Translation of Long Sentence in English for Science and Technology

Linhui Wu¹ and Runtao Li²

¹ No.1 Chengdu Neusoft Avenue, Dept. of Applied Foreign Languages, Chengdu Neusoft University, Chengdu, Sichuan, China
² No.1 Chengdu Neusoft Avenue, Dept. of Applied Foreign Languages, Chengdu Neusoft University, Chengdu, Sichuan, China

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Abstract. The essay aims at how to translate long sentence in English for Science and Technology (Hereafter referred to as EST). The first part of the essay introduces what are the characteristics of long sentence in EST. On that basis, the essay gives further analysis about the qualification that a translator of EST should achieve. The second part is about the translation process for long sentence in EST, which covers two stages to give readers a clear understanding of the problem. The third part gives suggestion on translation methods choosing for long sentence in EST. The above three parts discussed in the essay is a clue for a technical translator to deal with long sentence in EST. In the last part, the essay indicates some important notes in technical long sentence translation which emphasis on equivalence to the original sentence. The total essay gives some examples with analysis followed and also some theories accordingly to support them. The long sentence translation is not an obstacle in EST on the basis of the above-mentioned items.

1. The Characteristics of Long Sentence in EST

The long sentence in EST has a little difference with other long sentence. The sentence pattern in EST is as follows: passive voice is commonly used in EST because it can be expressed more objectively and truly; non-predicate verbs and Noun Clauses are frequently applied in EST; To have a better understanding of the translation of EST, a translator must bear in mind that he is more interested in understanding the description, the function and the effect of a concept such as entropy rather than in learning laws, particularly axioms, theorems, systems in some of which entropy is involved. In a word, to translate a text you do not have to be an expert in its technology or its topic; but you have to understand that text and temporarily know the vocabulary it uses.

In science, the language is concept-centered; In technology, it is object-centered: in, say, production engineering, you have to learn the basic vocabulary with the translations- e.g. ‘lath’, ‘clip’, ‘winder’, ‘bolt’, etc. On that basis, what is the utmost important thing we should know are the characteristics of long sentence in EST mentioned above.

2. The Preparation for a Translator before Translation

The translation of long sentence especially in EST is perhaps the most difficult of all in the process of English-Chinese translation. The prerequisites for the correct handling of long and complex sentences in English-Chinese translation lie in the following aspects:

2.1. Correct Comprehension

Correct comprehension, therefore, is always the most important for a translator before starting his translation. In order to make a well understanding of the text, firstly, the translator should go through
the whole original long sentence. After this, he should have a general knowledge of the following items: type of the original sentence; technical or poetic or something; what is the author driving at?

2.2. The Dialectic Unity of Faithfulness and Coherence

The dialectical unity of faithfulness and coherence is always the target a translator should achieve. This means a translator has to begin with a careful analysis of a long and complex sentence with respect to the context so as to understand it clearly:

A. What the author is driving at?
B. What his argument or views are? As to source language, there maybe are few argument or views in it. In fact, the author often narrates only a fact or introduction of a machine or production lines etc. On the basis of that, the translator should pay more attention on the “logic sequence” in the original.
C. What grammatical relation there is among the three, four, five, or even more “modifiers” in the long sentence to be translated?

3. Translation Process

The process of translating begins with choosing a method of approach. Secondly, in translation, translator should have four levels more or less consciously in mind. The first level is about the SL text level, namely, the level of language, where the translator should begin and which he should continually (but not continuously) go back to; The second level is about the referential level. It is the level of objects and events, real or imaginary, which translator progressively has to visualize and build up, and distinguish the essential part. The third level is the cohesive level, which is more general, and grammatical to trace the train of thought, the feeling tone (positive or negative) and the various presuppositions of the SL text. This level includes both comprehension and reproduction and it presents an overall picture, to which translator may have to adjust the language level; The last one is the level of naturalness, and it is about appropriateness of language in a certain situation.

This essay concludes two stages in the process of translation.

Stage 1: Comprehension
Step1: present the long sentence in a skeleton form;
Step2: infer the main idea from the sentence;
Step3: distinguish between principles and subordinate elements;
Step4: find out the interrelations between principle and subordinate clauses;

Stage 2: Presentation
Step1: enter on a tentative translation of each sentence division;
Step2: rearrange and integrate;
Step3: put on the finishing touches

4. The translation Methods for Long sentence in EST

To be a good translator, it is not enough to achieve these steps only in translation process. In order to make equivalence between target language and source language, one should gain skillful translation methods. In the practice of translation, some methods can be applied in the process of translation: translating in original sequence or in verse order, translating by division or by synthesis. For the convenience of explanation, these approaches may be broken down into specific methods or techniques, such as embedding, cutting, reversing, splitting, inserting, recasting, etc.

4.1 Embedding

The so-called embedding means placing the modifiers (including phrases and clauses) before the word being modified, thus the modifiers are embedded in Chinese sentences. This is quite opposite to the English sentence order in which modifiers larger than two words usually take the end-position. The pre-position embedding makes the Chinese version compact and coherent. In technical article, the modifiers are more and larger in quantity which is decided by the characteristic of technical article that it is often a introduction for a machine, a production line etc. When we meet such structure, we
should adopt the method – Embedding in translation. The method is frequently adopted in translating attributive and appositive clause.

Here are some examples used to support it:

Example 1: The CPCS is open and genuine multi-tasking sysmem that integrates the latest technology in computer networking.

**CPCS**是一种包含了最新电脑网络技术的真正的开放式的多功能测试系统。

Analysis: In this example, it can be seen that the subject is modified by three modifiers, two words and one attributive clauses. When translator deals with it, the modifier(attributive clause) is put forward before the predict.

Example 2: A molecule may be considered as the smallest particle of matter than can exist without changing its nature.

可以认为，分子是在不改变物质性质的情况下能够存在的最小颗粒。

4.2. Reversing

Reversing in translating long and complex English sentences refers to adjusting the sequence of a given sentence so as to make it confirm to Chinese usage. A sentence elements of pre-position may be placed at the end of the whole text, and on the other hand, an end-position elements may be placed at its beginning.

The method Reversing aims at the characteristics of long sentence in EST. It has been mentioned that author often use attributive clauses, participle phrases as modifier in the long sentence structure. The location of these modifiers are often fixed at pre-position or end-position. When translate, translator should analyze the inner structure of the whole sentence and translate them in a Chinese version. (see example 3)

Example 3: The secret of the moon remained unveiled until the latter half of the twentieth century due to the lack of lunar space carrier, for a serious of questions concerning fuel, material, safe landing, propelling mechanism and particularly electronic computation etc. were too intricate to solve under the technical conditions early in this century, which have since been undergoing profound change and greatly improving.

20世纪初，技术条件产生了深刻的变化，有了极大的改进。但在当时的技术条件下，燃料、材料、安全着陆、推进装置、特别是电子计算等一系列的问题都过于复杂，难以解决，没有登月运载工具。因此直到20世纪后期才揭开月球的秘密。

Analysis: In the original sentence, the author gives 2 marks on two parts. Their order gets an overturn. If you make a deeper explanation, you can see that the two parts are reason and result respectively. In long technical sentence, the author would like to put the result ahead of the whole sentence, which do not accord with the chinese logic order. In order to express in a logic, coherent context, translator should use reversing to adjust its order, which can be equivalent to chinese custom.

4.3. Amplification

As two different kinds of language with varies expression ways, translator should not only diversify the different kinds of word, but also amplify the necessary words, phrases or sentences. Amplification is a kind of translation methods when translator should add something to express the author’s original meaning fidelity and coherently. Here are some examples used to support it:

Example 4: It was understood that atoms were the smallest elements. It is known now that atom are further divided into nuclei and electrons, neutrons and protons, etc.

以前人们认为原子是最小的元素，现在才知道原子还可以分为原子核与电子、中子、与质子等。

Analysis: In this sentence, the author uses passive sentence. When translate, translator should add subject and be aware of tense.
Example 5: The slightly porous nature of the surface of the oxide film allows it to be colored with either organic or inorganic.

氧化膜表面具有轻微的渗透性，因此可以用有机或无机燃料染色。

Analysis: In this sentence, the author uses a noun phrase. When translate, translator should expand it to separate sentence for coherence.

Example 6: Manufacturing process may be classified as unit production with small quantities being made and mass production with large numbers of identical parts being produced.

制造过程可以分为单件生产和大量生产。单件生产就是生产少量的零件，大量生产就是生产大量相同的零件。

Analysis: When the relation between main sentence or sub sentence, participle phrase or prepositional phrase with the modified words is not close or separate, translating them in several sentences is a feasible way.

5. Conclusion

EST is a kind of special English. Perhaps, inevitably a technical translation is so difficult for its complex structure and obscure word that it is not easy to make helpful methods. In this essay, a lot of practical examples are used instead of obscure theory. Hoping these examples can be useful to solve the problem. Translating technical long sentence is not a tedious work only if translator can grasp the correct method to improve translation skill.

References