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STRUCTURAL AND SEMANTIC ASPECTS OF TRANSLATING ENGLISH CAUSATIVE CONSTRUCTIONS

Summary. The article is devoted to the study of structural and semantic features of translating English causative constructions in scientific and technical texts of Engineering sublanguage. The main purpose of the research is to describe the ways of the adequate rendering of English causatives into Ukrainian. A number of research methods have been employed to achieve the goal and the set tasks: theoretical analysis of special literature, descriptive, comparative and contrastive methods of original and Ukrainian correspondences' research, the method of componential analysis as well as linguistic interpretation and statistical processing of the results obtained The causatives are identified as syntactic constructions of inducive semantics for realizing subject – object relations with the effected object to carry out the action or to change its former state. Three main types of causative constructions (simple, extended, complex), functioning within simple, complex sentences and at the textual level, have been considered in scientific and technical texts in Engineering themes. On the basis of structural characteristics, four models of causatives with the main constituents have been determined: causer, causative verb, cause, effected action. According to semantic criteria, causative complexes have been differentiated into seven subgroups with the identification of causative verbs as the markers of inducive semantics and other linguistic means such as: noun groups, infinitives, participles. It has been substantiated that combined transformations are the most common ways of the faithful conveying of English causatives amounting to 25% of all 100 cases under review. They are represented by the following models: omission + compensation + replacement + equivalent translation; compensation + concretization + transposition + replacement; concretization + replacement. Grammatical transformations of inner partitioning (18%), omission (15%), replacement (16%), a lexical semantic transformation of transposition – nominalization (14%) has also been frequently applied. It has been revealed that simple causatives are mostly conveyed by the word-for-word translation way (12%).

Key words: causativity, causative construction, simple causative, extended causative, causative object, combined transformations, replacement.

Problem Statement. Causativity is a pragmatic and linguistic phenomenon, inherent in English scientific and technical texts of Engineering sublanguage that is realized at lexical, syntactic and textual levels. One of the linguistic means of its representation is syntactic constructions that form at least two arguments, one affecting another, thus carrying out an event implied by the verb-predicate that bears a concept of causativity. Causative constructions' functioning contributes to the logical succession of the idea exposition with the controversial arguments being considered and final results being inferred to achieve true information realization via a cause-and-effect relationship in scientific and technical texts. Causatives are regarded as complex linguistic units that have certain syntactic features, semantic peculiarities and morphological composition requiring an in-depth analysis. Moreover, the adequate rendering of English causatives as morphosyntactic entities into Ukrainian will reveal their multi-functional directionality and provide ambiguous treatment of technical concepts expressed by terms that serve as basic causative components, avoiding semantic inaccuracies and content distortions.

Overview of Recent Researches and Publications. The phenomenon of causativity has been highlighted in scientific works of such linguists as: M. Shibatani, M. Bessonov, V. Karaban, Yu. Nida. Causativity is determined as a cause-and-effect relationship with the subject (a person or a thing) inducing the object to carry out the event that is to be transformed into another state under a certain effect, cause, consequence of this induction. The causative is stipulated by the subject – object relations since its content plane is related to the object's motivation to perform some action or to change its former state [1]. Scholar M. Shibatani distinguishes two types of causativity. The first one is simple, intended to motivate the object, based on only one reason that is expressed by grammatical forms and lexical meanings of causative verbs. Another one is extended with the object performing some action and acquiring a new state under influence of two causes: action and inducement. Both types rely on the sematic nature of the verbal lexical unit, so the subject acts and compels the object to do something having one or two causes available [2, p. 8].

As researchers M. Bessonov, M. Shibatani and P. Manda Imoh assert causatives are generally divided into three types. Analytical causatives are formed by means of syntactic constructions with the verbs of compelling semantics "have, get, make". Morphological causatives are designed by affixal word-forming processes through adding -en, -ify, -ize to the roots of initial verb forms. Lexical causatives are the words of instigation meaning. Due to their combinability properties with other components of the construction, the participant is responsible for causing (not causing) the event or the situation to happen by his actions [3]. In addition, linguist M. Auersperger investigates the semantic roles of constituents within English causative constructions to elaborate a translation approach to their faithful conveying in the target language through equivalent counterparts. He states that three participants are distinguished in English causative constructions: causer, causee and patient. The researcher further develops the theoretical accounts of scholars S. Kemmer and A. Verhagen about the causer as the entity that causes the entire event with the causee being represented as

the entity that carries out some activity expressed by the effected predicate. The patient is described as the endpoint of the achieved action by the effected verb. The concept "effect" is often designated for the second verb [4].

In addition, scientist V. Karaban accounts for three types of causative constructions by compiling their models which mainly function in scientific and technical texts:

1. transitive verb of causative semantics + noun cluster + infinitive;

2. the verb "have/ get" + noun cluster + infinitive;

3. the verb "have/get" + noun cluster + Participle I/ II.

He developed the following means of their translation into Ukrainian:

1. a part of the object clause in the complex sentence;

2. an equivalent causative construction;

3. a separate sentence;

4. a grammatical structure with the verb-predicate in the subjunctive mood;

5. a combination of the verb "бути" and the adjectival phrase [5, p. 203-204].

Therefore, further componential analysis of causative constructions with their semantic characteristics in English scientific and technical texts of Engineering sublanguage enabled to expand their functional potential and to determine the ways of their translation into the Ukrainian language.

Setting the goals and tasks of the article will facilitate adequate transmission of changing technical phenomena expressed by causatives in the target language text and will stipulate the reproduction of the functional potential of original causative structures in translation.

The purpose of the article is to describe the ways of rendering English causative constructions into the target language.

To achieve the research goal, the following tasks are to be solved:

- differentiating the common English causatives in scientific and technical texts of Engineering sublanguage in compliance with structural and semantic criteria;

- identifying the ways of their faithful translation into Ukrainian.

To fulfill the set tasks, a number of research methods were employed: theoretical analysis of technical literature, descriptive, comparative and contrastive along with contextual methods of the original and the target language texts' research, statistical processing of final data, the method of componential analysis, the linguistic interpretation of the results obtained.

The Outline of the Main Research Material. One of the most notable grammatical aspects of English scientific and technical texts of Engineering sublanguage is a great variety of simple and composite sentences extended by infinitive, gerundial, modal, passive and causative constructions that are designated to fulfill a metacommunicative function of scientific exposition of facts, processes, events in their logical succession following the basic requirements for the scientific and technical texts' compilation: clarity, accuracy, cohesion, coherence [6]. Causative constructions in our research are considered as three-, four-, five-component word groups that mainly extend simple, declarative, affirmative sentences, complex sentences or function in several successive sentences, bearing instigation semantics. These causatives include the causative verb-predicate, the effected verb, the causer, the causee.

According to the componential analysis and the frequency of application, four main models of the causatives were singled out:

1. Inanimate causer (noun group) + causative verb + causee (noun) + effected action (infinitives). "*This high pressure created by the compressed gases causes the shaft to turn or rotate ... .*"

2. Inanimate causer + causative verb (have/get) + causee (noun or noun group) + effected action (participle I/II). "*Such transmitters will have their individual stages carefully shielded … .*"

3. Causer (noun group) + causative verb + causee (a noun group expressing a renewed state of the action). "*The nanomaterials will lead to a wight reduction together with an increase in durability and enhanced functionality ... .*"

4. Causer (gerundial phrase) + causee 1 (grammatical structure) + causative verb + causee 2 + effected action (bare infinitive). "*By expanding the surface area, the number of surface atoms increases dramatically, making surface phenomenon play a vital role in materials performance ... .*"

It is noteworthy that transitive verbs of causative semantics as well as semi- auxiliary verbs (have/get) function as the markers of causativity, affecting the semantic load of above-mentioned constructions.

Depending on the semantic peculiarities, causative constructions were differentiated into the following subtypes:

1. Causing undesirable or negative effect (make, cause, result in, get): "*The lack of oil in transmission system causes the gearbox to work improperly… .*"

2. Expressing coercion (make, cause, coerce, compel, force, instigate, induce): "*Hardware prices fall and tighter emissions standards caused car manufacturers to supplant carburators in new vehicle production ... .*"

3. Conveying requirements (instruct, order, command, tell, require): "*These challenges require urgent action to reduce the negative public health and environmental impacts of urban transport … .*"

4. Denominating recommendations (prescribe, recommend, advise): "*The life of a car battery can vary from three to seven years, but experienced technicians recommend drivers to replace it one year earlier to avoid a sudden stop in the engine performance ... .*"

5. Indicating motivation (provoke, actuate, force, push, urge, spur): "*The recent developments in hybrid engines urge the car manufacturers to buy the latest designs … .*"

6. Implying prohibition/permission (approve, allow, enable, permit, ban, forbid): "*… they also allowed the common transportation containers to carry… .*"

7. Emphasizing support / hindrance with two effected actions and two causers (promote, favor, facilitate, assist, abet, hinder, intervene, prevent, stop): "*The automatic transmission facilitates the car to stop with the engine at a high rpm, to allow for a very quick launch with the brakes released ... .*"

Thus, in English scientific and technical texts of Engineering sublanguage, the above-mentioned verbs of causative semantics contribute to the formation of simple and extended causative constructions that mainly function as complex objects in English simple sentences.

Having considered causatives of the complex type, it is worth pointing out that a cause-and-effect relationship is also expressed by the constituents of the same semantic load but they differ in functioning at the complex sentence or at the textual levels, acquiring other linguistic means of causativity expression. The

research material shows that a cause-and-effect relationship is often depicted in the main clause while the causer is revealed in the adverbial clauses of cause, condition, concession. "*As the micro-sized inorganic particles cannot be used due to their effect on the clearcoat layer, the conventional micro-sized fillers will affect the transparency of the clearcoat … .*" The causal relations can be implied by the semantic role of the main clause which is the causer and the adverbial clause of result expressing the second event (effect) within the complex sentence. "*Traditional polymers can be reinforced by nanoparticles so that it will lead to novel materials used as light-weight replacements … .*"

Moreover, there are some cases of causativity at the textual level expressed by two successive sentences with causer 1 in the first sentence, the cause and effect in the main clause of the second sentence and causer 2 in the adverbial clause of reason in the second one. Such causative means help exhaustively substantiate the technological process efficiency, taking two reasons (circumstances) into account. "*This is because a great amount of a substance comes into contact with surrounding material. This results in better catalysts, since a greater proportion of the material is exposed for potential reaction … .*"

While researching the theoretical background on conveying English causative constructions into Ukrainian, the word-for-word translation way is identified as the most frequent one that was also applied in 12% of our cases when conveying simple causatives of permissive semantics. "*Air brakes, designed to reduce their speed in flight, allow to maintain a safe speed in a steep descend … .*" – "*Пневматичні гальма спроєктовані для того, щоб зменшити швидкість в польоті, та дати можливість повітряному судну утримувати безпечну швидкість під час стрімкого зниження … .*" However, componental and semantic analyses of one hundred causatives in simple and complex sentences as well as at the textual level enabled to single out lexical semantic, grammatical and combined transformations to faithfully render them into the target language. The terminological corpus of translation transformations in our further research will be based on theoretical contributions of linguists L. Naumenko and A. Hordeyeva who highlighted lexical semantic transformations of twelve types and grammatical transformations, allowing the adequate rendering of the source language lexemes and grammatical structures into Ukrainian [7]. Thus, the grammatical transformation of inner partitioning (18%) was employed to translate the simple causative type "causer + causative verb + causee + effected action" where an English simple sentence extended by the causative construction was rendered by the complex one with the object clause as the Ukrainian correspondence for the English causative construction. "*The engineering staff are not going to have the disc brake in a new model replaced with air brakes or brand brakes*" [8, p. 19]. – "*Науково-технічний персонал не допустить, щоб дискові гальма нової моделі були замінені на пневматичні чи стрічкові гальма.*" In 14% of examples the lexical semantic transformation of transposition (nominalization) was used to convey the infinitive that functions as the effected action in the causative construction by the noun that serves as an object in the Ukrainian version. "*In any hybrid gasoline/ electric vehicles, the electric motor makes a generator charge electric batteries and also as a regenerative brake … .*" – "*В будь-яких гібридних транспортних засобах, що працюють на бензині чи електроенергії, електродвигун забезпечує заряд електричного акумулятора, як і гальмівної системи за допомогою генератора … .*"

In addition, simple causative constructions of the model "causer + causative verb + causee + effected action" were realized in translation through a simple verbal predicate. The omission of some construction elements (15% of the examples considered), particularly of a causative verb was mostly observed. So, the causal relationship between components in the translated version follows from the logical sentence structure without explicit representation by means of a causative verb. "*… but it also made the drum brake lose its sensitivity.*" "*… проте вона також послабила чутливість барабанної системи гальмування*". It was found that the grammatical transformation of replacement was utilized (16%) to render the extended causative construction of coercive semantics with two effected actions (infinitive phrases in the example below) in order to ground the efficiency of a new system. "*This system is particularly useful where the parking brake (handbrake or footbrake) causes the drum brake to stop the vehicle from travelling backwards and hold it on a slope … .*" – "*В тому випадку, коли гальма для паркування (ручник або педаль гальмування) здійснюють вплив на барабанні гальма, що попереджають зворотний рух транспортного засобу та утримують його в стійкому положенні, така система є особливо корисною.*"

As a result of the componential analysis conducted, the noun as a constituent of the English causative (causee) in the function of the subject was transformed into the object position by means of compensation with the infinitive (denoting the effected action) being conveyed by the non-finite form of the Ukrainian verb while the causative verb was represented by the Ukrainian verb of a narrower semantics through concretization. Having resorted to the lexical semantic transformation of transposition, the active construction, extended by the causative was translated into Ukrainian by the indefinite impersonal sentence through the replacement way. "*The crew got it to think more specifically on the problem of drum brakes… .*" — "*Команді слід було серйозніше задуматись над проблемою барабанних гальм… .*" The combined transformation (compensation + concretization + transposition + replacement) turned out to be the most appropriate one. Furthermore, it is to be noted that combined transformations were often employed to faithfully render the meaning of simple causative constructions taking on the following model: causer (animate) + causative verb + causee + effected verb. So, the indicated below causative complex was translated as a part of the complex sentence with the equivalent verb "домогтися" for the causative verb "get" through the concretization transformation while the noun group and the infinitive constitute the subject-predicate group with the verb in the subjunctive mood by means of the grammatical replacement. "*The automatic transmission designers must get all the gears within the gearbox change automatically, depending on the number of revolutions per minute and the current engine load*" [8, p. 88]. – "*Конструктори автоматичної трансмісії повинні домогтися того, щоб передачі в коробці переключались автоматично, залежно від кількості обертів за хвилину та поточного навантаження на двигун.*"

In scientific and technical texts of Engineering sublanguage there were some complex causative constructions functioning within one complex sentence with the main clause being a causee and the adverbial clause performing the role of a causer in the outer causative type. Moreover, the inner causative types were explicitly represented in each of the clauses with their semantic roles distribution that took on the following structural models: causative verb + causee + effected

verb (in the main clause); causer + causative verb + causee (animate) + effected state of the action (in the adverbial clause of reason). The first inner causative type was conveyed by the Ukrainian non-finite form of the verb and the noun group through the combined transformation of omission, compensation and replacement while the second inner causative type was translated by the equivalent adverbial clause of reason by employing the word-for-word translation way. "*It is difficult to have the proper gear selected in non-synchronized manual transmissions since it requires a skilled operator an understanding of gear range, torque, engine power, … ." Важко обирати правильну передачу в несинхронізованій ручній коробці передач, оскільки це вимагає від досвідченого водія розуміння діапазону передачі, крутного моменту, потужності двигуна, … .*"As can be seen, combined transformations (25%) were efficiently used to adequately convey the components of simple, extended and complex causatives at the word group, sentence and textual levels into the target language.

Conclusions and directions for further research material. To sum up**,** the study reveals structural and semantic aspects of English causative constructions in scientific and technical texts on Engineering themes. Differentiation of English causatives into simple, extended and complex ones and the descriptive analysis of their basic components enabled to research the main translation ways of their faithful conveying into Ukrainian with the identification of the target language units as translation means. **In the perspective**, it is worth considering the functional potential of morphological and lexical causatives in scientific and technical texts in order to elaborate the translation strategy of their linguistic adaptation in the target language.

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Мошковська Л. Структурно-семантичні аспекти перекладу англійських каузативних конструкцій

Анотація. Статтю присвячено дослідженню структурно-семантичних характеристик перекладу англійських каузативних конструкцій в науково-технічних текстах машинобудівельної підмови. Головною метою є опис способів адекватної передачі англійських каузативів українською мовою. Для досягнення мети та поставлених задач застосовано низку методів наукового дослідження: теоретичний аналіз спеціальної літератури, описовий, порівняльно-зіставний та контекстуальний методи дослідження оригінальних текстів та україномовних відповідників, методи компонентного аналізу та лінгвістичної інтерпретації і статистичної обробки отриманих результатів. Каузативи виокремлено як синтаксичні конструкції спонукальної семантики для реалізації суб'єктно-об'єктних відносин з мотивованим об'єктом виконати дію або змінити її попередній стан. В науково-технічних текстах машинобудівельної тематики розглянуто три основні типи каузативних конструкцій (просту, ускладнену та комплексну), які функціонують в межах простих, складнопідрядних речень та на текстовому рівні. На основі структурних характеристик визначено чотири моделі каузативів з основними складовими: суб'єкт-мотиватор, каузативне дієслово, об'єкт каузації, змінена дія. За семантичними критеріями каузативні комплекси диференційовано на сім підгруп із виділенням дієслів спонукальної семантики як маркерів каузативності та інших мовних засобів (іменникових словосполучень, інфінітивів, дієприкметників). Доведено, що комбіновані трансформації є найпоширенішими способами точної передачі англійських каузативів українською мовою, що складають 25% від ста розглянутих випадків. Вони представлені наступними моделями: вилучення + компенсація + заміна + еквівалентний переклад; компенсація + конкретизація + транспозиція + заміна; конкретизація + заміна. До того ж, граматичні трансформації внутрішнього розподілу (18%), вилучення (15%), заміни (16%), лексико-семантична трансформація транспозиції – номіналізації (14%) також часто застосовувались. Виявлено, що прості каузативи переважно відтворюються за допомогою послівного перекладу (12%).

Ключові слова: каузація, каузативна конструкція, простий каузатив, ускладнений каузатив, об'єкт каузації, комбіновані трансформації, заміна.