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MODALITY OF NECESSITY: TRANSLATION PROBLEMS

ABSTRACT. This article deals the role and means of expressing the necessity concept of modality in both Ukrainian and English philological and scientific-technical texts. The paper underlines that translation decisions made by translators while rendering the necessity concept not always depict in full the main idea of the source text. The present article also focuses on the fact that most translators attempt to convey the intended meaning of necessity, but there are a lot of subtleties while translating modal verbs, modal words or constructions from Ukrainian into English and vice versa. It hypothesizes the problem of the choice of the best equivalent in the process of translating necessity in philological and scientific-technical texts. The study concludes that the translation of modality of necessity should adhere to the syntactic patterns and lexical units of the source language structure and make linguistic shifts (changes) in the target language.
KEYWORDS: Modality. Necessity concept. Debitive modality. Translation transformations. Means of expression.

Means of expression of modality of necessity (necessity concept), their usage and their translation by non-language speakers in particular genres are the problem to be taken into consideration while mastering any foreign language, the English language in particular. Knowing how to use language means expressing modality in scientific-technical texts and philological texts can help those who study foreign language, who teaches it and those who write the manuals to better understand the corresponding or general conformities as well as functions of using modality necessity in academic writing and in professional

scientific articles. The fundamentals for covering the problems of modality as a concept can be found in works written by Ch. Bally, V. Vinogradov, A. Bondarko, G. Zolotova, N. Shvedova, V. Panfilov, L. Yermolajeva, V. Gak, I. Gaalperin, V. Plungyan and others. Among modern Ukrainian scientists who work in this sphere it is worth mentioning A. Melnichuk, I. Vichovanets, A. Zagnitko, L. Kadomtseva, A. Grischenko, M. Mirchenko et al.

From Aristotle to I. Kant the classical logic describes modality as the category that depicts mostly the nature of objective relations between the subject and its characteristic features, relations between the subject and the predicate of the statement, and states the truth degree of the dictum from the point of view of the person who makes the utterance [3, p. 30]. Taking into account that linguistics is not as old as logic, it is obvious that it borrowed the terminology describing the modality in logic for the nomination of the linguistic phenomena having modal characteristics. Despite the fact that linguistics and logic regard modality as the relation to the reality, the object's sides under the study in these two sciences are different.

It is worth mentioning that the modality category some linguists define as the semantic one (V. Admoni, G. Kolshansky), others as the syntactic one (L. Yermolajeva, A. Zvereva). There are scientists who define it as the grammar

category (V. Gurevich, F. Berzin, V. Vinogradov), or logic-grammatical one (V. Panfilov), logic (S. Amelina, E. Morohovskaya), functional-semantic (A. Bondarko, V. Tkachyk, V. Shinkaruk), or "speech category of subjective semantic-syntactical orientation" etc. [13, p. 79].

In the course of the modern research of modality different approaches have been formulated, among which the following can be outlined as the main ones: logical-grammatical, structural-semantic, functional-pragmatic and cognitive.

In the Ukrainian language, necessity function as the speech universal phenomenon belongs to the sort of potential situations that are viewed as the evaluating ones. It means that any situation is affected by either subjective or objective factors that, from the point of view of the subject of modal evaluation, demand obligatory transformation from the potential into the actual one. The meaning of the necessity is the manifestation of the real-potential modality necessity as in this case the situation of necessity is regarded as really possible [13, p. 87].

Necessity as the concept of the debitive modality (having its own characteristic semantic features and ways of expression) stands for the essential

need to perform any useful or desired action and it is connected directly (explicitly) with such a need.

In some linguistic articles that study the obligatory connection between the subject and the action we can find both terms: debitivity and necessity. Are these two terms identical or do they nominate different relations?

According to J. M. Gawron the concept of necessity in the English language is presented by three types, that is epistemic necessity, logical necessity, and deontic duty/obligation. So we can say that necessity is regarded in the broad sense including obligation and events determination and the modality of compulsion [15].

One of the most difficult issues of translating sentences with the debitive modality from English into Ukrainian and vice versa is the fact that any modal verb, modal word or modal construction has more than one equivalent in each of the two languages (Ukrainian and English). That is why according to A. Tron it is essential to have fundamental knowledge of all the concepts of debitive modality. In the Ukrainian language he enlists the following concepts: доцільності, повинності/норми/зобов'язання, повинності/ідеалу, вимушеності/змушеності і змушуваності, необхідності/потреби, неминучості/невідворотності. In the English language we as a rule use the

following   equivalents: expediency, obligation/duty/norms/compulsion/force/necessity/demand [7, p. 579].

Each of these concepts is characterized by its own differentiating meanings and ways of expression in English and Ukrainian which proves the expediency of the division of the debitive modality. For example, *вимушеність=compulsion* as the debitive modality concept means the obligation of doing not desirable, forced, affected by some peculiar conditions for the subject to do. In the English language the central modal modifier of the compulsion concept is the modal verb *must*.

There are no precise criteria differentiating concepts of obligation and necessity which very often leads to their full assimilation or overlapping, especially in the Ukrainian language. First of all, it can be explained by the rules of word-building in the Ukrainian language as building lexical units («повинен» – повинність, «необхідно» – необхідність) are polysemantic, interchangeable and can be explained by each other. But we can find significant difference in the Ukrainian language between "повинність and необхідність" (duty/obligation and necessity) from the logical point of view, as both these language units nominate different characteristics of the reality: necessity and obligation/duty. Both terms in the English language focus on the obligation of performing some

action. But in the Ukrainian language, contrary to the necessity, duty is directly connected with morality and ethical notion. [14]

So to our mind, it is worth combining such subtleties of modal meaning as necessity, compulsion, obligation, etc. under one term debitivity. We will consider debitivity as a kind of 'internal' objective modality, that can involve the wide spectrum of the norms prescribed to the subject to perform at any situation according to the extra-linguistic conditions, internal state and demands of the subject, conformities of his life, laws, traditions, customs, rules, duties, obligations, regularities, agreements etc.

The most used way of expressing debitive modality in the English language is modal verbs being the part of the complex modal predicates formed by the modal part (as a rule a modal verb) and the infinitive of the main verb. But the modal part can be also expressed with the help of lexical-grammatical constructions, for example: *had better, be bound to, be necessary to, be obliged to, be supposed to, be due to, be forced to, be compelled to* etc.

In the Ukrainian language the structure and semantics of necessity allow us to mark out such tools on different language levels to express necessity: a) lexical: modal verbs and predicates; b) morphological: constructions in the form of imperative mood but without the imperative meaning (such sentences have

the meaning of instruction or order); c) syntactical means: constructions with independent infinitive (infinitive clauses) [13, p. 90].

Speaking about necessity/obligation we should say that in the English language modal verbs are used more often comparing to the usage of modal words or modal constructions.

Any text, taken as a particular language unit, has its own linguistic and extra linguistic characteristics. In this paper we will consider two styles of text that is scientific-technical and philological. Each type of such texts has specific defining features and peculiarities, realized in the manner of using language units and the way these units are combined in the complex and meaningful structural and stylistic integrities. The main goal of the scientific functional style is knowledge systematization, world cognition, delivering study results, proving theories, basing hypotheses and classifications, phenomenon explanations, giving any scientific material, presenting scientific data to the public [1, p. 33].

Speaking about the Ukrainian language of science we should underline the fact that it has been developing and flourishing under a number of complex conditions including problems of Ukrainian language terminology and extra-linguistic factors (the latter one is the struggle of Ukrainians for the rights of their mother tongue). Having gone out into the orbit of science, the Ukrainian

language has visually reanimated its programmed rationalism to verbalize logical categories of thinking and cognition at the highest level [4, p. 18]

We have carried out the analysis of the translation of necessity in philological and scientific-technical texts (from English into Ukrainian and vice versa) on the basis of 300 units used in the annotations. The analysis was performed on the lexical and grammatical levels. On the lexical level the investigated unit was a word or word combination, on the grammatical level – a sentence.

The Ukrainian translation school has long and rich tradition, though its development has taken place under difficult social and historical conditions as the Ukrainian language itself has faced been downward pressure. Ukrainian translators in different historical periods have always strived the best world literature masterpieces to enrich the Ukrainian culture. During the period of independence new possibilities for the development of the Ukrainian translation school have been opened and translators see their task in the widening of the relations between Ukrainian and foreign literatures.

Approaches to the translation have changed and in the Ukrainian school of translation as well as in the teaching translation we use different classification of 'translation transformations' to render in full the original text in its translated

variant.

The problem of translation transformations has been under study by many Russian and Ukrainian linguists. Each of them has offered his/her definition for them, but the common feature for all the approaches is the idea that translation transformations are the key element while translating any text.

Ya. Retsker, A. Shevnin and N. Serov group the transformations into lexical and grammatical; R. Minjar-Beloruchev classifies them into grammatical, lexical and semantic; V. Komisarov outlines three groups of transformation: grammatical, lexical and lexical-grammatical, while L. Latishev describes morphological, syntactical, stylistic and mixed transformations. A. Fiterman and T. Levitska describe grammatical, stylistic and lexical transformations. L. Barchudarov stated that all translation transformations can be grouped into the following four groups: **replacement**, **substitution**, **addition** and **omission**. Our Ukrainian scientist V. Karaban differentiates between five basic grammatical transformations: **permutation**, **substitution**, **addition**, **omission** and **complex transformation** [2, p. 125].

In our study we used the generalized classification of translation transformations on the basis of the above mentioned scientific concepts. As according to the results of our study necessity is more presented at the lexical

and lexical-grammatical level in both languages, then it is worth using the transformations of the corresponding levels.

At the grammatical level we found **integration** (combining some sentences into one), **portioning** (dividing one sentence into a number of smaller ones), **addition**, **omission**, **replacement**, **substitution** and **complex substitution**.

At the lexical level there was found **synonymous substitution**, **calque**, **transcoding**, **contextual substitution** (**differentiation**, **concretization**, **and generalization**), **sense development/meaning extension**, **antonymic translation**. It is important to say that, as a rule, different translation transformations are used simultaneously. For example, replacement can be accompanied with substitution and a grammatical transformation is accompanied with a lexical one etc.

We have found out that in philological texts in most cases the units having the meaning of necessity at the grammatical level are translated (from Ukrainian into English) with the help of grammar substitution and addition. The second place among the most frequently used transformations belongs to omission and replacement. And we can state that complex transformation is used less often. Let's look at some examples:

1)   <u>Grammatical substitution</u>

*Зроблений акцент **на необхідності** опрацювання невеликих за обсягом галузевих словників-глосаріїв для спеціальних цілей, призначених для студентів перекладачів.*

*An accent has been put **on the needs** of compiling small-size special purpose dictionaries-glossaries foe students of departments of translation.*

2)   <u>Addition</u>

*Для досягнення мети **необхідно** з'ясувати місце філософської категорії часу у системі мови.*

*To achieve the goal **it is necessary** to find out the place of the philosophical category of time in the language expression.*

3)   <u>Omission</u>

*Окреслено причини, які зумовлюють **потребу** проведення такого дослідження.*

Reasons for carrying out this study have been identified.

4)   <u>Replacement</u>

***Сконцентровано увагу на необхідності** використання жанрового підходу при переході від еліптичного до деталізованого, розвинутого письма на початковій стадії навчання.*

__The necessity__ of using the genre approach in the transition from an elliptical to a detailed, developed writing skills at the initial stage of the training __is substaintiated.__

5)   Complex transformation

Звернено особливу увагу на __необхідний__ психолінгвістичний аспект сприйняття символів і знаків, про які йдеться.

Particular attention has been devoted to __the needs__ of psycholinguistic aspect of the perception of symbols and signs which are discussed in this article.

In the philological texts at the lexical level the units having the meaning of necessity are translated with the help of the dictionary equivalent, contextual substitution and variant equivalent. Here are some examples:

1)   Equivalent translation

Потенціал читання та перекладу повністю відповідає __потребам__ і побажанням студентів і сприяє підвищенню ефективності текстів.

Reading and translating have a high potential to fit students' wants and __needs__ and further push learning efficiencies.

2)   Contextual substitution

Значну увагу зосереджено на візуальних компонентах. Проаналізовано тавизначено їхню __важливість і доцільність__

використання.

*Great attention is paid to the visual elements. Their importance and **the necessity** of usage have been analyzed.*

3)   <u>Variant equivalent</u>

Визначаються перспективи подальшого дослідження цієї проблеми, які полягають у необхідності створення нової методології.

For futher research on this problem, there are identified prospects, related to the need to develop a new methodology.

As for the results of our study of scientific-technical texts, we can state that in most cases grammatical substitution was used accompanied with addition; then translators widely used replacement, and the least used transformation is omission. It is also worth mentioning that comparing these texts to the philological ones it is hardly ever used omission, and grammatical substitution is accompanied, as a rule, with addition. It can be explained by the logic of presenting the cognitive meaning of utterances in a scientific-technical text that provides their inter-motivation and cohesion. That is why omission as a translation transformation is possible to be used only in some cases contrary to the situation with the philological texts. Let's consider some examples:

1) Grammatical substitution and addition

Аналіз динамічних моделей ескалаторів типажного ряду пов'язаний із застосуванням значної кількості типорозмірів тягових ланцюгів, тому **необхідним є** *створення універсальної експериментально-розрахункової методики оцінювання пружних властивостей тягових ланцюгів.*

Analysis of dynamic models of a number of escalators typical character concerned with the use of a significant amount of traction chains types and sizes, so **there is need** *to create universal experimental and calculated methodology for assessing the elastic properties of traction chains.*

2)   Replacement and grammatical substitution

Необхідність *ефективного використання енергетичного та частотного ресурсів каналів телекомунікацій.*

Efficient use of energy and frequency resource of telecommunication channels **is needed**.

3)   Omission

Актуальною є проблема створення більш надійних методів та інструментів, **необхідних** *для діагностики умов роботи механічних клапанів серця.*

There is an actual problem in creating more reliable methods and tools

for the operation diagnostics of mechanical heart valves.

In scientific-technical texts translators mostly used equivalent translation, contextual substitution and variant equivalent. For example:

1) <u>Equivalent translation</u>

*Отримані кути візування повністю задовольняють **вимогам** до сучасних наземних і повітряних ОЕСС.*

*The angles of sight fully meet the **requirements** of a modern land and air OSS.*

2) <u>Contextual substitution</u>

*Розуміння того, як бізнес-процеси (в сенсі тлумачення, даного Andrea Burattin) виконуються на практиці, **життєво необхідне** для сучасної організації, оскільки це показує реальну ситуацію, виявляючи недоліки та "вузькі" місця.*

*A precise picture of how business processes (in the interpretation by Andrea Burattin) are performed in real-life **is vitally important** for an organization because it shows actual situation revealing gaps and bottlenecks.*

3) <u>Variant equivalent</u>

*Така конструкція **потрібна** для досягнення більшої підйомної сили, що надає змогу здійснення вертикального зльоту та посадки.*

*This design is **necessary** to achieve greater lift force which enables the implementation of a vertical takeoff and landing.*

In the course of our study we found out that modal words of necessity mostly used in the Ukrainian philological texts are translated in the following way: *необхідність – necessity.* While in the scientific-technical texts we encountered such cases *необхідність = вимога – requirement.* In some cases, translators used contextual substitution to generalize or concretize the meaning of necessity. For example:

*У статті описаний панельно-вихровий метод аеродинамічного розрахунку літака, **необхідний** для проведення дослідження та розробки методичних рекомендацій.*

*This article describes the panel and the vortex method of calculating the aerodynamic aircraft **required** to perform research and development guidelines.*

*Завдяки цьому, нам вдалося досягти **вимог** щодо контролю продуктивності чутливого елемента резонансних коливань CVG щодо різноманітних факторів.*

*Thanks to this, we managed to achieve **the requirements** for the control of performance of resonant vibrations CVG sensitive element to various disturbing factors.*

In the above given examples *'requirement'* and **'*it's required'*** are used in the English sentence, though it does not render in full the Ukrainian original sentence. Here are some more examples of using modal noun *'requirement'* in the meaning of necessity/duty while translating the Ukrainian sentences.

*Для коректного заходу на посадку гелікоптера **потрібно** знаходитися в центральній зоні.*

***It's required** to adhere to the central zone for correct helicopter landing.*

*Висотний літак, розроблений в цей момент має значні розміри через ці **вимоги**.*

*High-altitude aircraft developed at the moment have significant size due to those **requirements**.*

*Високе значення аеродинамічної якості **вимагає** великого крила з співвідношенням сторін X, яка визначається площею крила і довжиною крила.*

*High value of aerodynamic quality **requires** large wing aspect ratio λ, which is determined by the wing area and wing length.*

*Від величини ККД насосів залежить величина **необхідної** потужності турбіни.*

*The magnitude of **the required** turbine power depends on the efficiency of the pumps.*

Summing up we can state that despite belonging to the same functional scientific style, both these types of texts have different structure, semantics and usage of the ways of expression of necessity.

The necessity in general, ways of its expression, methods and tools to produce the adequate translation in different styles and genres are the problems and aspects to be studied and paid attention to while preparing future translators. It can help students, teachers and authors of the manuals to understand more deeply this phenomenon as a necessity leading to a better quality of professional translation.

REFERENCES

1. Іщенко Н. Г. Лексико-граматичні домінанти наукового тексту. Вісник Національного технічного університету України "Київський політехнічний інститут ім. Ігоря Сікорського". Сер. Філологія. Педагогіка. 2013. Вип. 1. С. 32-42.

2. Карабан В. І. Переклад англійської наукової і технічної літератури. Граматичні труднощі, лексичні, термінологічні та жанрово-стилістичні проблеми. Вінниця: Нова книга, 2002. – 564 с.

3. Ніка О. Модальність у взаємозв`язках класичної логіки і лінгвістики. Вісник Київського національного університету імені Тараса Шевченка. Літературознавство, мовознавство, фольклористика. 2007. Вип. 18. С. 30–33.

4. Онуфрієнко, Галина Сергіївна. Науковий стиль української мови : навчальний посібник. Київ : Центр навчальної літератури, 2006. – 310 с.

5. Помазан О. С., Ковтун О. В. Засоби вираження модальності в сучасній англійській мові. Вісник Запорізького національного університету. 2016. С. 138–142.

6. Сафонова Н. М. Еволюція поглядів на суб'єктивну модальність. Вісник Львівськ. ун-ту. 2004. Вип. 34, Ч. І. С. 74–80.

7. Тронь О. А. Складові категорії дебітивності. Семантика мови і тексту : Матеріали VI Міжнар. наук. конф. Івано-Франківськ : Плай, 2000. С. 578–581.

8. Актуальні питання іноземної філології : наук. журн. / Східноєвроп. нац. ун-т ім. Лесі Українки, Ін-т інозем. філології. – Луцьк: Східноєвроп. нац. ун-т ім. Лесі Українки, 2014–2018. URL: https://apif.eenu.edu.ua/?page_id=27 (дата звернення 25.03.2019).

9. Вісник НТУУ "Київський політехнічний інститут ім. Ігоря Сікорського". Сер. Філологія. Педагогіка. 2013–2017. URL: http://visnyk.fl.kpi.ua/issue/archive (дата звернення 05.03.2019).

10. Вісник НТУУ "Київський політехнічний інститут ім. Ігоря Сікорського". Сер. Механіка гіроскопічних систем. 2012-2018. URL: http://mgsys.kpi.ua/issue/archive (дата звернення 14.03.2019).

11. Вісник НТУУ "Київський політехнічний інститут ім. Ігоря Сікорського". Сер. Приладобудування. 2013-2018. URL: http://ismc.kpi.ua/issue/archive (дата звернення 15.03.2019).

12. Вісник НТУУ "Київський політехнічний інститут ім. Ігоря Сікорського". Сер. Інформаційні системи, механіка та керування. 2013-2018. URL: http://ismc.kpi.ua/issue/archive (дата звернення 15.03.2019).

13. Сікорська О. О. Функціонально-семантична категорія потенційності в українській мові: автореф. дис... канд. філол. наук: 10.02.01 / Одес. нац. ун-т ім. І.І.Мечникова. 2007. 199 арк. С. 174-199. URL: http://www.nbuv.gov.ua/ard/2007/07soopum.zip (дата звернення 15.03.2019).

14. Тронь О. А., Панькова Т. В. URL: http://194.44.152.155/elib/local/81.pdf (дата звернення 02.06.2019)

15. Gawron J. Modality. San Diego State University. URL: https://gawron.sdsu.edu/semantics/course_core/lectures/modal_lecture.pdf (дата звернення: 19.04.2019).

REFERENCES

1. Ishchenko N. G. Lexical-grammatical dominant scholarly text. Bulletin of the National Technical University of Ukraine "Igor Sikorsky Kiev Polytechnic Institute". Series. Philology. Pedagogy. 2013. Issue 1. P. 32-42.

2. Karaban V. I. Translation of English scientific and technical literature. Grammatical difficulties, lexical, terminological and genre-stylistic problems. Vinnytsa: Nova Knyha, 2002. – 564 p.

3. Nika O. Modality in the interconnections of classical logic and linguistics. Visnyk of Taras Shevchenko Kyiv National University. Literature, linguistics, folklore. 2007. Issue 18. P. 30-33.

4. O. Pomosyan, O. Kovtun, Means of expressing modality in contemporary English. Visnyk of Zaporizhzhya National University. 2016. P. 138-142.

5. Onufrienko G. S. Scientific style of the Ukrainian language: Manual. Kyiv: Center of educational literature, 2006. – 310 p.

6. Safonova N. M. Evolution of views on subjective modality. Visnyk of Lviv University. 2004. Issue 34. P. 74-80.

7. Tron O. A. Compositional categories of debitivity. Semantics of language and text: Materials VI International sciences conf. Ivano-Frankivsk: Plai, 2000. P. 578-581.

8. Current issues of foreign philology: sciences. Journal / Lesya Ukrainka Eastern European National University, The Institute of Foreign Languages. Philology. – Lutsk: Eastern Europe Lesya Ukrainka National University, 2014-2018. URL: https://apif.eenu.edu.ua/?page_id=27 (access date 25.03.2019).

9. Visnyk of NTUU "Igor Sikorsky Kyiv Polytechnic Institute ". Series. Philology. Pedagogy. 2013-2017. URL: http://visnyk.fl.kpi.ua/issue/archive (access date 05.03.2019).

10. Visnyk of NTUU "Igor Sikorsky Kyiv Polytechnic Institute". Series. Mechanics of gyroscopic systems. 2012-2018. URL: http://mgsys.kpi.ua/issue/archive (access date 14.03.2019).

11. Visnyk of NTUU "Igor Sikorsky Kyiv Polytechnic Institute". Series. Instrumentation. 2013-2018. URL: http://ismc.kpi.ua/issue/archive (access date 15.03.2019).

12. Visnyk of NTUU "Igor Sikorsky Kyiv Polytechnic Institute". Series. Information systems, mechanics and management. 2013-2018. URL: http://ismc.kpi.ua/issue/archive (access date 15.03.2019).

13. Sikorska O. O. Functional-semantic category of potentiality in the Ukrainian language: author's abstract. Candidate of Sciences: 10.02.01 / Odessa I. I. Mechnikov National University. 2007. 199 arcs. C. 174-199. URL: http://www.nbuv.gov.ua/ard/2007/07soopum.zip (application date 15.03.2019).

14. Tron O. A., Pankova T.V. URL: http://194.44.152.155/elib/local/81.pdf (application date 02.06.2019)

15. Gawron J. Modality. San Diego State University. URL: https://gawron.sdsu.edu/semantics/course_core/lectures/modal_lecture.pdf (available on April 19, 2019)