

GRAMMATICAL TRANSFORMATIONS IN SCIENTIFIC-TECHNICAL TRANSLATION

Scientists describe a transformation as a set of transformation rules that define how one or more constructs in the source language is mapped into one or more of the target language. Differences in the types of two languages result in grammatical transformations. A grammatical transformation means a change of original syntactic structure in translation.

The purpose of the article is to identify the role of grammatical transformation in scientific-technical translation from English into Ukrainian.

To avoid inadequate word-for-word translation (grammatical over-literal rendering) grammatical transformations should be used. Their use is essential for adapting the translation to the norms of the language of translation and making it adequate. Grammatical transformations are caused by various factors: 1) difference in the ways of rendering information by English and Ukrainian sentences; 2) absence of grammatical elements, forms and constructions in Ukrainian; 3) voluntary expression of grammatical information in one of the languages: in Ukrainian the information about the action in Present taking place at the moment of speech (English verb form of Present Continuous) is not grammatically expressed; 4) peculiarities of word compatibility and their functioning in word combinations and sentences.

The grammatical transformation means changing grammatical characteristics of a word, word combination or a sentence in translation. We distinguish five main types of grammatical transformations: permutation (transposition), substitution (replacement), addition (development), omission (removal), complex transformation.

Absence of these or those grammatical means in one of languages does not create any insuperable hindrances in the process of translation.

Key words: grammatical transformations, scientific-technical text, translation.

Лاپінська О. Н., Національна металургійна академія України (Дніпропетровськ). ГРАМАТИЧНІ ТРАНСФОРМАЦІЇ В НАУКОВО-ТЕХНІЧНОМУ ПЕРЕКЛАДІ

Розглянуто особливості граматичних трансформацій у перекладі англійського науково-технічного тексту українською мовою. Описано п'ять основних граматичних трансформацій: переміщення, заміна, додавання, вилучення, комплексна трансформація, які використовують для того, щоб уникнути неадекватного дослівного перекладу.

Ключові слова: граматичні трансформації, науково-технічний текст, переклад.

Лапінская О. Н., Национальная металлургическая академия Украины (Днепропетровск). ГРАММАТИЧЕСКИЕ ТРАНСФОРМАЦИИ В НАУЧНО-ТЕХНИЧЕСКОМ ПЕРЕВОДЕ

Рассмотрены особенности грамматических трансформаций при переводе английского научно-технического текста на украинский язык. Описано пять основных грамматических трансформаций: перестановка, замена, добавление, опускание, комплексная трансформация, используемых для того, чтобы избежать неадекватного дословного перевода.

Ключевые слова: грамматические трансформации, научно-технический текст, перевод.

Translation is a means of interlingual communication. The translator makes possible an exchange of information between the users of different languages by producing in the target language a text that has an identical communicative value with the source text. Scientists describe a transformation as a set of transformation rules that define how one or more constructs in the source language is mapped into one or more of the target

language. Differences in the types of two languages result in grammatical transformations. A grammatical transformation means a change of the original syntactic structure in translation.

The purpose of the article is to identify the role of grammatical transformation in scientific-technical translation from English into Ukrainian.

To avoid inadequate word-for-word translation (grammatical over-literal rendering) grammatical transformations should be used. Their use is essential for adapting the translation to the norms of the language of translation and making it adequate. Therefore it is not surprising that the grammatical transformations have been studied quite extensively by linguists [1–10]. Grammatical transformations are caused by various factors.

1. Difference in the ways of rendering information by English and Ukrainian sentences: lexical means in one language are expressed by grammatical ones in the other.

2. Absence of grammatical elements, forms and constructions in Ukrainian: articles, gerundial constructions, formal object «*it*». In English gender of nouns and adjectives, cases, etc., are absent.

3. Voluntary (unnecessary) expression of grammatical information in one of the languages: in Ukrainian the information about the action in Present taking place in the moment of speech (English verb form of Present Continuous) is not grammatically expressed.

4. Peculiarities of word compatibility and their functioning in word combinations and sentences: adjective *administrative* in word combination *administrative efficiency* is not translated «*адміністративна ефективність*», but «*ефективне управління*».

The grammatical transformation means changing grammatical characteristics of a word, word combination or a sentence in translation. We distinguish *five* main types of grammatical transformations: 1) permutation (transposition or inversion); 2) substitution (replacement); 3) addition (development); 4) omission (removal); 5) complex transformation.

1. Theoretically Ukrainian sentence has a free word order and the sentence consisting of four words *Завтра ми подивимось новий фільм* permits 36 variants with varying word order. Requirements of English grammar stipulate a strict word order and can not be changed.

Inversion (from Latin *inversio* – turning, overturn, replacement) or *permutation* is changing a strict word order in a sentence. Usually inversion is used for highlighting an element replaced in a sentence or for conferring a special meaning to the whole sentence.

Translator should distinguish the following three types of inversion: grammatical, semantic and stylistic.

Grammatical inversion is not used for expressing any additional semantic or stylistic nuances or shades, but first of all because inverted word order is the only way possible for the given grammatical construction. For example, interrogative form of English sentence without interrogative word requires putting auxiliary verb in the first place in a sentence: Did you read this book? Isn't it a fine day?

Semantic inversion may be used to single out something «new», i.e. a semantic center of expression. This happens when there is no direct object in a sentence and the adverbial modifier is placed first:

In the corner stood a long low table.

Thus began their friendship.

Up in that lake country were many, many lakes.

In these sentences the group of words expressing «new» information is put in the end of the sentence the same way as in Ukrainian. Translation of semantic inversion is of no difficulty and is usually made word-for-word:

В кутку стояв довгий низький стіл.

Так почалась їх дружба.

Там, в тім краю, дуже багато озер.

Stylistic inversion includes all cases of changing the word order for emphatic outlining this or that sentence member. It is often used in poetry.

Below there are typical examples of English stylistic inversion and its translation:

a) *Inversion of adverbial modifier* which is put in the first place, which is followed by an auxiliary part of predicate, its meaningful part follows the subject:

Gladly would we now consent to the terms we once rejected.

None of inversion in Ukrainian would express that which is achieved by *lexical intensification* (лексичне підсилення):

З якою радістю (як охоче) ми б погодились тепер на ті умови, які ми попередньо відкинули.

b) *Inversion of direct object* not always creates sharp emphasis, but in English it is a powerful stylistic device.

Courage George II certainly had. (Th. Thackeray)

В хоробрості Георгу II не можна було відмовити.

Money he had none. (E. Gaskell)

Грошей у нього не було ні копійки.

c) *Inversion of possessive pronoun*, which in its stressed predicative form is put into the first place in a sentence, and subject (noun) is taken into the very end. Extremely emphatic construction is obtained:

Mine is a long and a sad tale.

Розповідь моя довга й сумна.

Ours is a totally different purpose.

Мета наша абсолютно інша.

d) *Inversion of prepositional adverb* (прийменниковий прислівник) is a powerful stylistic device, when prepositional adverb is put into the first place:

Open flew the gate and in came the coach.

The best way to render inversion is to use lexical-phrasal intensification devices:

Ворота розчинились навстіж, і карета вже була у дворі.

2. *Substitution* is often accompanied by another grammatical transformation – *replacement*, which is resulted in changing grammatical indications of word forms (e. g., instead of the form of singular the form of plural is used in translation), parts of speech (e. g., Infinitive in translation is transformed into Noun), members of sentence (e. g., Object is transformed into Subject in translation) and sentences (e. g., simple sentence is transformed into a complex one and vice versa):

Much work has been done on the problem.

З цієї проблеми написано багато праць.

Brakes must be applied to stop a car.

Щоб зупинити автомобіль, необхідно застосувати гальма.

This year has seen many great discoveries.

У цьому році відбулось багато великих відкриттів.

Besides replacements of a word by a word combination, word combination – by a sentence, a number of sentences – by one complex sentence and vice versa are used in translation:

I will discuss those points in greater detail.

Я розгляну ці положення докладніше.

This is true also for the language used in the scientific area of culture.

Це правильно також і для мови, яка використовується в науковому дослідженні культури.

This is what makes them meaningful.

Саме це й робить їх значущими.

Einstein, too, confessed the same admiration for ancient geometry.

Ейнштейн також зізнався, що й він теж був захоплений геометрією древніх.

The conference was a veritable summit meeting. Only Bohr was conspicuously absent.

Ця конференція була справжньою зустріччю у верхах, і лише Бора там бракувало.

3. *Addition* is a grammatical transformation resulted in increasing the number of words, word forms or members of sentence in translation. In the following examples word forms *applications* and *introduces* are translated by combination of two words.

There are many different applications of this material.

Цей матеріал застосовують у багатьох різних науках.

The mutual effect introduces a complex change.

Перехресний вплив призводить до появи комплексних поправок.

Addition is used in translating Nouns (*intricacies* – «складні проблеми та заплутані питання»), Adjectives (*recurrent* «що періодично повторюється»), Verbs (*to solve* – «знаходити вирішення»), Adverbs (*theoretically* – «у теоретичному плані»), substantivized adjectives (*the intracellular* – «внутрішньоклітинне середовище»), words of other parts of speech and word combinations (*data rates* – «швидкість передачі даних»).

4. *Omission* is such grammatical transformation, which is resulted in removing a certain speech element (not rarely this is a *pleonastic word*, word form, member of a sentence or a part of a sentence):

The explosion was terrible while it lasted.

Вибух був жахливий.

This is a very difficult problem to tackle.

Це дуже складна проблема.

5. *Complex grammatical transformation* is closely connected with vocabulary, with a considerable number of translational transformations having mixed character, i.e. in translation lexical and grammatical changes occur in parallel (*simultaneously* – одночасно). Such lexico-grammatical transformations are called *mixed* ones and consist of grammatical transformations mentioned above and different types of lexical transformations (*generalization, specification, contextual replacement*, etc.). In the following example grammatical transformation of replacing gerund by noun and a singular form of noun *research* by the plural form «дослідження» and lexical transformations of contextual replacement of the adverb *heavily* by «широко» and pronoun *I* by the pronoun «ми»:

In identifying these features I relied heavily on previous research.

Визначаючи ці характеристики, ми широко використовували попередні дослідження.

Absence of these or those grammatical means in one of languages does not create any insuperable hindrances in the process of translation. The interpreter of scientific and technical literature, naturally, should know well a given specialty; the interpreter, engaged

in translation of newspaper and publicistic materials, should keep abreast of modern international events, to know economy, metallurgy, engineering, computing, etc.

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