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Grammatical aspects of scientific and technical translation (on the material of the rescue and emergency work instructions)

Граматичні аспекти науково-технічного перекладу (на матеріалі інструкцій оперативно-рятувальних робіт)

***Summary.** Globalization processes have contributed to the intensification of the exchange of scientific knowledge and practical skills in the field of rescue service. This led to increased requirements for translators and set them the task of establishing the process of effective communication between rescue specialists. In modern conditions under martial law, the study of the difficulties that arise during the translation of operational and rescue work instructions is extremely relevant.*

The purpose of the article is to study the peculiarities of the imperative mood translation in the instructions for rescue and emergency work to eliminate the consequences of chemical, biological and radiological pollution.

Achieving the set goal involves performing the following tasks: to collect the illustrative examples of grammatical transformations in the instructions for rescue and emergency work to eliminate the consequences of chemical, biological and radiological pollution in English and Ukrainian translation equivalents; to classify factual material according to the types of translation techniques used by the translator; compare the original text and its translation, carry out a detailed analysis of the applied transformations.

The research material is the imperative mood sentences from the texts of the instructions for rescue and emergency work on the elimination of the consequences of chemical, biological and radiological pollution, with a total volume of 59 examples, as well as their translation.

In the Ukrainian translation of the instructions for the rescue and emergency work, grammatical transformations are used, which are caused by the difference in the grammatical structure of languages and the principles of language reality actualization.

The conducted analysis showed that in the vast majority of cases, in order to achieve adequacy, the Ukrainian translation of rescue and emergency work instructions is carried out using such grammatical transformations as division (44%), sentence combination (11%), replacement (14%), change word order (3%), changing the sequence of parts of a complex sentence (3%), addition (15%), omission (10%).

Key words: translation, transformations, instructions, grammatical structure, language norms.

***Анотація.** Глобалізаційні процеси сприяли активізації обміну науковими знаннями та практичними навичками у сфері оперативно-рятувальних робіт. Це зумовило підвищення вимог до перекладачів і поставило перед ними завдання налагодити процес ефективного спілкування фахівців рятувальників. У сучасних умовах воєнного стану вивчення труднощів, що виникають під час перекладу інструкцій оперативно-рятувальних робіт є надзвичайно актуальним. Метою статті є вивчення специфіки перекладу наказового способу в інструкціях оперативно-рятувальних робіт з ліквідації наслідків хімічного біологічного та радіологічного забруднення.*

Досягнення поставленої мети передбачає виконання наступних завдань: інвентаризувати ілюстративні приклади граматичних трансформацій у інструкціях оперативно-рятувальних робіт з ліквідації наслідків хімічного біологічного та радіологічного забруднення англійською мовою та українські еквіваленти перекладу; класифікувати фактичний матеріал за типами використаних перекладацьких прийомів, якими користується перекладач; порівняти текст оригіналу та його переклад, здійснити докладний аналіз застосованих перетворень.

Матеріалом дослідження є речення наказового способу з тексту інструкції з проведення рятувальних та невідкладних робіт з ліквідації наслідків хімічного, біологічного та радіологічного забруднення, загальним обсягом 59 прикладів, а також їх переклад.

В українському перекладі інструкцій оперативно-рятувальних робіт використовуються граматичні трансформації, що зумовлені різницею у граматичній будові мов та принципах мовної актуалізації дійсності.

Проведений аналіз показав, що у переважній більшості випадків для досягнення адекватності український переклад інструкцій оперативно-рятувальних робіт здійснюється за допомогою застосування таких граматичних трансформацій як членування речень (44%), об'єднання речень (11%), заміна (14%), зміна порядку слів (3%), зміна послідовності частин складного речення (3%), додавання (15%), опущення (10%).

***Ключові слова:** переклад, трансформації, інструкції, граматична будова, норми мови.*

Introduction. The issue of scientific and technical translation remains in the center of attention of both practitioners and theoreticians of translation. Functioning in a foreign culture as a substitute for the original, translation is designed to perform a very important communicative role: to adequately reproduce the message of one language by means of another.

Informativeness of instruction texts, their focus on messages of a special cognitive nature affects sentence structures. The content of English-language sentences in the texts of operational and rescue work instructions is expressed mainly in indefinite-personal and impersonal sentences using constructions of the imperative mood.

In the focus of scientists' attention are the grammatical difficulties of translating English scientific and technical literature (I. Byk [1], V. Karaban [2], A. Kovalenko [3], I. Guslenko [4]) and the peculiarities

of the functioning of the imperative form of the verb in English (D. Biber [6], M. Hewings [9]).

Globalization processes have contributed to the intensification of the exchange of scientific knowledge and practical skills in the field of rescue service. This led to increased requirements for translators and set them the task of establishing the process of effective communication between rescue specialists. In modern conditions under martial law, the study of the difficulties that arise during the translation of operational and rescue work instructions is extremely relevant.

The purpose of the article is to study the peculiarities of the imperative mood translation in the instructions for rescue and emergency work to eliminate the consequences of chemical, biological and radiological pollution. The research material is the English-language text of the instructions for rescue and emergency work on the elimination of the consequences of chemical, biological and radiological pollution [7; 8; 10].

Methodology/methods. The following research methods were used to reach the aim of the article: methods of analysis and synthesis, with the help of which the theoretical material on the researched topic was collected and summarized, as well as the results of the research; the continuous sampling method, which was used to select the material for further translational research; comparative method, thanks to which the original and translated texts are compared, their common and distinctive features are revealed; statistical method of data calculation.

At the first stage of the research, before analyzing the original text and the translation, some features of the original texts were conceptualized, as they have a specific grammatical structure. The main features of scientific and technical style texts are accuracy, clarity and logical presentation. In such texts, as a rule, the form of the present tense is used in a timeless sense, which indicates the constancy of the process, its immutability. The nominal nature of the scientific style is explained by the wide use of prepositions. Taking into account the thematic specificity of the text, the translator must also take into account the terminological features of such messages in order to avoid errors in the perception of the original text.

Considering the above the imperative mood sentences were selected from the text of the instructions for rescue and emergency work on the elimination of the consequences of chemical, biological and radiological pollution, with a total volume of 59 examples, as well as their translation.

After that, a translation analysis was carried out, which involved comparing the original text with the translated text and identifying translation transformations necessary for adequate information transfer. Such a process involved the analysis of translation transformations, which are considered interlanguage transformations, the reconstruction

of the original text or the replacement of its elements in order to achieve equivalence and adequacy of the translation. The correct choice of transformations during translation requires not only the presence of perfect knowledge of the grammar of both languages, but also sufficient analytical skills of the translator.

Results and Discussion. One of the necessary conditions for an adequate translation is the ability to correctly analyze the grammatical structure of foreign language sentences and correctly construct sentences in the translation in accordance with the norms of the language and the genre of the translation.

The analysis of the Ukrainian translation of the texts of the instructions for rescue and emergency work on the elimination of the consequences of chemical, biological and radiological pollution showed that the grammatical transformation of sentence structure is used quite often in the mentioned texts. Sentence division is a method of translation in which the syntactic structure of the sentence in the original is transformed into two or more predicative structures of the receiving language [2, c. 217]. The transformation leads either to the transformation of a simple sentence of the source language into a complex sentence of the target language, or to the transformation of a simple or complex sentence of the source language into two or more independent sentences of the translation language.

English speech is characterized by complex, detailed sentences consisting of several simple ones. This fact makes it somewhat difficult to understand and comprehend, so such sentences are often replaced with a number of simple ones.

Consider the proximity to safe shelter or review the possibility of sheltering in the house in case of a CBRN emergency [8, 67].

Подумайте про потенційні зони ризику та близькість до промислових об'єктів. **Враxуйте** можливі небезпеки ХБРЯ під час переїзду на нове місце.

In the example above the sentence in translation is divided into two separate, individual sentences. Moreover, in the second sentence the word *врахуйте* is added. It is clear done to attract the attention of the reader and it adds emotional expressiveness to the sentence.

There are three reasons for using sentence structure when translating from English to Ukrainian. First, the peculiarities of the grammatical structure of the English sentence, secondly, the peculiarities of the verbal structure of word formations in the English language, and thirdly, the genre-stylistic peculiarities of the English sentence [1, 294].

Most often, when transmitting specific English constructions that have equivalents in the Ukrainian, it is necessary to use this method of

translation. In this case, internal membership is approved. It does not cause any difficulties during translation.

Use dehumidifiers and air conditioners, especially in hot, humid climates, to reduce moisture in the air; but be sure that the appliances themselves don't become sources of biological pollutants [10].

Використовуйте осушувачі повітря та кондиціонери, особливо в жаркому вологому кліматі, щоб зменшити вологість повітря. Переконайтеся, що самі прилади не стануть джерелами біологічних забруднювачів.

When translating, you can resort to segmenting the sentence in connection with the genre-stylistic features of the English sentence and the better transmission of the stylistic features of the original, and even in connection with the belonging of the English text to a certain genre [1]. The need for division may be caused not only by the diversity of thoughts expressed in an English sentence, but also by their arbitrary nature and the fact that each one needs to be distinguished during translation.

Keep listening to the radio and/or watch the television and follow relevant social media until information is issued announcing that conditions are safe or you are directed to evacuate [7].

Продовжуйте слухати радіо та/або дивитися телевізор. Стежте за відповідними соціальними медіа, доки не буде опубліковано інформацію про те, що умови безпечні, або поки вас не попередять про евакуацію.

Quite often, when translating a text from English into Ukrainian, translators use the opposite transformation to division – integration.

The combination of sentences is conditioned during translation by almost the same reasons as the use of the method of division. These reasons are related to grammatical or stylistic peculiarities of the English text.

If a chemical comes in contact with the eyes, it is important to immediately flush the eyes with clear, lukewarm water for a minimum of 15 minutes. Maintain this procedure even if the eye feels normal before 15 minutes have passed [8, p. 59].

Якщо хімічна речовина потрапила в очі, важливо негайно промити очі чистою теплою водою та продовжуйте цю процедуру, навіть якщо око почувається нормально.

Take important personal items with you. It might not be possible to return for some time [7].

Візьміть із собою важливі особисті речі, оскільки через деякий час їх не можна буде повернути.

Follow manufacturer's instructions for cleaning and maintenance. Always disconnect the appliance before cleaning [10].

Дотримуйтеся інструкцій виробника щодо очищення та обслуговування – від'єднуйте прилад перед чищенням.

If we talk about combining sentences as receiving a translation from Ukrainian to English, it is a very common method of translation. In this case, it is necessary to ensure that this combination is logical, and that as a result, the idea of the original was not created. Combining sentences into one not only allows you to shorten the text, but also significantly facilitates the very perception of the text.

When translating into Ukrainian the text of the instructions for rescue and emergency work on the elimination of the consequences of chemical, biological and radiological pollution, no less typical is the use of a transformation called word order reordering or permutation. By changing the word order in the translated sentence, the word order is changed in comparison with the original sentence following syntax norms of the target language [3, p. 118]. The reason for using this transformation is the need to meet the requirements of the Ukrainian language syntax.

Think about potential risk zones and proximity to industrial facilities with possible CBRN hazards when you move to a new place [7].

Під час переїзду на нове місце, подумайте про потенційні зони ризику та близькість до промислових об'єктів з можливою ХБРЯ небезпекою.

Always call the emergency number for the service that deals with cases of poisoning in your country if you suspect that you or anyone else in the vicinity has been contaminated due to exposure to dangerous chemicals [8, p. 39].

Якщо ви підозрюєте, що ви або будь-хто інший поблизу був заражений через вплив небезпечних хімічних речовин, завжди телефонуйте за номером екстреної служби служби, яка займається випадками отруєння у вашій країні.

Changing the order of sentence parts is a transformation, with the help of which the order of words in the translated sentence changes in comparison with the original sentence in accordance with the syntactic norms of the language used for the translation [6, 30]. It can be noted that the translator uses a change in the order of words so that the translation corresponds to the rules of the Ukrainian language syntax.

In the examples below the parts of the sentence in English and Ukrainian are different, which is caused by the syntactical requirements in these languages.

If the contamination comes from household chemicals, keep any cans or containers with the information about the chemicals with you so you can describe it correctly to the emergency operator [8, p. 59].

Для того, щоб ви могли правильно описати це оператору екстреної допомоги тримайте при собі будь-які банки чи контейнери з інформацією про хімікати, якщо забруднення походить від побутових хімікатів.

To prevent chemical accidents from taking place in your home, it is important that hazardous chemicals are out of sight and reach from children and pets [10].

Небезпечні хімікати були поза полем зору та недоступні для дітей і домашніх тварин для того, щоб запобігти хімічним аваріям у вашому домі.

One of the most common cases of translation in the process of translation is a change in the order of words and word combinations in the structure of a sentence [2, с. 310]. It is known that the order of words in the English and Ukrainian languages is not the same; this, of course, cannot fail to be reflected during translation.

Some toxic gases are heavier than air and will therefore gather close to the ground or underground [7].

Деякі токсичні гази збираються поблизу землі або під землею тому, що вони важчі за повітря.

Follow manufacturer's instructions when using any type of disinfection [10].

При використанні будь-якого типу дезинфікатора дотримуйтесь інструкцій виробника.

The purpose of the grammatical transformation, which is called translation in the following example, is, on the one hand, the specificity of the grammatical features of the translated language, and on the other, the obvious desire of the translator to shift the accent for the reader.

This type of word order change or transposition is observed in the following examples:

Replace polluted curtains, or remove them and scrub well with a household cleaner and rinse before re-hanging them [10].

Замініть забруднені фіранки або зніміть їх і добре потріть побутовим миючим засобом і промийте, перш ніж знову повісити їх.

If you have health problems such as asthma, or are allergic, do this and more. Discuss this with your doctor [7].

Зробіть це та багато іншого, якщо ви маєте проблеми зі здоров'ям, наприклад астму, або страждають алергією, можливо, Обговоріть це зі своїм лікарем.

Sometimes the omission of words during translation is observed. Omission is a grammatical and syntactic transformation, as a result of which some words or parts of sentences are removed during translation. This is mainly due to the presence of different principles of construction of English and Ukrainian sentences.

Clean pollution from the surfaces, such as showers and kitchen counters. Remove the pollution from walls, ceilings, floors, and paneling.

Do not **simply** cover mold with paint, stain, varnish, or a moisture-proof sealer, as it may resurface [10].

Очистіть поверхні від забруднень, такі як душові кабінки та кухонні стійки. Видаліть забруднення зі стін, стелі, підлоги та панелей. Не покривайте форму фарбою, морилкою, лаком або вологостійким герметиком, оскільки вона може знову з'явитися на поверхні.

In the analyzed example, the Ukrainian translation uses the technique of translation transformation – omission, since the means of expanding the sentence **simply** has been removed. The sentence does not suffer any loss of content, but the overall expressiveness of the utterance is slightly reduced.

Pay special attention to carpet on concrete floors. Carpet can absorb moisture and serve as a place for biological pollutants to grow [10].

Приділіть увагу ковроліну на бетонній підлозі. Килим може вбирати вологу і служити місцем для зростання біологічних забруднювачів.

Substitution is the most widespread and diverse type of translation transformation. In the process of translation, the following types of grammatical units can be replaced: a) replacement of word forms; b) replacement of parts of speech; c) replacement of sentence members; d) syntactic substitutions in a complex sentence. In the translation of the instructions we often encounter partial language substitution.

Some particles are so small they can pass through vacuum bags and remain in the air: If you are allergic to dust, wear a mask when vacuuming or dusting. [10]

Якщо у вас алергія на пил, надягайте маску під час прибирання пилососом або пилу. Людям із високою схильністю до алергії не слід виконувати ці завдання.

In the given example of translation, we are trying to replace the adjective *allergic* with the noun *алергія*.

Conclusions. In the Ukrainian translation of the instructions for the rescue and emergency work, grammatical transformations are used, which are caused by the difference in the grammatical structure of languages and the principles of language reality actualization.

The conducted analysis showed that in the vast majority of cases, in order to achieve adequacy, the Ukrainian translation of rescue and emergency work instructions is carried out using such grammatical transformations as division (44%), sentence combination (11%), replacement (14%), change word order (3%), changing the sequence of parts of a complex sentence (3%), addition (15%), omission (10%).

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