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POSITIVE AND NEGATIVE ASPECTS OF VARIABILITY PHENOMENON IN TERMINOLOGY (BASED ON THE CONSTRUCTION PRODUCTION TERMS IN THE ENGLISH AND UKRAINIAN LANGUAGES)

The article is devoted to the scientific terminological theory of variability in the English and Ukrainian languages based on construction terminology. It should be pointed out that there are several reasons for term variation. Terminological variation arises due to multidisciplinarity: concepts are often used across different domains (e.g., 'stress' in physics, psychology, and construction), where they acquire domain-specific meanings. Different language systems may use distinct terms for the same concept due to differences in linguistic structure, cultural perception, and professional standards. Technological change also drives terminological evolution, as new inventions and practices require new terms or the redefinition of existing ones.

In addition, regional, cultural, and institutional differences influence terminology formation, referred to as sociocultural influences. Variability in terms affects the process of translation, technical writing, and documentation, where accuracy and consistency are essential. Misinterpretation caused by terminological inconsistency may lead to communication gaps or errors, particularly in specialized and technical texts.

The most significant issues of the theory of terminological variability are considered in the article: diachronic and synchronic parameters, which characterize terminological systems within a clear paradigm structure; semantic and pragmatic features of the functioning of construction terms, including the mechanisms of representing terminological variability. The article also focuses on synonymy and paradigmatic connections among terminological units, analyzing their structural organization and the degree of correlation with synonymous analogues. These theoretical foundations help better understand the processes of terminology formation, variation, and standardization in multilingual and multidisciplinary contexts.

Key words: term, construction terminology, term system, paradigmatic structure of terminology, variability, synonymy, thematic group.

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ПОЗИТИВНІ ТА НЕГАТИВНІ АСПЕКТИ ЯВИЩА ВАРІАНТНОСТІ В ТЕРМІНОЛОГІЇ (НА МАТЕРІАЛІ ТЕРМІНІВ БУДІВЕЛЬНОГО ВИРОБНИЦТВА В АНГЛІЙСЬКІЙ ТА УКРАЇНСЬКІЙ МОВАХ)

Статтю присвячено науковій теорії термінологічної варіативності в англійській та українській мовах на основі будівельної термінології. Слід зазначити, що існує кілька причин варіативності термінів. Термінологічна варіативність виникає внаслідок мультидисциплінарності: поняття часто використовуються в різних галузях знань (наприклад, «напруга» у фізиці, психології та будівництві), де вони набувають специфічних значень. Мовні системи можуть вживати різні терміни для позначення одного й того ж поняття через відмінності у мовній структурі, культурному сприйнятті та професійних стандартах. Технологічні зміни також спричиняють розвиток термінології, оскільки нові винаходи та практики потребують нових термінів або переосмислення наявних.

Крім того, на формування термінів впливають регіональні, культурні та інституційні відмінності— так звані соціокультурні чинники. Варіативність термінів впливає на процес перекладу, технічного письма та документації, де важливою є точність і послідовність. Неправильне тлумачення через термінологічну непослідовність може призвести до комунікативних помилок, особливо в науково-технічних текстах.

У статті розглянуто ключові проблеми теорії термінологічної варіативності: діахронні та синхронні параметри, які характеризують термінологічні системи в межах чітко визначеної парадигмальної структури; семантичні та прагматичні особливості функціонування будівельних термінів, зокрема механізми репрезентації термінологічної варіативності. Окрема увага приділяється синонімії та парадигматичним зв'язкам між термінами, аналізується їхня структурна організація та ступінь відповідності синонімічним аналогам. Таке теоретичне підгрунтя дозволяє глибше зрозуміти процеси формування, варіації та стандартизації термінології в багатомовному та міждисциплінарному контексті.

Ключові слова: термін, будівельна термінологія, терміносистема, парадигмальна структура термінології, варіативність, синонімія, тематична група.

Problem Statement. The high level of development of modern science and technology necessitates close attention to theoretical and applied issues of terminology, which, as it is known, is a semantic system of a special type. Clearly expressed applied character of terminological research is aimed at the further improvement of terminological dictionaries, terminological systems, unification of industry terminologies. Current issues in linguistic science are related to the study of the nature and function of terms, both intralinguistically and in interlinguistic comparison. Particular attention is paid to professional terminology that is not directly related to general vocabulary. Among such terminologies is the field of construction. The process of building construction is inextricably linked with the use of a large volume of special names in almost all key areas of production. Construction terms cover a wide range of technical and production-related names, as well as terms functioning as components of productive

compound word-formation models of this type of terminology.

The **purpose** of this article is to clarify the nature of terminological variation.

The **main tasks** to be solved are to study the state and identify patterns and causes of variability in terminological units in English and Ukrainian construction terminology.

Let's review theoretical foundations of this phenomenon. Several scientific schools and scholars have shaped this field of research. Eugen Wüster is considered to be the father of modern terminology theory. He proposed that terms should be standardized and unambiguous within a domain (Wüster,1979). However, his prescriptive and static view was later critiqued. Eugen Wüster investigated international technical communication and founded International Organization of Standardization creating the Technical Committee for Terminology Standardization in 1936. Wüster took an active part in the first edition of the

International Electrotechnical Vocabulary, London 1938.

Socioterminology views term variation as a natural result of social, professional, and communicative practices. This approach has been particularly influential in fields like sociolinguistics and translation studies.

The founder of socioterminology is generally considered to be Maria Teresa Cabré. She developed the concept, emphasizing the social dimension of terminology – that is, how terms are used and evolve in specific social and professional contexts. Socioterminology emerged as a response to traditional terminology approaches that often treated terms as fixed and context-free. Cabré and others argued that terminology should consider the users, institutions, and social practices that shape and modify specialized language (Cabré, 2003).

Communicative Theory of Terminology emphasizes the importance of context, communication, and pragmatic factors in understanding terminology. It sees variation as necessary and often productive (Cabré, 2023 et al.).

The communicating theory of terminology is a relatively modern approach within the field of terminology that seeks to address how terms function not just as labels for concepts but as tools for communication in specific contexts. It moves beyond the classical theory of terminology, which emphasized standardization, precision, and conceptbased definitions, by acknowledging usage, variation, and pragmatic factors in communication. Developed in response to limitations of the Wüsterian classical theory (named after Eugen Wüster), that was focused heavily on standardized terms for use in science and technology. Scholars like Juan Carlos Sager, Rita Temmerman, and others stated that real-world usage of terms varies significantly depending on context, user group, and communicative tasks (Temmerman, 2022). It is based on sociocognitive and pragmatic approaches in linguistics and communication studies. Terms are seen as units of discourse rather than static conceptual labels, situations – in professional, educational, and intercultural communication. The communicating theory recognizes that meaning is not fixed, but co-constructed during communication.

Terminological variability is considered in terms of the paradigmatic and syntagmatic connections of construction terms. The study is based on the structural organization of terminological systems in both languages. Two aspects are explored: external language comparison and internal terminological structure. These aspects are addressed by analyzing dictionaries, technical references on various types of

construction machinery, advertising brochures of wellknown construction brands, and specialized editions. As it is known, comparative linguistic research aims to establish the differences and similarities in the composition of units and in the structural organization of terminology systems. The nature of interlingual correspondences depends on many factors, including the level of language proficiency, improvement of the system of teaching both native and foreign languages, the volume of educational, scientific, and technical information, and so on. Intensification of the processes of interlingual communication and the growing influence of global integration have also contributed to the creation of new and improvement of existing educational materials that reflect the realities of the modern world and the development of languages in the field of science and technology. As a result of the conducted research, it has been found that in construction terminology there are common micro-systems, stable patterns of organization of a particular terminological field in both languages. The classification of terminological units includes such parameters as inclusion, intersection, and partial overlap of meanings. It is noted that in both languages these phenomena have their own specific features, which is explained by the different nature of the languages.

Relations of inclusion are the relationships of terms that name subordinated concepts (excavator multibucket excavator; excavator – bucket excavator). Relations of intersection are relationships of terms that are not synonymous, the meanings of which contain common and differential features, so a term can be both a kind of excavator and, on the other hand, based on the presence of shared and opposing features, can be excavator-crane, excavator – dragline, excavator - cable crane, excavator - tower crane, excavator-drainage, hydraulic hoist – manual hoist; manual hoist – mobile hoist. It is worth noting that such opposition relations are studied in the context of the development of construction terminology within the framework of forming a freely combined model. An important type of terminological variability is synonymy. Synonymy in construction terminology is represented by two types of variability - lexical and terminological (complete and partial synonyms). The first type includes synonyms that do not have structural differences and are close in their meaning and functional-pragmatic features. These include terminology synonyms – terms that refer to the same concept (referent) but differ in their word composition. For example, screw mixer - auger mixer, interior plaster – internal plaster. Structural (morphological and word-formational) synonyms also include a

paradigmatic type of variants formed from the same root. For example, the synonymic series of the term road roller includes: asphalt roller, vibratory roller, roller compactor, pneumatic-tired roller. A particular group is represented by synonyms that are paradigmatic (regular) variants of terms that are used in specific contexts, depending on specific formal or functional factors (gender, number, etc.), as well as lexical variants, i.e., various names for the same concept or a structural feature of a specific construction machine, reflected in its name. Relations of identity, leading to the phenomenon of terminological variability and expressed in synonymy, link terms that name identical referents (in our case, construction machines and mechanisms) but differ in their form of expression. For example, single-bucket excavator and power shovel; one-bucket excavator - push shovel. Among the diversity of means of formal expression of specialized concepts, and therefore variants of terms, regardless of the count of variants, due to their relevance to modern terminology, it is important to note the so-called terminological synonymy. It still remains relevant from the time of its first appearance to today. However, despite a significant number of studies, including comparative research on the terminology of related languages, the nature and interaction of this phenomenon with other forms of variability still attract the attention of researchers. It is known that there are different opinions in the linguistic literature about terminological variability (synonymy). Some researchers believe that this phenomenon is alien to the terminology system, which should be characterized by strict unambiguity and one-to-one correspondence. These scientists emphasized the inadmissibility of synonyms in terminology (see Maria Teresa Cabre (Cabre, 2003 and others). Supporters of the view that linguistic synonymy (including terminological one) is a completely natural and functionally justified phenomenon.

However, despite the existence of differing views, most researchers believe that the phenomenon of terminological variability, including synonymy, is inherent in terminological systems. In particular, the traditional view of the nature of terminology systems is connected with the idea of their static nature, their unchangeability, and the need for strict normalization. However, the modern understanding of terminology systems, including construction terminology, considers them to be dynamic information systems of language, associated with the processes of cognition and categorization of the world. This view aligns with the increasing interest in terminological variability, as both a linguistic and extralinguistic phenomenon. Among the most thoroughly studied

aspects of terminological variability is synonymy, both complete and partial. The classification and analysis of such concepts alongside the development of methods for identifying and systematizing them is one of the key tasks of modern terminological studies. According to them [2, 3], synonymy is caused by the processes of term formation at different stages of development of terminology systems. Synonymy is inherent to specialized terminologies, where the same concept may have several formal expressions (names), due to the presence of different synonymic variants. Therefore, synonymy allows us to examine the internal dynamics of terminological systems, their openness and evolution. The phenomenon of terminological synonymy in construction terminology is characterized by the relationship of identity, which manifests in the presence of two or more lexically different but semantically identical terms associated with a specific concept and performing the same naming function. As a rule, the synonymous series of construction terms is formed under the influence of various linguistic and extralinguistic factors, such as borrowing from other languages, the desire for standardization, regional specifics, and professional jargon. The main types of synonymic relationships can be classified as follows: 1. Two-component terminological units (e.g., multi-bucket excavator scraper excavator, articulated truck - truck mixer). 2. Three-component terminological units (e.g., cyclic action excavator - periodic action excavator; concrete-delivery truck - concrete truck). 3. Fourcomponent terminological combinations *crawler-mounted power shovel – crawler excavator*). 4. Four-component term with an unlimited number of components (e.g., diesel-powered wheel excavator - single-bucket tracked diesel-powered excavator). Many compound terms are related to lexicalized phraseological units and short forms (or abbreviations). In this case, the terminological system contains many multi-component terms, in which the full terms are presented. Examples in which the semantic and structural core is the word: 1. 'excavator': bucket excavator, single-bucket excavator, multibucket excavator, dragline excavator – екскаватор з жорсткої лобової рами, ківшовий екскаватор, універсальний будівельний екскаватор, одноковшовий екскаватор, багатоковшовий екскаватор, драглайн. 2. 'machine': concrete placing machine, concrete mixer, concrete float - concrete-placing machine, concrete-mixer, concrete float traveling machine.

It should be noted that some researchers not only emphasize the importance of context in which a term is used, but also stress the necessity of identifying the

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core components of complex terms. It is noteworthy that the main characteristic of structural completeness of a term is that it allows for the reconstruction of a certain object. In cases where the primary word is missing, the understanding of the full meaning is lost. The semantic nucleus may be expressed by both a single word and a phrase, with its structure ranging from simple to complex. It is also emphasized that the terminological system includes the minimum form of a term, which consists of an initial, derived, or final form and is used in terminology and term formation as a truncated version. For example, crawler bulldozer with hydraulic drive – поворотний гідравлічний бульдозер; non-rotating bulldozer – неповоротний бульдозер; tracked bulldozer - гусеничний бульдозер; self-propelled grader – самохідний грейдер; motor grader – автогрейдер; rotating bulldozer with hydraulic drive – поворотний бульдозер з гідравлічним приводом; grader with three blades and a nonrotating dump – автогрейдер з трьома відвалами і неповоротним отвалом; asphalt spreader – асфальтоукладальник; stone crusher – stone breaking machine, crusher; stump-puller, nibble shears nibbler. Clearly, many of these terms, despite having been borrowed, have adapted and become widespread. However, it should be emphasized again that the morphological structure, the lexical composition of the term, and the manner of its naming are also the primary features that differentiate a term from a common word and give it a specialized meaning. In the studied terminology system in the thematic group 'Stoneworking machines for road construction', the following word combinations are found: a) with the word 'hammer': martillo – ударний копер, vibro-hammer – віброкопер, pile hammer – копер; b) according to cause of movement: 1. diesel hammer – дизель-молот, 2. hammer with mechanical drive – механічний копер; vibratory hammer – вібромолот; diesel hammer; hydro hammer – гідравлічний молот; vibrating beam; vibrosheaker - rocking hammer; hammer drill; excavator; percussion drill excavator.

Alarge number of oppositions are also found among terms (e.g., crawler bulldozer – wheeled bulldozer, boom derrick – derrick). Similar oppositions are often found in texts of this type. It should also be noted that such binary oppositions facilitate the understanding and mastering of new terms and concepts, as well as the formation of professional competencies.

It should be noted that some family terms in modern literature are not always presented consistently and do not always have equivalents in Ukrainian.

In conclusion, based on the above, it is possible to summarize that the specifics of creating specialized terminology in both Ukrainian and English are similar

in many ways. However, there are some differences: in English, compound terms prevail (the most common method of terminology formation), whereas in Ukrainian, syntactic and derivational models are most frequently used. It is this fact that should be taken into account when translating or creating specialized terminology in scientific and technical texts from one language to another.

Summarising the previous findings it is possible to point out that the phenomena of terminological variation deals with how and why specialized terms (i.e., terminology used in technical, scientific, legal, or other professional domains) change or differ in form and meaning across different contexts, languages, disciplines, or time periods. This theory intersects with terminology studies, linguistics, translation studies, and knowledge representation. In conclusion it is necessary to highlight the key points connected with this phenomena. Terminological variation occurs when synonymous terms exist for the same concept. It is absolutely obvious that polysemy arises if one term refers to multiple concepts depending on context. As for diachronic variation, it occurs with the process of terms changing over time. In accordance with previous findings diatopic variation arises when terms vary across regions or dialects. While diaphasic variation happens when terms vary across registers (formal vs informal use). It is worth noting that domain-specific variation occurs if a term has different definitions in different disciplines.

The variance phenomenon in terminology refers to the existence of multiple terms or variations for the same concept across different contexts, disciplines, languages, or regions. It would be interesting to note that this phenomenon has both positive and negative aspects. Revising the key results that are in general agreement with our previous observations, let's look through the positive aspects of the term variability. The greatest advantage lies in contextual flexibility. Variance allows terminology to adapt to specific professional, cultural, or regional contexts, making communication more precise within specialized fields. The term 'gypsum board' is also known as 'drywall' or "plasterboard" depending on the region (US vs UK vs international standards). This allows professionals in different locales to use familiar terminology. Another positive aspect is adaptation to technological change. Example: The emergence of "smart glass" is also referred to as 'electrochromic glass' or 'switchable glass', reflecting technological features and marketing distinctions. Our results provide one more positive aspect of this phenomenon which is so called 'specialization within subfields'. Example: "Concrete" in civil engineering may include variants like "ready-mix concrete", "reinforced concrete", and "precast concrete", each serving a specialized purpose.

Summarising general results it is possible to conclude that negative aspects of terminology variation could lead to ambiguity and miscommunication. Multiple terms for the same concept can confuse readers or speakers, especially in interdisciplinary or international settings. The term "cement" is often mistakenly used to mean "concrete". Inaccurate usage can lead to confusion in construction planning or material ordering. Negative aspect of this phenomenon may influence on translation challenges. Translators might have problems with choosing the most accurate term among variants, especially if the context is unclear or culturally specific. In Ukrainian, 'цегла' typically means 'brick', but there are different types like 'силікатна цегла' (silicate brick) and 'керамічна цегла' (ceramic brick), which may all be translated simply as 'brick' without distinction unless the context is clear. Negative aspect of term variance is absolutely connected with standardization difficulties. Variance can hinder efforts to standardize terminology, which is crucial in fields like medicine, engineering, and law term systems. "Aggregate" can be called "gravel", "crushed stone", or "ballast" in different regions or technical specifications, complicating procurement and compliance with international standards (e.g., ISO vs ASTM). Cross-language inconsistencies also appears due to this phenomenon. Translators may struggle to choose the most accurate term among variants, especially if the context is unclear or culturally specific. The English term 'insulation' covers thermal, sound, and moisture protection, but in some languages, different terms are used for each type, which can lead to oversimplification or mistranslation.

Investigating term 'variance' - the variation in form, meaning, or usage of terms across contexts, disciplines, languages, or time we came to several important conclusions. As it was stated above. terms are not universally stable. Terms often lack fixed meaning and can vary depending on context, discipline, user, or time period. Rigid definitions may fail in interdisciplinary or multilingual environments. Term variance reflects conceptual and cultural differences. So, variations in terminology often reflect deeper conceptual, cognitive, or cultural differences. It should be stressed that understanding term variance can enhance cross-cultural and interdisciplinary communication. Synonymy and polysemy are common in specialized languages. According to our observations, in specialized fields, multiple terms may refer to the same concept (synonymy) or one term may refer to multiple concepts (polysemy). Term disambiguation is crucial for clarity in translation, interpretation, and knowledge organization. Another aspect is term evolution. For sure, it is natural and continuous process. Terms evolve over time due to technological, scientific, and social changes. Terminological databases and dictionaries must be regularly updated to remain relevant. It is evident that term variance affects translation and knowledge transfer. So inconsistent terminology can lead to mistranslation, misunderstanding, or knowledge loss. That is why translators and subject-matter experts must collaborate closely, especially in technical or legal field. Term variance should be systematically analyzed. Using tools like corpora, terminology databases, and ontologies, term variance can be classified, tracked, and predicted. Systematic study helps build better translation tools, glossaries, and machine learning models.

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