operation, has fallen far behind the development of the times. In the translation process of cultural communication, we can learn from the technical application in the process of localization, make full use of various modern technical means such as computer-assisted translation, improve translation efficiency, speed up the production cycle of cultural products, and quickly push them to the international market.

2.2. Diversification of Cultural Communication Forms in Translation

Joseph Nye, a professor at Harvard University and former Assistant Secretary of Defense of the United States, introduced the concept of "soft power" in 1990. He discussed five aspects, the most important of which is cultural attraction, emphasizing that you can achieve your desired goal by attracting others rather than forcing them. In addition to the intrinsic power of culture, we can learn from various forms of localized communication, such as software, online help files, dynamic websites, multimedia, video games, mobile applications, etc., to enhance the attractiveness of cultural communication, expand its impact and strengthen its communication capacity.

Taking the "Key Concepts in Chinese Thought and Culture" as an example, we can adopt various artistic forms, and the translated products are not limited to the original edition. For example, the translation of The Analects of Confucius can be considered in the form of rewriting, variation or creation of translation, so as to adapt to the needs of local readers from the translation strategy. Second, differentiate the reader groups, such as the enlightenment series, the growing series, and the adult series, can consider targeted rewriting. And when distributed locally, it must be different from the national typographic style and norms. Localized typesetting has certain professional typesetting rules, such as fully consider the target market preferences of the template, the target market font settings, color matching, etc.. Third, the carrier forms are diversified, breaking through the traditional forms. Learning from localization experience, we can change the traditional "book" form of the Analects of Confucius into interactive, illustrated and animated e-books or mobile phone applications to increase their interest, story and entertainment and meet the needs of mass cultural consumption. It can even be turned into film and television works, supplemented by English dubbing or English subtitles, etc.. At the same time, it can design and build localized websites that conform to the target cultural market, sort out relevant historical knowledge and relevant knowledge bases, etc., and enhance affinity and influence.

2.3. Localization of Translated Cultural Products

American translation theorist Eugene A. Nida divides the cultural factors in language into five categories: ecological culture, material culture, social culture, religious culture, and linguistic culture [4]. Cultural translation, when viewed in the context of the above five aspects, is bound to be effective in conveying cultural messages. Localization usually combines translation and marketing strategies, focuses on the consumer needs of the target cultural market, and requires cultural products or services in the source language to be adapted to the local context. From the inception of the concept of localization to the present day, international companies around the world have used this form of communication to spread their culture. Bates Gill, Honorary Chairman of the China Research Unit at the Centre for Strategic and International Studies (CSIS) in the United Kingdom, once hit the nail on the head when he said: "China is rich in resources in terms of cultural attractiveness, but it is not good at promoting cultural products". [5] This criticism is worth considering. Taking traditional culture as an example, we should fully investigate and analyze the needs of the target market, and then select appropriate cultural products, rather than just considering what kind of cultural products the country wishes to promote. International cultural communication can draw lessons from the strategy of localization marketing, and localization from the perspective of

globalization, so as to modernize and localize the interpretation and application of Chinese cultural elements. In terms of strategic elements such as cultural product positioning, cultural image building, advertising and public relations, we should pay attention to overall planning, and adopt flexible and changeable ways to adapt to the cultural environment and needs of the local market in specific operations.

3. CURRENT PROBLEMS IN INTERNATIONAL CULTURAL COMMUNICATION

The "One Belt, One Road" is both a road to economic development and a road to the cultural communication. The integration of culture with the economy and politics is deepening, and its status and role continue to be highlighted. International cultural communication plays an important role in shaping the national image and is also the stage and way to display the national culture. It plays an irreplaceable part in promoting the political, economic and cultural integration of all countries in the world. At present, due to many factors such as language and cultural differences, poor channels of international cultural communication and poor communication effect, the process of international cultural communication is affected.

3.1. Differences in language and culture

Language symbols are the carriers of culture, and culture and translation have a natural relationship. Translation, as the conversion of language symbols, is an important way to promote cultural communication and exchange. No matter what kind of translation method is adopted, whether it is "domestication" or "foreignization", reflexive or hybridization, literal or free translation, its fundamental task is to maximize the effect of international cultural communication.[3] However, English and Chinese belong to different language systems, which not only present unique differences in language symbols, but also contain differences in thinking modes and cultural backgrounds between nations. This difference in language and culture exists objectively, and culture will be lacking to vary degrees in the process of foreign communication and translation. The lack of information in translation is inevitable. Computer-assisted translation can make up for the translation problems caused by the differences in language and culture by means of neural network learning, and reproduce the source language culture to the target language as comprehensively as possible.

3.2. Poor channels of international cultural communication

At present, China's international cultural communication channels largely rely on media such as television, websites, publications, etc. Among them, there are still very few channels of communication in English and other languages. Only CCTV-NEWS has relatively high international capabilities in TV channels, and the number of mainstream foreign language websites, published translations, etc. are also very few. As a result, the channels for the translation and distribution of China's excellent ideology and culture to foreign countries are still blocked, which is not conducive to the spread of China's outstanding thoughts and culture in foreign countries. Some publishing companies are worried about the economic risks and the market prospect of China's outstanding ideological culture, and will not take the initiative to translate and publish Chinese ideological culture. Relatively speaking, the output of Chinese ideological and cultural works mainly depends on some academic institutions, but will be affected by the promotion efforts. The translation of "Key Concepts in Chinese Thought and Culture" is restricted by communication channels. and lacks sufficient audience and vigorous promotion, which makes the international communication of Chinese ideological and cultural not smooth and will be labeled as academic and professional. Therefore, in order to further improve the international cultural communication, we must continuously expand the scope of China's international cultural communication channels, and vigorously develop new online media with English and other languages as the main languages to enhance the influence of Chinese culture [6].

3.3. Poor effect of international cultural communication

In international cultural communication, most of the Chinese culture going out is actually given away for free, especially among foreign audiences outside the Chinese community, where communicators cannot accurately grasp the needs of the foreign cultural market and lack unique cultural content and products, resulting in ineffective international cultural communication. For example, the real feedback from Americans about the national image of China propaganda film distributed in Times Square in New York City is that "we see that apart from showing China's rich population and their achievements, I am not sure what kind of message they want to convey, and the short film does not show China's vibrant national image" [7]. Due to different cultural backgrounds and habits, foreigners may not be interested in the Chinese culture. In addition, we have not conducted in-depth investigations on the cultural needs and consumption habits of foreign audiences in combination with our own standards and subjective choices in the international cultural

communication. Therefore, in the process of cultural communication with foreign countries, we should make good use of the rich cultural resources, dig out cultural elements that foreigners are interested in, improve the quality of translation and enhance the communication effect.

4. THE ROLE OF COMPUTER-ASSISTED TRANSLATION AND LOCALIZATION IN INTERNATIONAL CULTURAL COMMUNICATION

4.1. Promotion of the international cultural communication and computer-assisted translation

Translation should not only achieve linguistic equivalence, but more importantly, it should achieve cultural equivalence[8]. Only by being familiar with the culture, understanding the differences between various cultures, and choosing the appropriate translation strategy, can we do a better job of translating and promoting the spread of culture. However, in computer-assisted translation and localization, we should not only consider the accuracy and matching of languages, but also need to take cultural differences and elements into account to compensate for the loss as much as possible, to achieve equivalent functional transformation between different languages and cultures, and to truly promote the development of computer-assisted translation and artificial intelligence.

4.2. Promote artificial intelligence and human-computer integration in computer-assisted translation

At present, the artificial intelligence technology of computer-assisted translation is gradually developing. It is gradually replacing manual translation in the fields of life, service and study, greatly improving the efficiency and accuracy of computer-assisted translation. However, the current localization and computer-assisted translation technologies cannot meet the standards of "faithfulness, expressiveness and elegance". Localized products have not yet reached the standards that can be truly used by people in the target language and conform to the local ethnic characteristics. With the advancement of information technology, it is obviously difficult to realize timely information sharing all over the world by manual translation alone. Artificial intelligence technology of computer-assisted translation will not completely replace manual translation. Only through the integration and development of the two can high-standard translation quality and speed be achieved and the promotion of international cultural communication be accelerated.

4.3. Promote the joint development of new media technology and the localization industry

The 21st century is the era of artificial intelligence, and the new media industry based on the Internet and digital technology has emerged, which is rapidly immersed in all aspects of people's daily life and provides people with a massive information platform. At this time, people's demand for timeliness and localization of translation is increasing rapidly, and human translation can no longer meet people's needs. It requires the intervention of technical tools and the use of computer-assisted translation. The use of computer-assisted translation and other technical tools has greatly stimulated the development of localization industry [9]. Only by continuing to promote the development of new media and the use of computer-assisted translation, stimulate the development of the localization industry and products, and quickly push the target language products of the source language to the international market, can we realize the international cultural communication.

5. CONCLUSION

Under the background of the era of global economic integration, regionalization and AI empowerment, localization has become an important part of the development strategy of enterprise globalization, and has given birth to the development of computer-assisted translation technology, which plays an irreplaceable role in the process of localization. International cultural communication is a dynamic construction process that enables the target audience to understand foreign cultures from understanding to recognition. With the assistance of computer-assisted translation and other technologies, localization is gradually applied to the dynamic construction of international cultural communication, which promotes the informatization of cultural translation forms, the diversification of cultural communication forms, the localization of cultural output products. It will present a more vigorous development trend, which is of great significance for improving the national cultural image and promoting international cultural communication.

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REFERENCES

[1] LISA. The Globalization Industry Prime . Switzerland: Localizaton Industry Standard Association ，2007, pp.7-8.

[2] Translators Association of China. Chinese Language Service Industry Standard-Basic Terms for Localization Business. Translators Association of China, 2011.

[3] Li Meiqin. A Special Study on "Cultural Communication and Foreign Translation". Journal of Zhejiang Gong Shang University, 2015 (02). DOI：10.14134/j.cnki.cn33-1337/c.2015.02.002

[4] Nida ，E．A．Language ，Culture ，and Translating ．Shanghai:Shanghai Foreign Language Education Press，1997, pp. 79.

[5] Yang Muzhi. National "Soft Power" and World Cultural Communication. China Editor, 2007 (2): 23. DOI: https://doi.org/10.1007/978-3-540-30494-4_16

[6] He Mingxing. Building an International Communication System of Chinese Culture to Enhance Communication Ability. China Publishing Journal, 2013 (05).

[7] Liu Feng. Chinese Culture "Going Global": Why? How to "Go". Democracy Monthly, 2011, pp. 48. DOI: 10.19402/j.cnki.zgmz.2011.07.019

[8] Bai Jingyu. Culture and Translation. Beijing: China Social Sciences Press, 2015, pp. 6.

[9] Zhang Li, Ma Yuan. Conceptual Evolution from Translation to Localized Translation under New Media Ecology. College English (Academic Edition), 2015, pp. 116-119.