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A SEMANTIC AND STRUCTURAL ANALYSIS OF IDIOMATIC EXPRESSIONS IN ENGLISH

This article examines idioms, which, as components of phraseological units, possess unique and richly developed characteristics. Based on their origin, idioms are classified within phraseological units. It is established that idioms have emerged and continue to emerge in connection with lifestyles, cultural practices, religious beliefs, superstitions, worldviews, art, and professions of different peoples. Clearly, each idiom was initially used with a literal meaning, but over time, gradually acquired figurative and idiomatic qualities. It is revealed that idioms serve as powerful indicators of the cultural and cognitive frameworks used by native speakers to interpret the world. It is noted that conceptual metaphor theory (CMT), a modern approach in cognitive linguistics, challenges traditional theories of language. It is argued that cognitive linguistics represents a new conceptualization that views idioms not as arbitrary or irregular linguistic phenomena, but as cognitively grounded constructions arising from universal cognitive mechanisms common to all native speakers. It is recognized that idiomatic expressions pose challenges for artificial intelligence (AI) and natural language processing (NLP) systems. It is established that traditional computational models often misinterpret idioms because they are not composite, and their meanings cannot always be inferred from individual words. Cognitive linguistics sheds light on the mechanisms and structure of human language processing, which can be applied to the development of artificial intelligence systems. The article concludes by arguing that by studying the mechanisms underlying the creation and expression of human meaning through language, cognitive linguistics lays the foundation for the creation of AI models with characteristics closer to those of humans. Moreover, some theories from cognitive linguistics, including conceptual metaphor theory and frame semantics, have been successfully transferred to artificial intelligence-based computer systems to improve their natural language processing and generation capabilities.

Key words: idiomatic phrases, semantic indivisibility, structural stability, Conceptual Metaphor Theory, AI models.

Introduction. According to its definition, “idiom” is a particular kind of phraseological unit. Idiomatic phrases are unique expressions of existing languages that are integral in their usage and unified in meaning, usually not amenable to precise rendering into other languages and requiring substitutions of similar stylistic coloring when translated. Within idioms, the unity of meaning and the stability of semantic, lexical, and syntactic structure constitute fundamental criteria. Lexical stability is maintained through the fixedness of components, while syntactic stability is ensured by preserving the established order of constituent elements. Structural stability is likewise upheld by the unaltered composition of idioms; any modification disrupts their expressive value. The semantic cohesion of idioms is achieved through the attenuation of the literal meanings of their constituent parts. Consequently, individual words lose their nominative function and operate instead as components of a metaphorically unified expression. Idioms serve as one of the most powerful stylistic

devices employed by authors to reinforce meaning. They enhance the expressiveness of particular themes within a text. Unlike simple lexical units, idioms function as more complex communicative structures. Semantically, they are marked by semantic integrity, and syntactically, they are distinguished by combinations of lexical elements that may otherwise appear incompatible. Idiomaticity is considered a fundamental characteristic of linguistic units. It exists at various levels, from words to set phrases, demonstrating that most units of the English vocabulary share this characteristic feature. A lexical idiom can take the form of a word or represent its lexical-semantic variant, possessing full or partial semantic integrity.

Analysis of recent research and publications. The late nineteenth century saw the emergence of two major approaches to idiom research, shaped by the Anglo-American and Continental European traditions. Scholars within the Anglo-American school—such as H. Sweet, Y. Bar-Hillel,

W. Chafe, N. Chomsky, F. Palmer, W. McMordie, and W. Weinreich—argued that idioms must be examined from multiple perspectives. From an interlingual standpoint, idiomatic expressions reflect nationally specific linguistic and cultural features. From an intralingual perspective, these scholars defined idioms as lexical combinations whose meaning cannot be deduced from the semantic values of their individual components.

In lexicographic practice, representatives of this school adopted a broad interpretation of idiomaticity, incorporating into dictionaries not only conventional idioms but also phrasal verbs, phraseological units, proverbs, metaphorical expressions, and even onomatopoeic forms. However, this inclusivity has often led to disputes regarding the classification and delimitation of idioms and phraseological units in lexicographic works. The Continental European approach, represented by Swiss, French, Russian, Soviet, and German linguists such as F. de Saussure, Ch. Bally, P. Guiraud, A. Bulakhovsky, F. Fortunatov, V. Fleischer, and G. Votyak, proposed a more systematic framework. In the early twentieth century, Ch. Bally distinguished phraseological units from free word combinations and introduced a tripartite classification comprising regular combinations, phraseological groups, and phraseological units. He also emphasized the inherent difficulty of drawing clear boundaries between free and fixed expressions within the lexicon.

Task statement. The main goal is to show the role and meaning of idiomatic expressions in the English language.

Outline of the main material of the study. Idiomaticity manifests in both interlingual and intralingual forms. Its precise nature can be established through comparative analysis, where the structural analogue—or standard of comparison—is identified either within the same language or across different languages. Consequently, idioms may take the form of idiomatic words or idiomatic phrases. The latter, characterized by semantic indivisibility and structural stability, function analogously to single lexical items and are therefore considered an integral part of a language's lexical and phraseological system. Conventional language theories analyzed idiomatic expressions as semantically opaque expressions whose meanings cannot be inferred from the semantic values of their constituent elements. Cognitive linguistics offers a novel perspective within the framework of Conceptual Metaphor Theory (CMT), illustrating idioms conceptually motivated and rooted in human cognition. According to this viewpoint, idioms are reflections of how humans understand abstract topics

through lived experience rather than just being verbal objects. Both their tenacity and cultural diversity can be explained by this philosophical foundation.

Established by Langacker (1987), Lakoff and Johnson (1980), and Kövecses (2010), theory of cognitive linguistics views language not a separate formal system but rather an essential component driven by general cognitive processes like metonymy, metaphor, and classification and that meaning is created by usage. Idioms are motivated language units that correspond to conceptual frameworks, which are the mental models that humans use to perceive and comprehend the world. The conceptual metaphors and pictures structure thoughts and become the source of their meanings.

Cognitive linguistics views metaphors conceptual rather than verbal. Lakoff and Johnson (1980) estimate that metaphors make up around 70% of English utterances. Metaphor is more than just a means of communication. Metaphors are a mechanism via which people comprehend, think, and express one thing based on another. They are a universal cognitive model for humans being conceptual at core. In daily life, humans frequently employ tangible, structured, and familiar concepts to make sense of more complex, unstructured, and difficult-to-define ones. Both are referred to as source and target domains, respectively. According to contemporary cognitive linguistics, metaphors fall under the cognitive category rather than the pure language category. Although the formula of metaphors is superficial, conceptual metaphors are deeply ingrained. Thus, metaphor is not so much a language phenomenon as it is a type of internalized cognitive category, cognitive tool, or cognitive source. We come to the conclusion that our conceptual system is metaphorical. Moreover, the shared social and cultural values of different ethnic groups are linked to the metaphorical conceptual structure, which may help explain why the same metaphorical phrase can have different or even opposite meanings for people from different backgrounds.

In Conceptual Metaphor Theory, metaphor is not “a decorative device, peripheral to language and thought”. The theory holds instead that conceptual metaphors are “central to thought, and therefore to language”. From this theory, a number of basic tenets are derived: 1) Metaphors structure thinking; 2) Metaphors structure knowledge; 3) Metaphor is central to abstract language; 4) Metaphor is grounded in physical experience; 5) Metaphor is ideological [2, p. 54].

Metaphorical way of thinking enables us to describe the meaning of many idioms and idiomatic

expressions. Through the metaphorical way of thinking any person can perceive and understand the figurative meaning of the continuation precisely as a result of imagination. People frequently interpret one conceptual domain in terms of another, which leads to the development of conceptual metaphors like “Anger is heat”- “He was boiling with rage” /She gave me the cold shoulder.” “Ideas are food” – “I can’t digest that theory.” / “That’s a meaty topic.” [2, p. 32].

Artificial Intelligence (AI) has become a key factor influencing many businesses in the age of rapid technological growth. AI has a significant and intricate impact, especially in the domains of translation and language. Cognitive linguists form the foundation for the generation of AI models with more human-like characteristics. Certain cognitive linguistics theories, including conceptual metaphor theory and frame semantics, have been successfully transferred to computer systems based on artificial intelligence in order to enhance their natural language processing and generation capabilities.

The study of language through the prism of human cognition is the focus of cognitive linguistics, which highlights the significance of mental operations, conceptual frameworks, and mechanisms for meaning formation in language interaction. Contrarily, artificial intelligence refers to the creation and use of a broad range of technologies and approaches with the goal of building systems that are capable of carrying out tasks that are typically thought to require human intelligence and intellectual capacity.

Cognitive linguistics offers essential insights into the mental processes involved in language comprehension, production, and assimilation within the framework of natural language processing. This information is necessary to build increasingly sophisticated algorithms that can accurately simulate human perception and production of language content. Cognitive linguistics makes a thorough theoretical basis for examining how individuals generate and understand ideas within the context of conceptual modeling. By using these methods, AI researchers can better model and manipulate semantic data in AI systems using generated conceptual models, which enhances and contextualizes language processing. Researchers can create artificial intelligence systems with improved cognitive functions that can perceive and comprehend language input by incorporating cognitive linguistics principles into AI systems.

AI is crucial to cognitive linguistics in data analysis and pattern identification because it can process and analyze vast amounts of linguistic data to identify subtle patterns, correlations, and structures—

especially when machine learning techniques are applied. The role of technology is significant for cognitive linguists, who seek to discover linguistic and cognitive patterns in a variety of languages and situations.

Employing computer modeling and simulation methods, artificial intelligence serves as a powerful tool for experimentally evaluating and enhancing theories of cognitive linguistics. Through the utilization of artificial intelligence (AI) tools, cognitive linguists can evaluate and refute established theories, enhancing our understanding of the interplay between language and cognition.

The potential of artificial intelligence to simulate cognitive functions like language learning and comprehension has created new avenues for research into the ways in which people process and produce linguistic patterns. The goal of current research is to incorporate theories of cognitive linguistics into artificial intelligence systems. Examples of this include developing algorithms for frame-based semantic analysis and computational models for metaphor interpretation. Additionally, there is increasing interest in using AI technologies to study cognitive-linguistic processes, namely the evolution of language systems and the processing of linguistic representations by neural networks [5].

Idioms highlight the potential of cognitively inspired techniques and the drawbacks of strictly statistical Natural Language Processing (NLP) models. Traditional computational models frequently misinterpret idioms since they are non-compositional, meanings cannot always be inferred from individual words. As statistical or word-based models treat each lexical item independently, literal translations of phrases like *“hit the sack”* or *“a piece of cake”* result in semantic problems. Idiom recognition and machine translation represent yet another important use. Idiom-aware algorithms drawn from cognitive linguistics are able to recognize idioms by contextual non-compositionality (e.g., semantic mismatch between literal and figurative senses). Map idioms across languages via shared conceptual metaphors instead of direct lexical equivalents.

For example, in order to translate the phrases *“waste time,”* *“spend time,”* and *“save time”* into other languages in a semantically accurate and culturally appropriate form, one should understand conceptual metaphor *“Time is money”*.

A theoretically driven framework for simulating idioms is offered by cognitive linguistics. Idioms are seen as examples of conceptual metaphor and metonymy, which can be computationally represented

as mappings between source and target domains, rather than as exceptions. By using this approach, AI models are able to depict idioms as semantic networks that use common conceptual structures to link literal and figurative meanings.

One way to conceptualize "*break the ice*" is as a metaphorical mapping between starting a social engagement (target) and physical fragmentation (source).

For example, the source domain in the idiomatic expression "*hit a wall*" is physical collision, while the meaning "*obstacle in progress*" makes target domain.

Another example of metaphorical mapping can be "*burning with anger*" which conceptualizes "*heat/fire*" as a source domain and "*anger as emotion*" as a target domain. Instead of learning fixed idiomatic patterns, AI systems can generalize figurative meaning by rooting idioms in these conceptual networks.

Metonymy is a type of literary device in which a word is replaced with a contiguous and related one. Metonymy is often limited to names of people, animals, professions, and locations. According to Ungerer and Schimd (2001), metonymy is a type of rhetorical device in which the literal and metaphorical meanings are closely related to draw attention to the continuity between words, which is seen to be a crucial factor in differentiating metonymy from metaphor. Actually, this viewpoint is supported by all of the conventional wisdom: metonymy is the practice of using one thing's name instead of another. Additionally, the two items must be somewhat connected or adjacent to one another [4]. Cognitive linguistics considers metonymy to be conceptual in nature like metaphor. Playing a great role in enriching language some of metonymies have become stable (being spontaneous, unconscious, and widely recognized as a type of thinking model). It is referred to as conceptual metonymy and is regarded as a type of cognitive mechanism. "Metonymy, also known as an idealized cognitive model (ICM), is a cognitive process in which one conceptual entity, the vehicle, grants mental access to another conceptual entity, the target, within the same domain" [1, p. 334].

Metonymy functions inside a single conceptual domain, whereas metaphors organize abstract thought across domains. One prominent component of a conceptual frame is used to represent another. Metonymy in idioms frequently offers cognitive access to difficult ideas. Some instances are:

"*The White House announced...*" This structure represents its inhabitants (metonymy). "*All hands on*

deck" – a cry or signal used on board ship, typically in an emergency, to indicate that all crew members are to go on deck. The act is represented by hands. Metonymy highlights important aspects of experience that can readily activate the entire conceptual frame, which adds to the economy and vividness of idioms.

The cultural foundation of idioms is another point of emphasis for cognitive linguistics. The verbal realizations of conceptual metaphors vary by culture, despite the fact that they may be universal. Although basic bodily sensations such as spatial orientation, bodily movements, and emotions are common to all cultures, Kövecses (2005) notes that how these sensations are perceived and conveyed through language varies depending on historical and cultural norms. Thus, idioms serve as cultural mirrors, reflecting how a society perceives morality, relationships, emotions, and other aspects of life. History and culture of language community are frequently reflected in idiomatic expressions. Understanding of imagery, figurativeness, and metaphorical processes of idioms can help one better understand cultural quirks.

For example, the phrase the meaning of the phrase "*show your true colors*" is that one should show his real attitudes and qualities. A person who shows his true colors reveals his real thoughts, especially when they are negative. With nautical origin this phrase first appeared in 1700s. In Medieval times pirates would sail under false flags to trick other ships. Believing that the pirates were friendly, the other ships approached them and were captured. The pirates would only display their "*true flag*" following the attack.

Another example "*let the cat out of the bag*" means to uncover, to reveal a secret. The phrase seems to have started in medieval England, when peasants who farmed the land had to pay the lord of the manor a significant portion of their earnings. Some made an effort to avoid declaring all of their animals, and they often removed them to sell them illegally at a butcher shop or market. This was a common method of selling young pigs, who were transported to the market in sacks. Since both the buyer and the seller were breaking the law, the sales were frequently completed quickly, and occasionally it was possible to sell a cat rather than a much more expensive pig since the buyer did not check the bag before the sale. However, when the cat jumped out of the bag, their secret was uncovered.

Ultimately, idioms act as a mirror of cultural-historical heritage. The information hidden in them

becomes actualized by conceptualizing it at the discursive level. Based on the examples we analyzed above, we can conclude that sometimes the social-cognitive and functional use of these expressions is relevant and of great importance for the modern era. When studying this phenomenon, ethnolinguistic, cultural, social, cognitive and other analyses would be fully applicable. Also, understanding and explaining conceptualization through metaphorization is of utmost importance.

Conclusion. Idioms are expressions of underlying mental structures and metaphorical frames rather than random verbal constructions, according to the principles of cognitive linguistics. Even while artificial intelligence has advanced significantly in the field of natural language processing, its comprehension of figurative and context-dependent terms is still restricted. This restriction results from artificial intelligence's reliance on statistical

correlations and literal meaning rather than genuine mental comprehension. Unlike human speakers, who interpret idioms through cultural knowledge, empirical reasoning, and metaphorical reasoning, artificial intelligence systems lack the embodied and contextual basis necessary for such interpretation. Consequently, the integration of cognitive linguistic models, such as Conceptual Metaphor Theory and Conceptual Blending Theory, into artificial intelligence architectures is a promising approach to improving the understanding of non-literal language. Consequently, idioms serve as an important criterion for distinguishing between superficial linguistic processing and true interpretive competence in artificial intelligence, especially as these systems are increasingly integrated into translation and communication technologies, where pragmatic sensitivity and cultural nuance are essential.

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Нагієва Г. І. СЕМАНТИЧНИЙ ТА СТРУКТУРНИЙ АНАЛІЗ ІДІОМАТИЧНИХ ВИРАЗІВ В АНГЛІЙСЬКІЙ МОВІ

У цій статті розглядаються ідіоми, які, будучи компонентами фразеологічних одиниць, мають унікальні і багато розвинені характеристики. На основі свого походження ідіоми класифікуються усередині фразеологічних одиниць. Встановлено, що ідіоми виникли та продовжують виникати у зв'язку з способом життя, культурною практикою, релігійними віруваннями, забобонами, світоглядом, мистецтвом та професіями різних народів. Очевидно, що кожна ідіома спочатку використовувалася в буквальному значенні, але згодом поступово набуvalа переносних та ідіоматичних якостей. Виявлено, що ідіоми є потужними індикаторами культурних та когнітивних рамок, що використовуються носіями мови для інтерпретації світу. Наголошено, що теорія концептуальної метафори (КТМ), сучасний напрямок когнітивної лінгвістики, кідає виклик традиційним теоріям мови. Вказано, що когнітивна лінгвістика є новою концептуалізацією, що розглядає ідіоми не як довільні або нерегулярні мовні явища, а як когнітивно обґрунтовані конструкції, що виникають з універсальних когнітивних механізмів, загальних для всіх носіїв мови. Визнано, що ідіоматичні висловлювання створюють труднощі для систем штучного інтелекту (ІІ) та обробки природної мови (НЛП). Визначено, що традиційні обчислювальні моделі часто неправильно інтерпретують ідіоми, оскільки вони не є складовими, і їх значення не завжди можуть бути виведені з окремих слів. Когнітивна лінгвістика проливає світло на механізми та структуру обробки людської мови, що може бути застосоване до розробки систем штучного інтелекту. На закінчення статті стверджується думка, що, вивчаючи механізми, що лежать в основі створення та вираження сенсу людиною за допомогою мови, когнітивна лінгвістика зкладає основу для створення моделей ІІ з характеристиками, більшими до людських. Більше того, деякі теорії когнітивної лінгвістики, включаючи теорію концептуальних метафор та семантику

фреймів, були успішно перенесені до комп'ютерних систем на основі штучного інтелекту для покращення їх можливостей обробки та генерації природної мови.

Ключові слова: *ідіоматичні фрази, семантична неподільність, структурна стабільність, теорія концептуальних метафор, моделі штучного інтелекту.*

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