科技英语翻译

A Tentative Study of Thought in EST Translation

思维探索

■ 朱庆 著

国防工业出版社
National Defense Industry Press

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·北京·

内 容 简 介

本书在探讨思维本质及其与语言、翻译关系的基础上,尝试探索科技英语翻译中的思维因素,主要从思维过程、思维形式和语篇思维等三个方面探讨思维对科技翻译的影响。

(本书如有印装错误,我社负责调换)

前　　言

　　众所周知,科学技术对于一个国家的发展起着至关重要的作用。当今世界,科学技术迅猛发展,科技资料浩如烟海,其中绝大多数都是用英语发表或出版的,因此,科技英语的翻译越来越引起人们的重视。我国的科技英语翻译有着悠久的历史,在最近二十多年间取得了长足的发展。但长期以来受翻译学科整体发展的影响,科技英语翻译的研究主要局限在语言学范围内,使得很多问题无法得到解决。对此,本书提出以人类思维为出发点去研究科技英语翻译现象这一新的视角。

　　翻译是把一种语言构成的文本用另一种语言准确而完整地再现出来,也就是说,翻译是用不同的语言表达同一思维内容。所以,翻译过程不仅仅是一种语言活动,更是一种思维活动。确切地说,全人类具有的思维共性是翻译的基础,而各民族不同的思维个性形成了语言表达形式上的明显差异,也造成了翻译中的困难和障碍。

　　本书在探讨思维本质及其与语言、翻译关系的基础上,尝试探索科技英语翻译中的思维因素,主要从思维过程、思维形式和语篇思维等三个方面探讨思维对科技翻译的影响。

　　据笔者所知,国内从思维角度去研究翻译的著作只有寥寥几本,目前尚无把思维与科技英语翻译结合起来研究的著作,因而笔者斗胆在现有资料与前人研究的基础上写出这本不甚成熟的小册子,以期能成为一块引玉之砖。

本书在写作过程中,参考了国内外大量相关文献资料,所有引用例句和参考资料都在书后参考文献中列出,以表达笔者对这些专家学者的敬意与感谢。

　　本书得以付梓,与笔者的领导、浙江工商大学外国语学院院长刘法公教授的鼓励与支持是分不开的,浙江工业大学外国语学院刘建刚博士对本书提出了很多中肯的意见与建议,美国专家 Clare Cimilelli 女士帮助校读了本书的英文内容,在此一并表示感谢。同时也感谢出版社的编辑同志,没有她们的不断敦促与辛勤工作,本书恐怕是难以如期与读者见面的。最后,我要感谢浙江工业大学外国语学院的史永红老师,她帮助收集整理了许多资料,还参加了部分写作工作。

　　研究翻译问题,既要有深厚的实践基础,又要有宽广的知识素养。我深感自己在这两方面都有很大的不足,加之时间紧迫,书中谬误之处在所难免,恳请广大读者不吝指正。

<div align="right">朱　庆</div>
<div align="right">2007 年夏于浙江工商大学</div>

Contents

V

目　　录

Introduction

Along with the rapid growth of economy and the improve-
ment of people's living standard, China is making great efforts
to catch up with the development of the world's advanced sci-
ence and technology. Thereby translation of scientific and tech-
nological information into Chinese becomes a very important
task. Hence studies on the translation of English for Science
and Technology (EST) are not only academically important but
practically crucial because it directly relates to the construction
of a modern country.

As is well known, translation, EST translation included,
is a process in which a text of one language is fully and correctly
reproduced in another language, that is to say, translation is to
express the same thought content with different languages.
Therefore, the translating process is not only a kind of language
activity, but a kind of thinking activity as well. To be exact,
the thought universality of human beings constitutes the foun-
dation of translation, while the thought individuality of each
language-speaking community poses differences in the form of
language expressions, thus bringing about difficulties and obsta-
cles in translation.

Based on the discussion of the essence of thought and its
relation with language and translation, this book focuses on

1

thought factors in the process of transfer of EST, a specific register in translation studies. It mainly investigates the influence of thought upon translation of EST from three perspectives, namely, the process of thought, the forms of thought, and the textual thought.

The book is made up of five chapters.

Chapter One gives a short introduction to the nature of thought and its relationship with language and translation. Studies on the relationship between thought and translation at home and abroad are also briefly reviewed in this chapter.

Chapter Two discusses the most prominent features of EST at the hierarchies of lexis, syntax and stylistics. As a special variety of the English language, EST is intended for communicating scientific information, which may require special translation principles.

Chapter Three states the process of EST translating from the perspective of thought. It holds that the whole translating process can be divided into three interrelated phases: analysis, which aims at the full understanding of the source language text; transfer, in which the analyzed information is transformed in the mind of the translator from one language to another; and synthesis, which aims at ensuring the readability and social function of the target language. All of the three interdependent stages are closely related to the inner activities of human thought.

Chapter Four studies the relationship between forms of thought, namely, concepts, judgments and inference, and units of EST translation, such as words, sentences and para-

2

graphs.

The last chapter elaborates on textual thought and its application to the translation of EST texts, especially the functions of EST texts and their cohesive ways in achieving textual coherence. By textual thought in translation, a translator may attach importance to the wholeness of a text, thereby a more coherent and cohesive version will be achieved, and meanwhile the translator can give prominence to the functions of an EST text.

Chapter 1

Thought, Language, and Translation

1.1　Definition of Thought

Thought, or thinking[①], is a term difficult to define due to its abstract traits. Here are the definitions of thought from some common dictionaries. In *Webster's Third New International Dictionary*, thought is taken as "an action which produces ideas"; and in *Britannica*, thought is called "a means of getting something in the objective world". In *Merriam-Webster's Collegiate Dictionary*, thought is defined as "an act that uses one's mind or power of reason to make judgments, to form opinions". In *A Concise Social Scientific Dictionary*, thought is viewed as "the indirect, general reflection of objective substance, which is based on the social practices". As to the defini-

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① Thought and thinking are two words closely related to each other. Some people think they refer to the same thing, while others don't think so. In psychology thought refers to the act, the result or the process of thinking, while thinking mainly refers to the act or practice of one that thinks. That's to say that thought has wider meanings than thinking. However, in this book the difference between the two terms is neglected for convenience.

4

tions from the perspective of translation, FANG takes it this way: "Thought is a cognitive process to make analysis, synthesis, judgment, inference etc. on the basis of figurativeness and concept. Studies of human brains show that thought is the motional synthesis of physical, chemical and physiological forms in the neurological centre of human brains. It is a kind of complicated forms of the motion of matter". (方梦之, 2004: 256)

Those definitions tend to show that thought is generally a kind of cognitive activity: a process of human brains to receive, store and output the information which may guide human behaviors. In a word, thought reflects the objective reality of human brains.

As a common ability of human beings, thought has its universality. That's the reason why people from all over the world can understand each other and share their knowledge with each other. Thought, however, also has its individuality. Each nation may have its typical way of thinking. People from different counties may use different ways to express the same ideas and to get the same knowledge, and the differences may lie in the word order, sentence structure or text layout in different languages. Therefore scientific studies of the relationship between language and thought become very important.

1.2   Relationship between Thought and Language

The relationship between language and thought has been discussed for a long time by linguists, psycholinguists, philoso-

phers and anthropologists. Some believe that thought determines language; some advocate that language determines thought; and others think that thought and language are independent of each other. Among various theories, Humboldt's "Weltanschauung" and Sapir-Whorf Hypothesis attracted a lot of attention and brought about widespread discussions about the relationship between thought and language.

Wilhelm von Humboldt was the first European to combine knowledge of various languages with a philosophical background. He equated language and thought exactly in a hypothesis we now call "Weltanschauung" (world-view) hypothesis. Humboldt holds the view that language is a kind of worldview: language and thought interact with each other; language is the tool of thought; thought and languages are inseparable. Meanwhile, he puts forward the idea that different people speak differently because they think differently, and that they think differently because their languages offer them different ways in expressing the world around them. In the book *On Language* he writes:

> The spiritual traits and the structure of language of a people are so intimately blended that, given either of the two, one should be able to deserve the other from it to the fullest extent... language is the outward manifestation of the spirit of people; their language is their spirit, and their spirit is their language, it is difficult to imagine any two things more identical. (Humboldt, 1988: 86)

The "Weltanschauung" hypothesis was further developed in the United States by Edward Sapir and his student Benjamin

6

Lee Whorf. Whorf's views on the relationship between language and thought have become known as the Sapir-Whorf Hypothesis.

The Sapir-Whorf Hypothesis can be summarized as follows: "one's thought is completely determined by his native language because one cannot but perceive the world in terms of the categories and distinctions encoded in the language; the categories and distinctions encoded in one language system are unique to that system and incommensurable with those of other systems." (HU et al, 1988: 240)

Obviously the Sapir-Whorf Hypothesis is too absolute, because there does exist strong evidence against it, including the possibility of translation between different languages. So it might be better to say that "language therefore informs but does not comprise thinking" (Newmark, 2001: 57). This argument can be convincingly proven by the following remarks:

Language does not exist in a vacuum. It serves and is modeled by other systems in the human mind. Because it is used for conveying ideas, its structure and function must reflect these ideas. Because it must he spoken and understood easily and efficiently, its structure and function are forced to stay within the limits imposed by people's processing capacities. Because it is used for communication within a complex social and cultural system, its structure and function are modeled by these factors as well. Yet once people have learned how to use language, it wields a power of its own. It aids them in thinking about some ideas and hinders them in thinking about others. It molds many as-

7

pects of their daily affairs. (Clark & Clark, 1977: 515)

In the Chinese academic fields, there are also a lot of studies on the relationship between language and thought. BAO (包惠南, 2001) thinks that thought is expressed by language, which serves as the tool and carrier of thought. SHEN (申小龙, 2003) points out that the essence of human thought lies in its linguistic quality. JIN (金惠康, 2002) views language as the wing of thought. In short, these Chinese experts think language is a tool of thought, and thought plays a major role in the relationship between the two.

Based on the above discussion, we may conclude that the key point of the relationship between language and thought is that thought influences and models language, especially language structures. On the other hand, language is not only a reflection of thought, but also a strong counteraction of thought.

1.3　Relationship between Thought and Translation

Translation is a kind of language activity that concerns how to deal with the information between two languages, but traditionally, it has been approached primarily from the perspective of languages. This method, however, has turned out to be too narrow a view. The famous American translator, Eugene A. Nida says, "It is true that in all translation and interpreting the source and target languages must be implicitly or explicitly compared, but all such interlingual communication extends far beyond the mechanics of linguistic similarities and con-

8

trasts. " (Nida, 1993: 14) The reasons for this, as we have just discussed, are that language is just the reflection of thought, and a language, particularly the structure of the language, is influenced by the thought patterns of its people. So translation studies cannot elude the study of thought, the essence behind language.

The traditional way of studying translation from a linguistic perspective is gradually showing its disadvantage and flaws, so more attention should be paid to the influence of thought upon translation. The process of translating is not only the transformation of language forms but also that of thinking processes.

From the perspective of psychology, translation is nothing but an act of conscious information processing. A translator first inputs the linguistic information into his or her mind, then processes it with his or her brain, and finally outputs the message in another language form. During the whole process, the translator analyzes the source language information, transfers the information from source language to target language, and synthesizes the transferred information in order to make his or her version agree with the thinking and reading habits of target language readers.

Philosophically, translation is a communication between a translator and the original text, which includes understanding, perceiving, internalizing, transferring and rendering. During the course of communication, collisions may emerge due to different ways of thinking. So the translator should pay attention to the differences between the two thought patterns so as to sweep the obstruction in translation.

1.4　Researches on Thought in Translation

It is known that thought is extensively studied in philosophy, linguistics and many other disciplines, but in translation field, no matter whether at home or abroad, it has never been in the main stream. The studies of thought in translation have been conducted unsatisfactorily; the findings and breakthroughs are much fewer compared to those of other aspects in translation. That is to say, thought has not been given deserved attention in translation studies.

During the first half of the twentieth century, translation theories witnessed little development. Researches mainly focused on the traditional translating methods and rendering techniques, and they were hardly concerned about the relationship between translation and thought.

But Benedetto Croce, an Italian esthetician and critic, was outstanding during this period. He points out in his masterpiece *Aesthetics* that the source text cannot be reproduced perfectly in translation because the production of language depends on intuition. Therefore, each speech behavior is unique and creative. That means not all sentences can be translated completely. He also explains the process of translation: first to get the contents of the source text, then to break away from the shell of the source text, and finally to create a totally new text based on the idea of the source text and the thought of the translator. Although Croce does not study thought in translation directly, his studies display to some degree the relationship between thought

10