

# Research on the Practice of Post-editing of Chinese-English Translation for Cross-border E-commerce—Based on Catford's Translation Shifts

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[ **Abstract** ] The combination of machine translation with post-editing and human-computer interaction has emerged as the dominant approach in the language service industry. However, the absence of theoretical guidance often leaves post-editors perplexed when encountering different machine translation errors, which in turn leads to a decline in the quality of post-edited translation. This paper aims to address this issue by incorporating Catford's translation shifts theory into MTPE (Machine Translation Post-editing) to explore the translation practice of cross-border e-commerce English.

[ **Key words** ] machine translation (MT); MT post-editing (MTPE); Catford's translation shifts; cross-border e-commerce English

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## 1 Introduction

In recent years, the balance between translation quality and translation efficiency, along with the full exploitation of the advantages of human-computer interaction, has led to the emergence of the machine translation post-editing (MTPE) model as the new standard in the current translation service industry. As a significant venue for language services, cross-border e-commerce has emerged as the third-largest industry in terms of language service demand. The application of MTPE in this manner not only fulfills the requisite criteria for translation efficiency in cross-border e-commerce, but also incorporates the consideration of translation cost. However, the absence of theoretical guidance and the inherent limitations of machine translation (MT) render the post-translation editors uncertain of their approach, and the quality of MTPE is consequently diminished. Currently, the primary focus of research on MTPE in China is on the overview of post-editing, the development and application of post-editing tools, and related topics, while there is a paucity of studies that integrate translation theory with MT and MTPE practices. This study takes cross-border e-commerce Chinese-English translation as an example to explore the optimization strategy of MTPE based on Catford's translation shifts theory, with a view to solving the limitations of MT and improving the quality of cross-border e-commerce Chinese-English translation.

## 2 Machine translation post-editing (MTPE)

### 2.1 Machine translation and its development

In recent years, the rapid development of artificial intelligence and big data technology has led to significant advances in MT technology. In particular, the advent of the neural machine translation (NMT) model in 2013 marked a pivotal shift, as MT surpassed rule-based and statistics-based approaches and entered the era of neural

translation. The online MT systems of major Internet companies at home and abroad, including Google Translate, Microsoft Translate, and China's self-developed Baidu Translate, Youdao Translate, and Sogou Translate, have been developed using core technologies such as artificial intelligence, neural networks, natural language processing, and deep learning models, which have significantly enhanced the fidelity and intelligibility of MT outputs, resulting in notable qualitative improvements. With the exception of less obvious advantages in the field of literature and art, which is highly creative and unfamiliar, the quality of MT in some vertical fields, such as machinery, economy and trade, patents, automobiles, biology, and medicine, has reached a higher level. As a result, MT is increasingly replacing human translators, and has become the preferred solution for everyone to obtain convenient, real-time, and free translation services. Indeed, technology facilitates translation. Given the substantial benefits of the MTPE model in terms of time and cost, it is challenging to ignore the role of network information technology in the completion of any translation task in the present era.

## 2.2 MTPE

NMT offers several advantages, including straightforward operation, adaptability to diverse application scenarios, and cost-effectiveness. In the case of heavy translation tasks, time constraints, limited budgets, or a lack of the necessary capabilities, the various online translation systems are the preferred solution for both language demanders and providers. Nevertheless, in practice, it has been demonstrated that neural machine translation, as a new technology, still exhibits shortcomings in its model architecture, arithmetic training, and other aspects. Consequently, the necessity for human intervention and editing on MT is evident. This novel approach to translation production, which combines MTPE, represents a highly promising development in the language service industry. It leverages the efficiency of MT while maintaining the quality of manual proofreading, thereby capitalizing on the respective strengths of machine and human.

According to the definition of GB/T40036 – 2021, MTPE “aims at checking the accuracy and comprehensibility of MT, improving the text, increasing the readability of the text and correcting the errors”, and there are mainly two types of post-editing: light post-editing and full post-editing, involving three texts: the original text, the MT text and the MTPE text. The extent of MTPE is contingent upon the user's specifications for translation quality. If the user's requirements for quality are at the comprehension level, namely semantic accuracy, complete information and grammatical standardization, and do not encompass such details as linguistic expression and stylistic refinement, then light post-editing may be employed. In the event that the user's requirements are at the publication level, namely in order to obtain results comparable to those of human translators, it is necessary to implement modifications and touch-ups at the level of phrase-making. In such a case, it would be advisable to adopt a full post-editing approach.

MTPE represents a novel approach to MT and post-editing. It leverages the speed and efficiency of MT, while also capitalizing on the precision and quality of human translation. This model not only addresses the demands of the rapidly evolving translation market but also drives the advancement of translation technology and facilitates exchanges and collaborations between academia and industry.

## 2.3 Cross-border e-commerce and its translation

Cross-border e-commerce refers to an international business activity in which trading actors belonging to different customs borders reach transactions and carry out electronic payments on the basis of e-commerce platforms, and deliver products and conduct transactions according to cross-border e-commerce logistics. As an innovation in export and foreign trade industry, cross-border e-commerce has demonstrated a remarkable capacity for growth and expansion over the past two decades. According to the General Administration of Customs of the People's Republic of China, China's total import and export of cross-border e-commerce amounted to 2.38 trillion *yuan* in 2023, a year-on-year increase of 15.6%.

Given that cross-border transactions are involved, the scope of application of Chinese-English translation is quite extensive. This encompasses all English translation activities related to cross-border e-commerce, including

the translation of cross-border e-commerce platforms, cross-border e-commerce news reports, and so forth. From a narrow perspective, cross-border e-commerce English translation encompasses the translation of text involved in cross-border e-commerce operations, including online customer service (communication and exchange in pre-sale, on-sale, after-sale, etc.), promotion and marketing (store introduction, company profile, social media marketing and promotion, etc.), and actual operation (product listing, product description, clearance and freight logistics, etc.).

MTPE is a language service model that is well-suited to the cross-border e-commerce industry, particularly for large-scale cross-border e-commerce companies that place a high value on business profits and seek to reduce the cost of translation. Cross-border e-commerce is oriented towards foreign customers and must therefore pay attention to cross-cultural factors in translation at all times. For the time being, MT can only make a difference in the technology-directed field, which is dominated by informational texts. In the case of more categories of commodities, post-editing is necessary. The speed of MT is considerably faster than that of human translation, which is well-suited to the needs of cross-border e-commerce online platforms for rapid changes in information. Post-editing is responsible for correcting errors in MT to ensure the accuracy of the translation, which can meet the reading expectations of overseas consumers for information on the product introduction page. The combination of the two, with their complementary strengths, allows for the full exploitation of the potential for productivity gains in language services.

## 2.4 Language features of cross-border e-commerce English

### 2.4.1 Features of the vocabulary

Cross-border e-commerce English is a subset of business English. Its vocabulary is divided into three main categories: professional vocabulary, compound vocabulary, and abbreviations. Professional vocabulary is a unique subset of language that emerges when language domains change. It is characterized by clarity, concision, and simplicity in cross-border e-commerce. When it comes to international trade, computers, advertisements, law, and other fields, there are often highly specialized English words that require translation in accordance with established norms, such as “default bid” (默认竞价), “bullet point” (产品关键点), “custom bond” (海关保证金), and “returnless refund” (不退货产品退款). In the composition of the professional vocabulary, there are also many ordinary words that need to be translated with specific meanings to avoid semantic confusion in a particular context, such as “review” (评论), “visibility” (曝光度), “follow” (关心), “copy” (文案), and “traffic” (总流量).

The use of compound vocabulary is also of significant importance in cross-border e-commerce English translation. The formation of compound words is primarily the result of the combination of several free words, which, in the context of cross-border e-commerce, can serve to convey information and simplify the structure of utterances, such as the noun-and-noun combination “barcode label” (条形码标签), the noun-and-participle combination “order processing” (订单处理), and the adjective-and-participle combination “free tracking” (免费追踪服务). Due to the informative nature of the cross-border e-commerce industry, compound words of three or more words are common, such as “manufacturer’s suggested retail price” (制造商建议零售价), and “buy one get one free” (买一送一). In addition, compound words made up of hyphens are another notable feature, such as “pay-as-you-go plan” (即付即用的销售计划), “up-and-coming products” (新推商品), “cost-per-click bid” (每次点击费用竞价), and “brick-and-mortar store” (实体店).

The translation of abbreviations is a common challenge encountered in cross-border e-commerce. Abbreviations offer a concise approach to language expression, and their use is becoming increasingly prevalent in translation. They are mainly divided into the following forms: cutting off part of the word, such as “promo” (促销), “intro” (简介), and “merch” (商品); alphabetical or numerical homophones, such as “O2O” (线上到线下商业模式); simplified abbreviation of symbols, such as “%” as percentage; abbreviated initials, such as “EIN” (Exporter Identification Number, 出口商识别码), “FAQ” (Frequently Asked Questions, 常见问题解

答), and “SEO” (Search Engine Optimization, 搜索引擎优化). It is important to note that some abbreviations can have different meanings in different contexts. For example, “REG” can refer to both register (注册) and regulation (规则), and “#” can refer to both number (号码) and hashtag (主题标签).

Cross-border e-commerce industry relies on the rapid development of information network technology and the strong sense of innovation, so some new words continue to emerge, such as “add to cart” (加入购物车), “money off” (满减), “social influencer” (网红), “drive traffic to” (引流), “five-star positive feedback” (五星好评), “flash deal” (限时抢购), and “feeds” (动态消息).

#### 2.4.2 Syntactic features

Sentences in cross-border e-commerce English are dominated by active, compound and rhetorical sentences. In the operation step description and marketing promotion of cross-border e-commerce platform, cross-border e-commerce text tends to use more active structure to emphasize the subjectivity of cross-border e-commerce parties, including both parties to the transaction, the platform operator, and third-party service providers, to achieve the function of communicative dynamics. For example, “You will enjoy 30% off for the entire shop.” (您将享受全场7折优惠。) Commonly, there are also imperative sentence types, which are mostly used for tone of voice, information emphasis, and so on. For example, “Don’t miss the lowest price for Christmas.” (千万不要错过圣诞节最低价。) In the introduction of the platform rules, the text is in more formal terms, with clear and specific expressions, in order to constrain user behaviors and avoid legal risks.

Compared with the English of other industries, cross-border e-commerce English seldom involves long and difficult sentences. Instead, its sentence structure is relatively simple and clear, which makes it easy to read and thus improves work efficiency. For example, “The e-commerce platform advertisement must first have keywords matching the search and meet the minimum relevance standard.” (电子商务平台广告首先必须有与搜索相匹配的关键词,并且符合最低相关性标准。)

Besides, metaphors are often used in cross-border e-commerce English to convey economic information in a visual way and to enhance the expressive and infectious power of the language. For example, “So do emerging brands that will pop on your radar soon.” (新兴品牌也一样,这些品牌很快就会引起您的注意。)

### 3 Catford’s translation shifts theory

In his book *A Linguistic Theory of Translation*, John Cunnison Catford defines translation as “the replacement of textual material in one language (SL) by equivalent textual material in another language (TL)”. He then provides the definition of “translation shifts” in Chapter 12, that is, “departures from formal correspondence in the process of going from the SL to the TL”. Catford subsequently categorizes shifts into two principal types, namely level shifts and category shifts. The latter can be further subdivided into structure shifts, unit shifts, class shifts and intra-system shifts.

#### 3.1 Level shifts

In Catford’s opinion, level shifts mean that “an SL item at one linguistic level has a TL translation equivalent at a different level”. Influenced by Firthian and Halliday’s linguistic model, Catford divides language into four levels: grammar, lexis, graphology and phonology. Level shifts occur when one language resorts to lexicalize what is grammaticalized in another. In Chinese-English translation, tense and plural forms in Chinese are mostly reflected in lexis level, which should be translated into grammar level in English. For example, in Chinese, “了” is often used to identify the action that happened in the past, which is usually translated into “-ed” added after the verb in English to express the same meaning.

#### 3.2 Category shifts

Catford defines category shifts as “departures from formal correspondence in translation”. Four sub-types of category shifts are also listed, which are structure shifts, class shifts, unit shifts, and intra-system shifts.

Structure shifts occur in phonological and graphological translations as well as in total translation. During the translation process, shifts in language structure are to be expected, particularly in grammar at all levels. For

example, a sentence in Chinese is expressed as a sentence structure of “S + P+ O”, such as “我们的产品有价格优势”, while when translated into English, it becomes “S + be predictive + adverbial” of “Our products are competitive in price”.

Class shifts occur when “the translation equivalent of an SL item is a member of a different class from the original term”. Learning from Halliday, Catford defines a class as “that grouping of members of a given unit which is defined by operation in the structure of the unit next above”. In the context of Chinese-English translation, it is not uncommon to shift verbs in Chinese to static words in English, such as nouns, prepositions, and adjectives. This approach aligns with the linguistic characteristics of both languages.

Unit shifts are changes of rank, that is, “departures from formal correspondence in which the translation equivalent of a unit at one rank in the SL is a unit at a different rank in the TL”. In the context of the source text, units may be either upgraded or downgraded during the translation process.

Intra-system shifts are used for those cases where “the shift occurs internally, that is, for those cases where SL and TL possess systems which approximately correspond formally as to their constitution, but when translation involves selection of a non-corresponding term in the TL system”. In other words, the structure and form of the SL and TL are similar, but the TL is not translated word for word.

#### 4 Case analysis on translation through translation shift theory in cross-border e-commerce English

In this paper, the cases are selected from Alibaba.com (an international trade B2B website), and MT adopts Google Translate, and the discussion has been done in terms of level shifts and category shifts of Catford's translation shifts.

##### 4.1 Cases analysis of level shifts

It is a commonly employed technique in the context of level shifts, which are employed to achieve equivalence at different linguistic levels between Chinese and English. The various components of language, including grammar, lexis, graphology and phonology, can be considered as distinct levels. Among these, graphology and phonology present particular challenges in terms of level shifts.

There are plural of nouns, tense, and voice in the expression of English, which are mainly presented by the changes of words. However, it is not possible for Chinese to directly present these concepts through the use of vocabulary alone. Instead, certain words must be added to match those used in English. For instance, Chinese mainly uses “了”, “过”, “已经” and adverbs to express the tense. The shifts at the lexical level are usually reflected in the conversion of nouns in singular and plural forms between the two languages in translation. Similarly, the translation at the grammatical level is reflected in different English tenses.

##### 4.1.1 Shifts of plural nouns

In the context of cross-border e-commerce, it is important to note that nouns such as products (产品), brands (品牌), customers (顾客), discounts (折扣), and consumption habits (消费习惯), which are frequently used in English, must be converted to singular and plural forms according to the expression habits of English when translating them from Chinese to English. Failure to do so may result in the English translation being regarded as not conforming to the requirements of English grammar or containing grammatical errors. However, with regard to this particular aspect, machine translation is highly effective in converting singular and plural forms of Chinese words into English. Furthermore, the handling of singular and plural words is essentially in accordance with the grammatical requirements of the English language.

**Example 1** 我们是手提包、运动装等各类产品的专业供应商。我们的产品紧跟时代潮流,而且价格极具竞争力。

**MT:** We are a professional supplier of handbags, sportswear and other kinds of products. Our items are in a competitively priced manner and follow the trend of the times.

**MTPE:** We are a professional vendor for various products, including handbags, and sportswear. We can offer stylish products at a competitive price.

**Analysis:** For some nouns in Example 1, machine translation (MT) translates them according to the grammatical requirements of English into singular nouns, such as “供应商” (supplier); or uncountable nouns, such as “运动装” (sportswear); or plural nouns, such as “手提包” (handbags), and “产品” (products). It is evident that machine translation has already made significant inroads in terms of providing comprehensive information, accurate vocabulary, correct grammar, and fluent utterances. However, the translated text retains the order of the Chinese utterances, resulting in a strong sense of Chinglish. At this juncture, it is clear that post-editing is a necessity. To illustrate, in MTPE, the subject “我们的产品” is translated into “we can offer products” (我们可以提供产品), which is an application of structure shifts. Example 1 is a company’s self-introduction on Alibaba.com. In the English translation, the subject is generally placed at the beginning of the sentence and the active voice is used, for example, “we can offer...” (我们可以提供……), which more clearly demonstrates the company’s strength and implies the company’s initiative, thus attracting more attention of foreign consumers compared to MT.

#### 4.1.2 Shifts of tense

The Chinese language lacks a concept of verb tense. Consequently, other words must be employed to express tense, such as “了” and “已” to indicate past events, and “将” to indicate future occurrences. In contrast, the English language employs a system of verbs with inherent tenses, which can be indicated by the structure “auxiliary verb + verb”. For instance, the use of the present perfect tense, indicated by the phrase “has/have + done”, signifies that the action in question has already been completed and has an effect on the present. In contrast, the past tense, as indicated by the word “did”, represents an action that occurred in the past. In cross-border e-commerce, instances of tense shifts between Chinese and English do occur. Such occurrences are often the result of machine translation, which frequently results in the misinterpretation of the original meaning of the translation, leading to difficulties in comprehension for foreign consumers. In such cases, post-translation editing is a crucial step in ensuring the accuracy and clarity of the translated content.

**Example 2** 本月所有的沙发售价统统打九折。

**MT:** All sofas are priced at 10% off this month.

**MTPE:** We ’re offering a 10% discount on all sofas this month.

**Example 3** 保证我们在市场中处于领先地位的一个最重要的因素就是高品质。

**MT:** High quality is one of the most important factors to ensure that we take the lead position in the market.

**MTPE:** High quality is one of the most important factors that have secured our leading position on the market.

**Analysis:** In Example 2, MTPE’s professionalism is reflected in its precise grasp of tenses, effectively emphasizing the company’s ongoing promotional activities by choosing the present progressive tense instead of the general present tense. This tense shift successfully conveys a sense of urgency, which stimulates consumers’ willingness to buy and attracts their attention at the same time. Similarly, in Example 3, although MT uses the general present tense to directly translate “处于领先地位” without grammatical errors, it fails to fully capture the immediacy and dynamism of the original text, and MTPE modifies it to the present perfect tense, which not only more accurately conveys the company’s leading position in the industry, but also more vividly demonstrates the strength and vitality of the company. MTPE’s expertise in tense conversion is reflected in its ability to choose the most appropriate tense form according to the context and the intended context to enhance the expressiveness and persuasiveness of the translation.

#### 4.2 Cases analysis of category shifts

In the view of Catford, category shifts are variations from “formal correspondence in translation”. Catford mainly discussed four types of category shifts, which are structure shifts, class shifts, unit shifts, and intra-system

shifts. Examples of these four types will be listed and analyzed respectively.

#### 4.2.1 Structure shifts

Structure shifts, the most common type of category shifts, refer to the change of language structure in the process of translation. Structure shifts can be applied at all levels, for example, the conversion from Chinese post-center to English pre-center, and from Chinese pre-modifier to English post-modifier. There exist dramatic differences in language structure between Chinese and English, so it is inevitable to adopt structure shifts between language units.

##### (1) Shifts from active voice to passive voice

The passive voice is not often used in Chinese, and sentences with a passive meaning are expressed using the active voice without the word “被”. Nevertheless, the passive voice is a common feature of English, which is largely achieved through the alteration of verbs. In this instance, the post-translation editor should modify the MT version by transforming the active sentence into a passive one. This not only aligns the translation with the prevailing English expression style, but also renders it more accessible to the targeted consumers.

**Example 4** 在假期会有很优惠的折扣。

**MT:** Great discounts are offered during the holiday season.

**MTPE:** We offer great discounts during the holiday season.

**Example 5** 货物将在付款确认后立即发货。

**MT:** Goods will be shipped immediately after payment confirmation.

**MTPE:** We will ship the goods immediately after getting the payment.

**Analysis:** In both examples, the doer of the action is unknown, so they are expressed clearly and correctly in the passive voice of MT. However, MTPE adapts it to the active voice, making it clear that the doer is “we”, i. e. the enterprise or service provider. This expression helps to establish direct communication and trust as it shows that the enterprise is responsible for the service process. Although the passive voice is frequently used in English, in business and customer service, the active voice is more in line with English as it is more direct and action-oriented.

##### (2) Shifts from Chinese post-center to English pre-center

In cross-border e-commerce, it is of the utmost importance to fully consider the language habits and thinking patterns of overseas consumers. Usually, the Chinese expression habit is post-centre, while the English is pre-center. Consequently, it is necessary to make an appropriate adjustment to the word order when translating.

**Example 6** 我们的商品以优质、实惠、时尚为特点,深受全球消费者的喜爱。

**MT:** Our products are characterized by high quality, affordable and fashion, and are deeply loved by consumers around the world.

**MTPE:** Our products have captured the hearts of global consumers due to their high quality, remarkable value, and stylish designs.

**Example 7** 一旦添加或保存了银行账户,您便不能再修改银行账户信息。

**MT:** Once you have added or saved your bank account, you can no longer modify your bank account information.

**MTPE:** You will not be able to change your bank information once you have added or saved a bank account.

**Example 8** 为庆祝母亲节,凡当天在本店消费的顾客,均可享受清仓大甩卖的买一送一优惠。

**MT:** To celebrate Mother's Day, all customers who spend money in our store on that day can enjoy a buy one get one free offer at the clearance sale.

**MTPE:** You can buy one get one free on Mother's Day since we have a clearance sale to celebrate Mother's Day.

**Analysis:** When translating between Chinese and English for cross-border e-commerce, the translator must

take into account the culture and language habits of the target language. Chinese usually puts the topic or focus at the end of the sentence, while English usually places it at the beginning of the sentence. This difference requires the translator to adjust the word order appropriately to make it consistent with English expression habits. All the above three example sentences of MT are correct, but MTPE has made a topic shift by placing the theme, which is placed later in Chinese, at the beginning of the sentence in the English translation, to indicate emphasis and a goodwill reminder.

### (3) Shifts from Chinese pre-modifier to English post-modifier

The differing structures of the Chinese and English languages often result in the pre-modifier and post-modifier being shifted in translation. This is done for two reasons: firstly, to meet the requirements of the respective language structures, and secondly, to emphasize a certain expressive purpose.

**Example 9** 我公司是一家平价时尚服饰连锁零售商。

**MT:** The company is a chain of affordable fashion clothing retailer.

**MTPE:** The company is a chain store retailer of popular-priced fashion apparel.

**Example 10** 我方能满足你方用轻装铁盒包装货物的要求,但是你方必须承担额外的包装费用。

**MT:** We can meet your requirement for light iron boxes, but you must bear the additional packing costs.

**MTPE:** We can meet your requirement of having the goods packed in a light iron box but you have to bear the extra packing charge.

**Analysis:** MT is effective in converting Chinese pre-modifiers into English post-modifiers. The preceding examples demonstrate that most parts of translations from Chinese into English by MT are almost understandable. However, in order to align more closely with the stylistic characteristics of English expression in the cross-border e-commerce, MTPE has made appropriate adjustments. In Example 9, MT does not handle the pre-modifier of Chinese in an appropriate manner. This is essentially a direct translation. MTPE has segmented the Chinese pre-modifiers and postponed some of them in order to achieve a balanced sentence structure. The introduction of the store is natural and fluent in English. MTPE of Example 10 more clearly expresses the requirement of “having the goods packed in a light iron box”.

### (4) Shifts between affirmative sentence and negative sentence

Chinese and English exhibit comparable modes of negative thinking, yet diverge in their lexical and grammatical conventions for expressing negative concepts. When all the negative forms of Chinese are translated into a corresponding negative form of English, the translation may not be fluent or may deviate from the norms of Chinese expressions. Therefore, it is essential to employ appropriate methods to achieve equivalence during the translation process.

**Example 11** 在义乌,没有买不到的东西,只有想不到的产品(当然是合法产品)。

**MT:** In Yiwu, there is nothing you cannot buy, only unexpected products (legal products, of course).

**MTPE:** You name it, and we can find it in Yiwu (legal products, of course).

**Example 12** 我们相信你们不会拒付。

**MT:** We trust you won't refuse to pay.

**MTPE:** We don't think you'll refuse to pay.

**Analysis:** There is a difference between Chinese and English in the way they express affirmation and negation. English conveys negation through specific words such as “not”, “never”, and “hardly”, while Chinese tends to use the negative prefixes “不” and “没有”. In Example 11, MTPE adopts affirmative sentences to convey the meaning of the original text, which is not only closer to the original intent, but also emphasizes the affirmative meaning. Example 12 is consistent with the English expression habit of negative transfer.

#### 4.2.2 Class shifts

Class shifts occur when “the translation equivalent of an SL item is a member of a different class from the



original term”. Chinese is characterized by a dynamic language that frequently employs verbalization structures. In contrast, English is distinguished by its relatively static language, which is characterized by a high frequency of nominalisation structures. Therefore, class shifts are unavoidable in Chinese-English translation.

(1) Shifts from verbs to nouns

**Example 13** 这个月末以前应该付款。

**MT:** Should be paid by the end of this month.

**MTPE:** Payment is to be effected (made) before the end of this month.

**Example 14** 合同规定,如果供货商拖延交货时间,就要对供货商进行罚款。

**MT:** The contract stipulates that if the supplier delays the delivery time, it will be fined.

**MTPE:** The contract states that if there is a delay in delivery, the supplier will be charged a penalty.

**Example 15** 我们担心市场价格下跌会引起拒付。

**MT:** We are concerned that falling market prices will lead to a refusal to pay.

**MTPE:** We're worrying that a drop in prices might lead to refusal of payment.

**Analysis:** In cross-border e-commerce Chinese-English translation, lexical conversion not only needs to follow English grammar rules, but also needs to reflect the professionalism and formality of vocabulary. For the three cases mentioned above, MTPE meticulously considers the specific context and the applicability of specialized terminology, and skillfully converts the key verbs into corresponding nouns, which not only enhances the professionalism and formality of the text in business communication, but also more accurately reflects the potential problems of business transactions.

(2) Shifts from verbs to adjectives

**Example 16** 银行只接受一次拒付。

**MT:** The bank accepts only one refusal.

**MTPE:** Only one refusal of payment is acceptable to the bank.

**Example 17** 孕妇服用后,对胎儿骨骼增长及智力发育有良好作用。

**MT:** When taken by pregnant women, it has a good effect on foetal bone growth and intellectual development.

**MTPE:** Taken by pregnant woman, it is helpful to the growth of fetus skeleton and baby's intelligent development.

**Analysis:** The Chinese verb “接受” in Example 16 is also directly translated by MT as the predicate verb “accept”, but MTPE takes advantage of the professional intuition and modifies it into the adjective phrase “be acceptable to...”, which also reflects the English expression habit of pre-center. In Example 17, MT directly translates “有良好作用” as “it has a good effect on...” based on the addition of the subject “it”, which is a common active construction sentence. However, in MTPE, the verb has been converted into an adjective phrase “it is helpful to...”, which is more acceptable to overseas consumers.

(3) Shifts from verbs to prepositions

**Example 18** 京东全球购是天猫国际的最大竞争者,(是)中国第二大在线商城。

**MT:** Jingdong Worldwide is the biggest competitor of Tmall Global and (is) the second largest online mall in China.

**MTPE:** As China's second largest online mall, Jingdong Worldwide is the largest competitor of Tmall Global.

**Example 19** 公司位于山东半岛,坐拥主要高速公路,交通便利,毗邻美丽的莱州湾和风景如画的文峰山。

**MT:** The company is located in Shandong Peninsula, sitting on the main highway, with convenient transportation, close to the beautiful Laizhou Bay and the picturesque Wenfeng Mountain.

**MTPE:** The company is located in the Shandong Peninsula, with main highways providing convenient transportation, adjacent to the beautiful Laizhou Bay and picturesque Wenfeng Mountain.

**Analysis:** In cross-border e-commerce Chinese-English translation, shifts from verbs to prepositions are a common grammatical adjustment, which helps to improve sentence fluency and adapt to English expression habits. In Example 18, MT connects two simple sentences by “and”, which is grammatically correct but bland in expression, and MTPE emphasizes the market position of “Jingdong Worldwide” by converting the second simple sentence into a prepositional phrase and placing it at the beginning of the sentence, which also reflects the difference in Chinese and English expressions. In Example 19, MT translation of the Chinese verb “坐拥” is too rigid. MTPE changes the verb “坐拥” to the preposition “with” in English and adds the verb “provide” to form a complete phrase with the following phrase “convenient transportation”, which makes the translation more fluent.

#### 4.2.3 Unit shifts

The English grammar hierarchy comprises five units: sentence, clause, phrase, word, and morpheme. The largest grammatical unit of a language is the sentence, while the smallest on the rank scale is the morpheme. Between the two, in descending order, are the clause, the phrase and the word. A unit may sometimes operate in the structure of a unit of lower or of higher rank. In other words, there are shifts from words to phrases, words to short sentences and clauses to sentences, or vice versa. The use of prepositions and conjunctions in English results in the construction of lengthy sentences, in contrast to the more concise style of Chinese. This necessitates the implementation of unit shifts, which involves the conversion of multiple language units within long English sentences.

##### (1) Shifts from words to phrases

**Example 20** 我们生产的计算机其特点是品质好、体积小、节能,而且易学好用。

**MT:** The computers we produce are characterized by good quality, small size, energy saving, and easy to learn to use.

**MTPE:** The computer we produced is characterized by its high quality, compact size, energy saving and easy to learn and easy to operate.

**Example 21** 我们的产品物美价廉,值得拥有。

**MT:** Our products are cheap and affordable. You deserve them.

**MTPE:** Our products are top in quality and low in price. You deserve them.

**Analysis:** Because of the characteristics of conciseness and flexibility, Chinese words are widely used, especially the applying of four-character words. Therefore, in Chinese-English translation, Chinese words are modified into English phrases in many cases. But in this case, MT performs poorly and even has grammatical errors. In Example 20, the Chinese phrase “易学好用” is a typical four-character word. However, MT fails to correctly understand the meaning and incorrectly translates it as “easy to learn to use”, which is susceptible to misinterpretation. MTPE has modified it into “easy to learn and easy to operate”, which accurately reflects the product’s ease of use and design. This modification enables overseas consumers to comprehend the product’s characteristics with greater ease. MT translation of “物美价廉” in Example 21 is understandable. However, MTPE also adopts the unit shifts to express more clearly to overseas consumers that “物美” means “top in quality” and “价廉” means “low in price”.

##### (2) Shifts from phrases to sentences or clauses

English sentences have a tree-like structure, while Chinese sentences have a bamboo-like structure. This represents the most basic rule for organizing sentences in both English and Chinese languages. It can be said that English is a tree-structured language with a subordinative relationship, while Chinese contains many parallel and loose sentences. When translating from Chinese to English, it is of the utmost importance to grasp the logical relationships between Chinese clauses and sentences and then process them into English’s tree-structured language.

**Example 22** 创立于2013年,小红书字面翻译为“little red book”,是一个总部设在中国上海的电子商务

购物平台,也是网络社区。

**MT:** Founded in 2013, literally translated as “little red book”, rednote (小红书) is an e-commerce shopping platform headquartered in Shanghai, China and also (is) an online community.

**MTPE:** Set up in 2013, rednote (小红书), which can be literally translated as “little red book” in Chinese, is a social e-commerce shopping app based in Shanghai, China.

**Analysis:** As is shown in Example 22, the sentence is composed of three short sentences leading to a loose structure. MT does not affect the reading of overseas consumers, and the quality of the translation is considered satisfactory. Considering the hypotaxis and tree-structure of English, MT translates the Chinese phrases “创立于2013年”和“字面翻译为 little red book” into two past participle phrases as adverbials. It then translates the next two short sentences directly to match the Chinese word order. MTPE is also designed to reflect the tree-structure of English. Consequently, shorts sentences in Chinese are translated into a compound sentence in English. The phrase “小红书字面翻译为 little red book” is modified into an attributive clause to supplement the specific content of the subject. Such optimization not only enriches the level of sentences, but also makes the expression more natural and authentic, and enhances the fluency and professionalism of the translation.

## 5 Conclusion

The above case study of cross-border e-commerce English translation demonstrates that, under the macro-guidance of Catford's translation shifts theory, MTPE provides a theoretical basis for post-editors to improve cross-border e-commerce translations, addresses the shortcomings of MT, and optimizes the quality of translations. Concurrently, it enhances the efficiency of cross-border e-commerce English translation, reduces the expenditure of enterprises on personnel, and achieves multiple objectives in a single initiative. This paper discusses Catford's translation shifts theory, which is one of the translation theories. In MPTE of cross-border e-commerce English translation, translators must master all kinds of translation theory, flexibly use translation skills and strategies, make the correct use of industry professional terms and common sentence patterns, so as to completely, clearly and properly convey the content of the text. This enables overseas consumers to understand the text information.

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