Saudi Journal of Engineering and Technology (SJEAT)
Scholars Middle East Publishers
Dubai, United Arab Emirates
Website: http://scholarsmepub.com/

ISSN 2415-6272 (Print)
ISSN 2415-6264 (Online)

A Preliminary Study on the Translation of Military English Science and Technology

Huang Hongxia[1], Wang Feng[2, 1*]
[1]School of Foreign Studies, Yangtze University, China
[2]School of Languages and Cultures, Nanjing Normal University, China

Review Article

***Corresponding author**
Wang Feng

Article History
Received: 13.08.2018
Accepted: 24.08.2018
Published: 30.08.2018

DOI:
10.21276/sjeat.2018.3.8.4

Abstract: Features of Military English Science and Technology (MEST) have been introduced, and accordingly its translation principles are put forward. At the same time, difficulties in the translation of MEST are analyzed, that is, a large number of professional terms, abbreviations and old words with new meanings making it difficult for translators and interpreters to understand. Meanwhile, MEST are not open to the public, which also reduces translators' chances to learn professional materials, resulting in underdeveloped translation studies. To be engaged in translation and related research on MEST, translators must have excellent English language skills, extensive scientific knowledge and solid Chinese language skills to ensure the accuracy of information transmission and to enhance the readability of the translation.

Keywords: English for Military Science and Technology, Translation Principles, Difficulties in Translation, Accuracy, Readability.

INTRODUCTION

With the deepening of reform and opening up, the cultural, political, military and economic exchanges between China and western countries are increasingly frequent. The study, research and development of military science and technology is particularly important as the country's hard power -- to efficiently safeguard the security and stability and to build a socialist harmonious society in an all-round way. Statistics show that "70% to 80% of the arms sold in the world arms market are accompanied by English instructions, and about 60% of military books and journals are published in English[1]".

Scientific literature is the basis for the public and professionals to acquire scientific knowledge, and also the carrier and tool for knowledge dissemination and advanced science and technology.

Therefore, "translation activities play an important bridging role in intelligence gathering, development of weapons and equipment, and optimization of strategies and tactics, and are an important fighting force in modern military activities [1]."

Military English for Science and Technology (MEST) mainly refers to the research papers and narrative articles introducing the development and application of high technology in the military field published by western magazines [2]. Speaking from the mode of discourse, it belongs to written language; from the tenor of discourse, formal style; from discourse itself, the professional language of science and technology [3]. The main purpose of the translation of MEST is to help target-language readers (mainly scientific and technical workers with professional knowledge and readers who are temporarily in need of certain scientific and technological information) to obtain accurate information from the translation.

At present, the translation of MEST in China is mainly input translation. In order to keep abreast of new developments of foreign military science and technology and improve the level of China's weapons and equipment and military construction in a timely manner, translators must understand the characteristics, translation principles and strategies of MEST and master certain military knowledge of science and technology so as to reduce errors and missing translations.

TEXTUAL FEATURES OF MEST

English for science and technology (EST) covers all fields of society, including politics, economy, military, society, sports and science and technology. The translation for EST, as a kind of applied translation, has the characteristics of "language specification, formal tone, objectivity, logic, informativeness, high degree of specialization and the extensive use of symbols, formula, charts, etc. Especially it refuses rhetorical devices to exaggerate and render in the

literary way [4]." As a kind of EST, MEST has the scientific, logical and objective nature of the EST texts through the extensive use of nominal structures, passive voices, professional terms, and long sentences.

Extensive use of nominal structures

The nominal structure is one of the remarkable characteristics of EST texts. The so-called nominalization is to delete the modal components, blur the concept of time, and abstract the concrete concept of action verbs and state verbs. There are two main types of nominal structures: one is the lexical nominalization—to add -tion, -ment, -sion and other suffixes after verbs to form behavioral nouns; the other is the nominal phrases equivalent to clauses[2].

The reason why EST has a large number of nominalizations is related to its register. MEST mainly discusses the development and application of science and technology in the military field. Its main purpose is to elaborate objective facts, rather than convey personal feelings. The nominal structure can avoid subjective assumptions [5], thus enhancing objectivity. Nominalization transforms verbs into nouns, that is, actions into states, and blurs the concept of time. Since the translation of MEST often contains a large amount of complex technical information, the use of nominalization can make the information organization more hierarchical and logical. Besides, the translation of EST, mainly for information transmission, needs to be fast and concise to keep up with the pace of scientific and technological development. As nouns can be modified by a variety of grammatical forms, the nominalization makes the sentence concise, meeting the requirements of the texts.

Extensive use of passive voices

One of the distinctive characteristics of MEST is coherence, clarity and fluency[6]. Its content is objective, accurate and logical. Therefore, there is little causative relationship at the semantic level. When the nominal structure replaces the personal pronoun as the subject, a large number of passive voices will be used, reflecting objectivity and universality, which can also play a role in highlighting the narrated objects.

Extensive use of long sentences

MEST is dominated by the transmission of information about the development and application of military science and technology, which contains a large amount of information and is highly professional. Therefore, long and compound sentences are often used in its texts. Statistics show that the average sentence length of modern scientific English is between 20 and 30 words [4]. The longer sentences in the academic literature, the more multiple-compound and multiple-complex sentences exist. For example, when reporting China's claiming on the successful test of hypersonic waverider, the *Janes* said: "China has reportedly tested hypersonic aircraft in the past, but principally with hypersonic glide vehicles (HGVs) that were launched to high altitudes via booster rockets and then flown unpowered to their targets at hypersonic speeds – defined as being greater than Mach 5[7]."

Frequent use of new words

MEST mainly conveys the latest achievements and developments in the field of military science and technology and enables readers to grasp the latest development in this field. Therefore, new words inevitably appear in the texts.

"Industry insiders, on the basis of their research on emerging new words, concluded that the formation of new words can be divided into four categories: (1) innovation method, which is to create a brand new English word, such as sofar =sound fixing and ranging; (2) affixes: to add prefixes and suffixes before the original words to generate new words, such as bioclimatology; (3) transferring meaning, that is, old words take on new meanings, such as bug (its original meaning is a worm, but in military field it refers to a covert listening device); (4) borrowing: to borrow or absorb borrowed words, new idioms that are passed around orally, etc. For example: textile finishes have in general become a 'no - no' in today's market place, thanks to many reasons, says a representative of fiber producer. The 'no - no' is a new word in American slang: 'taboo' [8]".

In general, every two to three years, the technology and equipment in the military field will be updated, and many contents will be outdated [9]. This means the emergence of new words and higher requirements for translators. Translators can better cope with new challenges only by improving their comprehensive communication skills in military science and technology and keeping abreast of the latest developments in the field.

Wide use of abbreviations

In addition to the extensive use of military terms and technical terms, abbreviations are one of its features. Greatly shortening the word length, the use of acronyms makes it more economical and concise, improves the speed of information exchange, and plays a role of confidentiality to a certain extent [2], because "keeping secrets is an important and long-term task of military science and technology journals [10] ". Clippings (such as plane), Blends (such as smog), Alphabetism, (such as FAMA assault rifle—Fusil Argentino Modelo Asalto assault rifle)[11], Acronyms (such as NATO) are commonly used for MEST texts[12]. Although abbreviations have the advantage of economic simplicity, their extensive use of acronyms also increases the difficulty of translation. At present, several dictionaries of abbreviations of MEST have been published in China, such as *the English-Chinese Dictionary of Military Abbreviations* and *the English-Chinese Dictionary of Ship Technology and Naval*

Abbreviations. However, with the continuous development of MEST, the renewal speed of technology products is extremely fast, resulting in the emergence of new abbreviations, some of which are not traceable.

TRANSLATION PRINCIPLES OF MEST

The main function of MEST is to describe, explain, define, classify, introduce and compare the new trends in the field of military science and technology [13]. It has a large amount of information and a strong specialty, with the characteristics of simplicity, objectivity and accuracy. The translation of MEST should follow the principles of simplicity, objectivity, accuracy and standardization.

Conciseness

The English texts of military science and technology are characterized by conciseness and clarity, while the Chinese language has the same features. The target language readers of MEST are mainly military science and technology workers with professional knowledge and readers with temporary needs of military science and technology information. They cannot slowly taste the translation, and their purpose is to obtain the more required accurate information from the translation, in a faster, better and cheaper way [14]. Therefore, translators should follow the principle of conciseness when translating MEST.

Objectivity

Chinese mostly uses personal pronouns as subjects, so that it is of subjectivity. The MEST texts stress logic and objectively describe new progress and breakthroughs in this field. Therefore, when translating the English texts of military science and technology, translators should use fewer tropes, exaggerations and other rhetorical devices which will add subjective emotions [4], and try to keep its original objective style.

Accuracy

Sir Peter Medawar [3], a British scholar, believed that "simplicity, relevance and clarity are the three main qualities of scientific discourse and clarity is the first quality [6] ". Wang Yanni [4] believes that accurate and authentic information is the first priority of scientific English translation [15]. Military science and technology texts are information texts, just as the old saying goes, “A miss is as good as a mile”. In translation, the information should be given priority, and the form can sometimes correspond to the original texts. Meanwhile, the use of metaphors and exaggerations should be avoided as much as possible to reduce language ambiguity [6]. Therefore, when translating military science and technology texts, we should try our best to convey the content accurately, and achieve similar equivalence in form. Accuracy also reflects the translator's rigorous working attitude.

Normalization

The above three principles emphasize the concise, accurate and objective norms of MEST. Qin Zhihong [16] believed that scientific English translation should try to get rid of the shackles of the original structure, pay attention to the collocation of words and the selection and extension of word meaning, and make the translation conform to the Chinese standard through the adjustment of words, word order, sentence pattern and voice[16]. That is to say, when translating MEST, translators should not only attach great importance to the characteristics of the texts itself, but also pay attention to the differences between English and Chinese on the basis of accurate information in the texts. Thus, translators have to follow the Chinese grammatical standard, avoid word-for-word translation and translationese, and try to keep sentences fluent to enhance the readability of the translation.

Difficulties in translating MEST

At present, the translation of MEST is still in the primary stage. There are two reasons for this phenomenon: First of all, as Wei Mengfen [17] said, there are three difficulties in scientific English translation: difficulty in understanding the original texts, difficulty in expression, and high requirements for professional knowledge [17]. According to the characteristics of MEST, in particular, the difficulty in understanding the original texts lays in two aspects—On the one hand, the rapid development of technology and its wide application in military field resulted in constantly emerging of new abbreviations, which caused great obstacles for the translators. Thus, it is very important to master some commonly used professional abbreviations. On the other hand, the original meaning of common words has changed greatly in MEST; thus causing translators’ difficulties in understanding, which is the basis of translation. There is no good output without good input. For example, due to the deficiency of background knowledge of science and engineering, translators graduated as English majors often translate works indistinctly. However, due to insufficiency of English-Chinese language ability, students majoring in science and engineering often make grammatical mistakes in translation. Therefore, translators are required to have a good command of comprehension and expression in both English and Chinese, as well as a high level of professional knowledge in MEST, to make translation a clear and readable one.

In addition to language comprehension barriers, another important reason for the slow improvement of MEST translation is the lack of publicity of military science and technology materials. For most people, the English translation of military science and technology is a no-go area because few people have access to military materials, let alone translate them. Since the 1990s, only some veterans who have long been engaged in translation and

accumulated rich experience in MEST, and only some translators who are still engaged in translation of MEST have obtained some achievements in the translation studies of MEST [2].

CONCLUSION

The translation of MEST is one of the important ways to learn and grasp advanced technology and knowledge from western countries. A large number of technical terms, abbreviations and old words with new meanings are the difficulties. At the same time, the lack of openness of military scientific and technological literature also hinders translators from accessing them, which leads to the stagnation of relevant research. However, translators can use various forms of communication, such as academic seminars and journals, to strengthen the ties of relevant practitioners and improve their English translation skills in military science and technology. In addition, to be engaged in translation and related research of MEST, translators should maintain a rigorous scientific attitude and a serious and responsible working attitude, and "pay equal attention to English, scientific and Chinese knowledge" [8]. Excellent English language ability, extensive scientific knowledge and solid bilingual foundation are the keys to correctly understand the original texts, accurately convey the information of the original texts, and enhance the readability of the translation.

REFERENCES

1. Chang, Wanyi. Texts Features of Military Science and Technology and Translation Strategies [J]. *Science and Technology*. 2017; 5: 296.
2. Zhang, Jintao, & Zhang Yunfei. *Translation Course of Military Science and Technology English* [M]. Nanjing: Nanjing University Press. 2015.
3. Zhang, Hui & Lu Daoli. On Stylistic Features of Military Science and Technology English [J]. *Shandong Foreign Language Teaching Journal*. 1996; 1: 23-25.
4. Wang, Yin. Preliminary Discussion on Syntactic Features and Translation Methods of Scientific English [J]. *Bulletin of Science and Technology*. 2010; 6: 949-952.
5. Qin, Yanbin. Analysis of Stylistic Features of Military Science and Technology English [J]. *College English* (Academic Edition). 2004; 189-191.
6. Qin, Pingxin. A Probe into the Manifestation Phenomenon in English Translation of Science and Technology [J]. *Chinese Translation of Science and Technology*. 2009; 3: 16-18, 55.
7. Wong, Klevin. China claims successful test of hypersonic waverider. *IHS Markit*. <https://www.janes.com/article/82295/china-claims-successful-test-of-hypersonic-waverider>. Accessed August. 2018; 3, 2018.
8. Zhang, Jianying. Analysis of Problems and Skills in Translation of English for Science and Technology in International Scientific and Technological Exchanges [J]. *Bulletin of Science and Technology*. 2013; 5: 202-207.
9. Musikhin, I. A. English for Specific Purposes: Teaching English for Science and Technology [J]. *ISPRS Annals of Photogrammetry, Remote Sensing and Spatial Information Sciences*. 2016; 3(6):29-35.
10. Yuan, Guoan. Secret Processing of Military Science and Technology Journal Manuscripts [J]. *Acta Editologica*. 2011; 3: 227-228.
11. Rivas, Santiago. Argentine Army receives first modernised FAL rifles. *IHS Markit*. <https://www.janes.com/article/82447/argentine-army-receives-first-modernised-fal-rifles>. Accessed August 3. 2018; 2018.
12. Malenica F, Fabijanić I. Abbreviations in english military terminology. Brno studies in English. 2013 Jan 1;39(1).
13. Li X, Li L. Characteristics of English for Science and Technology. In 2015 International Conference on Humanities and Social Science Research 2015 Sep 25. Atlantis Press.
14. Wang, Hao. Application of Variable Translation Theory in Scientific English Translation [J]. *Chinese Translation of Science and Technology*. 2011; 2: 60-62.
15. Wang, Yanni. A Brief Analysis of the Application of Functional Equivalence Theory in the Translation of Scientific English [J]. *Overseas English*. 2018; 3: 112-113.
16. Qin, Zhihong. Characteristics of Comprehension and Expression of Scientific English Translation [J]. *Chinese Translation of Science and Technology*. 2001; 14(1): 15-18.
17. Wei, Mengfen. Selection of the Meaning of Scientific English Translation [J]. *Chinese Translation of Science and Technology*. 2015; 1: 1-3, 35.