Exploring the Achievement of Information Equivalence in EST Translation of Long Sentences

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Abstract: This article explores the strategies on EST translation of long sentences. With the rapid development of technology and the increase of international exchanges and cooperation, EST deserves more attention of scientific workers and people concerned. However, abundant long sentences exist in EST texts. The complexity of the structures and the diversity of the forms render long sentences as the difficulty as well as the focus of EST translation. In view of this situation, the author points out the syntactic features of long sentences in EST texts from the perspective of English linguistics; in reference to the ever-changing translation principles, he proposes that in EST translation, keeping information equivalence is a practical goal, which can be achieved in the ways of interlinear translation, inverse translation, splitting, embedding and synthetic approach of translation. This article is dedicated to offer theoretical support, with the English linguistics, to EST workers in the hope of the increase of their command of English as well as the promotion of international exchanges and cooperation.

Key words: EST translation; information equivalence

1. Introduction

Compared with literary English, technical English is more practically valuable and more closely related to our life and work. With the rapid development of technology and the increase of international exchanges and cooperation, science and technology become increasingly important in English translation, especially today when global economy is integrated. However, a large number of practitioners in EST (a short form for "English of science and technology") translation field are not English majors who have learned the theories and skills of EST translation; moreover, they have uneven translation capability. Such a situation usually leads to inefficiency of work and poorly-translated texts. What's more, EST translators have limited access to the source texts, so EST information can not flow smoothly across cultures. All these factors above account for backward development of EST translation.

In view of this situation, combined with the features of scientific English texts, this paper presents that the clear objective of translating long sentences in EST texts is to maintain the information equivalence between the source and target texts with the help of some specific translation strategies. This article is dedicated to provide theoretical support with English linguistics to EST translation workers in order to improve their translation capabilities and enhance scientific information exchange and cooperation across borders, which will further promote the development of science and technology.

2. Information Equivalence

Translation standard, a basic issue in translation field, involves translation principles and requirements as a goal translators should strive to achieve. After a lot of research and exploration, translators, home and abroad, have proposed a wide range of translation standards and principles.

The greatest impact of translation principles on contemporary translation industry, is made undoubtedly by the most famous representative of translator-Yan Fu, who put forward the three-lettered translation principle: "faithfulness", "expressiveness" and "elegance", at the end of the 19th century. Shortly afterwards, some other translators presented similar translation principles like "faithfulness, fluency and gracefulness", or "correctness, fluency and ease to understand", etc, which prove to be just variants or other ways of expression of Yan Fu's translation principle. In addition, Mr. Liu Zhongde raised the translation principle "faithfulness, expressiveness, appropriateness", Zhu Shenghao "Theory of Romantic Charm", Fu Lei "Spiritual Similarity", Qian Zhongshu "Transmigration" and Lu Xun "Three Beauties" [1]. All these above exert a certain impact on translation development. Outside China, the comparatively influential theory of translation is "Equivalence", put forward by Grove Road, a translation theorist in former Soviet Union. This theory claims that "equivalence means the delivery of the accurate information, the maintenance of the consistence of rhetoric and the textual function with the original." Another representative translation theory in the west is Theory of Equivalent Effect, also known as Dynamic Equivalence or Functional Equivalence, put forward by American translator Eugene A. Nida. Theory of Equivalent Effect means the closest and the most natural equivalence between the source and target texts. [4]

Here, it is not difficult to find that despite the ever-changing expressions of translation principles, both Chinese and western translators regard "faithfulness" of the target text to the source text as the highest standard. As a practical branch, scientific English's main principal purpose is to transfer new knowledge to readers in the target context. Besides, EST translation serves mainly professional workers and some readers who need particular aspects of information temporarily; accordingly, these people aim to obtain necessary information quickly and accurately. Therefore, keeping information equivalence between the source and target texts should be the goal for all EST translators (workers) to achieve [5]. Because of the seriousness of EST texts, translators seldom take factors into consideration like cultural difference, communication styles, literary significance and effect, etc, all of which are supposed to retain in literary translation. Therefore, information equivalence can more easily achieved in EST translation.

3. Syntactic Features of Long Sentences in EST Texts

In general, long sentences of scientific English have the following syntactic feature:

First, clauses are frequently used, including noun clauses, adverbial clauses and attributive clauses, the use of which is the most common and also the most effective way to express complicated scientific information.[2]

Second, there is an extensive use of non-finite verbs and phrases in forming sentences, because flexible use of them makes it easier to straighten out ideas, simplify expressions, enhance sentence rhythm and express ideas vividly.

Third, prepositional phrases are commonly used. As function words, prepositions are usually followed by a noun or noun phrase with complicated components, which increases the length of the sentence and its complexity.

Finally, scientific English is full of postpositive attributives, nominalized structures or passive voice sentences, making up long sentences with abundant information, enhanced logic and layering.

For Example:

Nanotechnology has become a buzz word in the popular press. The roots of this phenomenon reach back to a marvelously inventive and engaging book, Engines of Creation, written by K. Eric Drexler in 1985. The central notion here is that it will one day be possible to construct a "universal assembler" which can be programmed to build, quite literally, anything that is composed of atoms and consistent with the rules of chemical stability. Drexier imagines that each of these assemblers is a micron-scale robot with nanoscopic manipulator arms that are capable of picking up individual atoms, and sticking them together in any fashion programmed in its internal memory. [3]

Here in this paragraph are mostly long sentences, including non-finite verb phrases, predicative clauses, attributive clauses, object clauses, prepositional phrases. These items reflect the syntactic features of EST texts, effective enough to enhance the logic and the seriousness of the text and clearly express the complex information in it.

4. Approaches to the Translation of Long Sentences in EST Texts

Based on the features of EST texts mentioned above, scientific articles often contain many long sentences, which may cover seven or eight lines of the text, up to sixty or seventy words, thus in EST translation, long sentences constitute the main difficulty which translators must handle with care. Translation of long sentences is generally done in the following ways: interlinear translation, inverse translation, splitting, embedding and synthetic approach of translation.

1. Interlinear Translation

In many cases, translators have to break the sentence structure of the original sentence, usually splitting it into shorter parts or combining different parts into one before they translate, but there are still some occasions on which translators basically follow the word order of the original sentence while translating, because these sentences are similar to Chinese in logical order and mode of thought.

For example:

It is evident that if all elements are built out of protons, neutrons and electrons, the atomic weights should be practically whole numbers since the atomic weight of hydrogen is nearly one and the mass the electron is negligible.

译文：很显然，如果所有的元素都是由质子、中子和电子组成的话，那么元素的原子量应该差不多都是整数，因为氢的原子量几乎是 1 而电子的质量是可以忽略不计的。[1]

The original sentence is comparatively complex in its structure, but simple in semantic clarity. Besides, it has a lot in common with Chinese in the logical order. That is why straightforward translation is adopted here.

2. Inverse Translation

Interlinear translation, however, should be avoided because of the complex structures of long sentences, especially when the ways of expression between the source and target languages are different or even completely opposite, while inverse translation is employed when translators partially or even completely change the word order. This strategy is particularly proper in the translation of the sentence structure with "it" as the formal subject, appositive clauses, adverbial clauses of concession, etc.

For example:

The resistance of any length of a conducting wire is

easily measured by finding the potential difference in volts between its ends when a known current is flowing.

译文：已知导线中的电流，只要求出导线两端电位差的伏特数，就不难测出任何长度的导线的电阻。[3]

As we know, the English and Chinese languages take different mode of thought in that English writings usually first present the main idea then develop it, while Chinese writings often take the from-specific-to-general mode of development. We can clearly identify such a difference in the example above and thus assume the strategy of domestication in translation.

3. Splitting

Generally speaking, one long sentence may contain multilayer meanings, while in Chinese, one sentence usually has the single one layer of meaning. Therefore, to achieve conciseness in the target text, one long English sentence is commonly divided into several shorter sentences, which are translated one after another with the word order and continuity maintained.

For example:

The classical metallurgical processes of smelting the oxides with carbon in the presence of a fusible slag, such as are used for the production of many of the commoner metals, are not applicable to the range of rather rare elements about which this section is written, if the metals are required in pure condition. [3]

译文：传统的冶金过程是用碳将易熔渣中的氧化物熔化，许多普通金属都是这样生产的；但这种方法并不适用于生产本文所提到的这些稀有金属元素，尤其是需要获得纯净金属时更是如此。

Here, the original sentence consists of one main clause and two other clauses. As the subject of this sentence is too long, it is suitable to split it into two shorter sentences in order to fit the Chinese way of expression.

4. Embedding

This strategy is mainly used for the translation of English attributive structures, including phrases and clauses which serve as the postpositive attributives. This translation strategy makes for the maintenance of the original sentence structure and the formation of a coherent whole.

For example:

People who live in the areas where earthquakes are a common occurrence should build houses that are resistant to ground movement.

译文：居住在地震多发地区的人们应该建造能够抗震的房屋。[3]

Here, as we can see, two attributive clauses in the original sentence are transferred into prepositive attributives, which make simple but forceful and accurate expression.

5. Synthetic Approach of Translation

Synthetic approach of translation is defined as to accurately understand the core information of the original sentence (text) and make comprehensive use of strategies for the structural transformation in the translator's own language to appropriately maintain equivalence in terms of information, meaning and spirit.

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For example:

Unless otherwise noted,

(1)

oxide folds and suck backs are acceptable

(2)

if the thickness

(3)

in the area is not less than the minimum sheet or plate thickness allowed in the material specification and / or the drawing tolerances for machined or formed sheets or parts, whichever is applicable.

(4)

译文：除非另有注明，对于机械加工或成型的板材或零件，该区的厚度不小于材料规范和/ 或图纸公差允许的最小板材厚度（那一条合适，就以那一条为准），否则氧化膜起皱和倒缩孔是可以允许的。[3]

This sentence consists of one main clause and four other clauses, among which "unless" and "if" lead the adverbial clauses of condition, "less…than" of comparison, while "whichever" of concession. After understanding the logical relationship between the lines, the translator does the translation in this way: part (1) involves straightforward translation, part (3) translated backwardly and then part (2) placed at the end.

5. Conclusion

For all translators, equivalence, as the goal, can be comparatively more easily achieved in EST translation owing to the features of scientific texts. EST translation is a very professional, highly-integrated activity. Today, when technology is developing rapidly and international exchanges are increasing sharply, EST translators (workers) are supposed to strive to broaden their horizons, improve their bilingual ability, practice translation activities repeatedly and summarize their experience, so that they can produce high-quality translated texts and generate more power to promote the development of our country.

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