

The Characteristics of Scientific and Technical English Translation-from the Aesthetic Perspective

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Abstract: *The concept of aesthetics permeates all aspects of society and culture. Undoubtedly, it is also inseparable from translation, which actually is an aesthetic activity. However, many people nowadays tend to consider literary translation as the example of translation aesthetics, and ignore the aesthetic feelings of scientific and technical English translation. This paper will analyse and elaborate science beauty, flexibility beauty, simplicity beauty, fluency beauty, and rhetoric beauty of scientific and technical English translation from the aesthetic perspective, based on the unique structure and content of scientific and technical English, to correct the previous aesthetic prejudice against scientific and technical English translation. As a result, an attempt is made to propose some translation strategies to improve the translation of scientific and technical English. To be specific, perform an initial aesthetic transformation according to the aesthetic understanding of the original text, and then reprocess the translation text on the basis of language conventions of the target language.*

Keywords: *Aesthetics; Technical English translation; Aesthetic transformation; Aesthetic reworking*

1. Aesthetic awareness of translation

In the history of aesthetics, Alexander Gottlieb Baumgarten, a Germanic enlightenment thinker, philosopher and aesthete of the 18th century, first made aesthetics a separate discipline in his work *Aesthetics*. In the book published in 1750, the discipline was nominated as “aesthetics”^[4].

From then on, aesthetics has been playing a very critical role in Chinese culture research, permeating all aspects of society and culture. It is also closely connected to aesthetics, with the results of aesthetic research being widely applied to translation studies, producing a large number of monographs and papers on the subject. However, generally speaking, studies on aesthetics in the translation community tend to be from the perspective of literary translation, always ignoring its role in scientific and technical English translation. Even worse, many translators believe that the priority and most essential to do in technical English translation is to check the correction of specialized vocabulary and domain knowledge, having little relevance to translation expertise^[5]. On the other side, they insist that the content of scientific and technical English translation is direct, professional, and unattractive, without any aesthetic feeling, which is a misconception.

Scientific and technical English normally belongs to written language. Therefore, it is unsuitable for reading and chanting, vocabulary meanings are specific and stable, and these expressions are simple. Nevertheless, scientific and technical English translation boasts its own unique aesthetic standards.

In the time of technological communication, excellent scientific and technical English translation can make technology more accessible to a wider audience, so it is valuable and urgent to study scientific and technical English translation. This paper will briefly explain the characteristics of scientific and technical English translation, as well as the corresponding translation strategies.

2. Characteristics of scientific and technical English translation

The process of the introduction of science and technology from abroad is extremely critical for the development of countries and enterprises, in which scientific and technical translation plays a key role, bring latest information to domestic readers. Even though scientific and technical works are mainly about stating facts, describing phenomena, deriving formulas and arguing laws, scientific and technical texts and translation never lack aesthetic appeal. In fact, excellent scientific and technical texts and their translations also have their own special aesthetics. Therefore, translators need to make great efforts to explore and study the original text, trying to saving the language characteristics and finding out similar

expression ways in the target language^[13]. Then readers can have a beautiful experience while acquiring information, which in turn can promote the dissemination of technology.

Based on the characteristics of scientific and technical English translation, this paper only elaborates on the following aspects from an aesthetic perspective.

2.1 Science beauty

Scientific and technical English translation emphasises the use of scientific and technical terminology and specialist vocabulary, requiring a deep knowledge of the field to which the text being translated belongs. Terminology is the basis of scientific and technical English translation, attaching importance to the word singularity and correspondence, the need to exclude the translator's subjective consciousness, and the need to follow words or symbols that are conventionally used in the field^[2]. The use of a large number of terms ensures that scientific and technical English translation is so accurate that the scientific and technical information can be correctly understood by readers.

Example: In addition, manual inspection also not only resulted in huge logistical efforts using cherry pickers and cranes, created work grounding and periods of going off grid, it also posed a great risk of occupational hazards.

In this sentence, the literal meaning of "cherry pickers" is a kind of mechanism to pick cherries, but in the machinery industry it means "vehicle lifts". Accurately explaining the words meanings in the context is the basis of successful translation, which can make the translation professional and intelligible, showing a special beauty sense.

Another example: A drone pilot can easily capture data of a single power line tower.

The literal meaning of the word "pilot" means people who drive planes, but in the drone industry it is generally translated as "flyer", which is an agreed term.

When translating the terminology of scientific and technical English texts, translators must be rigorous and patient, looking up words one by one, to find the terminology of the words in the target language, without subjective interference, because in some cases, translators may mistake understanding some words, but the sentence still makes sense.

2.2 Flexibility beauty

Scientific and technical English vocabulary is normally divided into technical, semi-technical and non-technical words. Technical words are generally fixed terminology, semi-technical words are generic words but have a special meaning in scientific texts, and non-technical words generally refer to functional words^[10]. In the translation of scientific and technical English, translators need to pay special attention to the translation of semi-technical words. In other words, translators need to explain the meaning of the words flexibly according to the context^[1].

Example 1: The following year he took power in a military coup.

Example 2: Solar power generation is greatly affected by cloud cover.

Example 3: It is difficult to regularly inspect all parts of the vast power grid to ensure stability.

In different contexts, "power" has different meanings, such as leadership, energy and electricity, which are just a few examples of the use of the word power, from which the flexibility of the meanings of words in technical English can be shown. Therefore, when translating scientific and technical texts, it is crucial to study the original context and choose the best matching meaning.

In addition, scientific and technical English texts may exist some new words or combined expressions that have not been recorded in existing dictionaries. Or sometimes the meaning given in the dictionary can not convey the meaning of the original English text, so it is necessary to make inferences based on the context of the original text, taking into account the actual situation and inquiring professional insiders.

2.3 Simplicity beauty

At the same time, the most familiar feature of scientific and technical English is its simplicity, which is expressed not only at the lexical level, but also at the syntactic level^[7]. In terms of vocabulary, usual ways to construct words of scientific and technical English translation are synthesis, blends, affixes and

abbreviations^[4].

Example: smog (smoke+fog), medicare (medical+care), PC (personal computer), wedding-ring

With the adoption of these constructing ways, information can be simpler expressed with fewer words.

At the syntactic level, the simplicity is reflected in the use of noun structure^[8]. The extensive use of noun structures can convey meanings as much as possible, shortening a sentence as a single noun or noun structure, thus abbreviating the length of the sentence and allowing the reader to grasp a great deal of information in a short space of time.

2.4 Fluency beauty

The natural flow and legibility of the text is one of the most distinctive features of scientific and technical text translation. When constructing sentences, scientific and technical texts often employ relational words, linking words, and etc. to connect various parts into a whole^[12], which makes it possible to comprehend the main message at the first glance.

Example: The harder the rock, so much the more difficult is the work of drilling, although few types are sufficiently hard to be allowed to remain after blasting without a lining of masonry or concrete.

The subject of this sentence is “the work of drilling”, “so much the more difficult” is the epithet, “the harder the the harder the rock” is the accompanying clause, and “though” leads the subordinate clause. Therefore, the translator needs to appropriately adjust the order of the sentence to make the translation still logical and easy to understand.

Therefore, during the process of translating scientific and technical texts, translators need to carefully analyze the sentences, sort out the logical relationship between different parts, and then translate them according to the logical clues of the original text, retaining the fluency beauty of the source text.

2.5 Rhetoric beauty

Although the translation of scientific and technical English places more emphasis on accuracy and fluency, rhetoric should not be ignored, with lots of texts using metaphor to make sentences more vivid and intelligible.

One of the main purposes of scientific and technical works is to convey information, but those passages often exist a bunch of obscure and difficult words, which may not conducive to comprehension and information dissemination. In general, the source text may employ metaphor to avoid readers feeling abstract and difficult to understand. So translators need to maintain it to illustrate abstract things through concrete images, which on the one hand helps the reader understand, and on the other hand can also improve the aesthetic effect of scientific and technical texts^[6].

Example: When one actually sees a fuselage expanding and contracting under the cyclic load, like a breathing monster, it is not difficult to understand how its structure may eventually become weakened^[4].

In the sentence, as people feel strange to the described things, the passage uses the rhetorical device of metaphor, comparing an aircraft under the cyclic load to a gasping monster, to help readers better understand the original text, which is amusing and impressive, easier to understand and remember the message of the source text.

In addition, scientific and technical texts sometimes may adopt allusion, using people or objects from literary works or mythological stories to explain complex concepts through concise and subtle images. This not only makes the texts vivid and easy to understand, but also enriches the historical and cultural connotations of scientific and technical texts. Allusions should be translated based on the context, and then make the facts to be illustrated more understandable and resonate with readers.

3. Translation strategies

As we can see from the above, scientific and technical English boasts many aesthetic features, so we should also reflect the features of the original text when translating them into Chinese. Therefore, when doing translation, the first step should be to summarise the aesthetic characteristics of the original text^[5], and then adopting various translation techniques to maintain those features. In other words, reflect the characteristics of English in the translation as well, such as accuracy and simplicity. Because of the

differences in cultural expressions among languages, many of the expressions of English can not be directly applicable to other target languages^[3], so it is necessary to embellish the translation according to expression habits^[5] of the target languages, which is nominated as aesthetic reworking.

3.1 Initial aesthetic transformation

Initial aesthetic transformation refers to recording the various aesthetic information obtained in the original texts and reflecting them in another language. As the source language and the target language are rooted in different cultures, there are differences in linguistic forms and ways of thinking, so aesthetic conversion involves both the conversion of linguistic forms and the conversion of ways of thinking.

In terms of language form, scientific and technical texts often use noun structures and definite clauses to convey a wealth of scientific information and make the overall style of the text more serious. However, definite clauses does not exist in Chinese, and if translators literally translate the noun structures into Chinese, the sentence can be unclear. So, it is necessary for translators to transform this kind of expression to make them be in line with Chinese expression habits, such as replacing noun structures with subject-predicate phrases.

The noun structure and the definite clause are two forms of expression commonly found in scientific and technical texts. They have a large volume of meaning, which are suitable for expressing delicate and complex scientific ideas, giving the text a sense of solemnity and seriousness. When translating as Chinese, it is important to pay attention to these different aesthetic orientations of the aesthetic object and to transform the linguistic form and structure, in order to preserve the features of the original text to the greatest extent possible^[9].

In addition, translators need to change the way of thinking. For example, in scientific and technical English, a third party is usually used as the subject, but in Chinese, most people use personal pronouns such as people and everyone. The use of the first person in English can often seem very subjective, so a shift in person is needed^[7]. There are many other aspects, such as the arrangement of place names and the arrangement of time, which are not listed here.

3.2 Aesthetic reworking

After the aesthetic transformation of the source text, though the translation showing the characteristics of the original text, it is likely to be incompatible with the expression habits of the target languages. Therefore translators need to creatively translate the original words, accurately expressing what the original writer wants to convey and maintaining the aesthetic features of the source text, in accordance with the expression habits and aesthetic standards of target language readers^[11].

Example: The more information is stored in computer, the greater the possibility of it being misused or accessed by the wrong people.

This sentence refers to the increase in computer crime and the theft of computer information, so the translation should reflect the pejorative connotation. However, in some cases, translators may not be the native speakers of the target languages, which may lead to inaccurate conveying in their translation, such as the emotion of the original sentence. Therefore, the translation usually needs to be reviewed and changed for several times and by different translators, including native translators. The translation need to be recreated to be more readable and vivid, finally forming the most appropriate translation, avoiding misunderstanding of readers.

4. Summary

The need to develop the scientific and technical translation is usually ignored by the translation community, as it is always considered to be merely a check on proprietary terminology and a test of domain knowledge, which has little to do with translation. However, scientific and technical translation boasts its unique aesthetic standards, such as science beauty, flexibility beauty, simplicity beauty, fluency beauty, and rhetoric beauty. With the extensive use of rhetorical devices, and special expression techniques, scientific and technical English is full of aesthetic beauty. In addition, scientific and technical English translation is key to technology distribution. Therefore, it is necessary and of theoretical and practical significance to explore how to reflect the aesthetics of scientific and technical English translation.

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