SCIENCE TIME
Scientific journal
VOLUME:4 ISSUE: 5/1
10.00.00
FILOLOGIYA FANLARI
Ilmiy jurnali
ILM VAQTI

SEMANTIC SHIFT IN ENGLISH AI-RELATED NEOLOGISMS

Kamola Ismoilova,
Kokand State University, Uzbekistan
English Language Theory Department

Abstract. *The rapid development of artificial intelligence technologies has significantly influenced the lexical system of the English language. New AI-related neologisms emerge not only through word formation processes but also through semantic transformation of already existing lexical units. This article investigates semantic shifts in contemporary English AI-related neologisms and analyzes how technological discourse changes the meanings of common lexical items. The study employs semantic, descriptive, and contextual analysis methods to examine neologisms actively used in digital communication, social media, and technological discourse. The findings reveal that AI-related vocabulary demonstrates intensive metaphorization, terminologization, and semantic broadening. Words such as "hallucination," "prompt," "training," and "agent" have acquired new semantic dimensions under the influence of artificial intelligence technologies. The research highlights the role of AI discourse in accelerating lexical innovation and semantic evolution in modern English.*

Keywords: *neologism, semantic shift, artificial intelligence, lexical innovation, AI discourse, semantic broadening, metaphorization, English linguistics.*

Annotatsiya*. Sun'iy intellekt texnologiyalarining jadal rivojlanishi ingliz tilining leksik tizimiga sezilarli ta'sir ko'rsatmoqda. Sun'iy intellekt bilan bog'liq yangi neologizmlar nafaqat so'z yasash jarayonlari orqali, balki avvaldan mavjud bo'lgan leksik birliklarning semantik transformatsiyasi natijasida ham yuzaga kelmoqda. Ushbu maqolada zamonaviy ingliz tilidagi sun'iy intellekt sohasiga oid neologizmlarning semantik siljishlari o'rganiladi hamda texnologik diskurs oddiy leksik birliklar ma'nolarini qanday o'zgartirayotgani tahlil qilinadi. Tadqiqotda raqamli kommunikatsiya, ijtimoiy tarmoqlar va texnologik diskursda faol qo'llanilayotgan neologizmlarni o'rganish uchun semantik, tavsifiy va kontekstual tahlil metodlaridan foydalanildi. Natijalar sun'iy intellektga oid lug'at tarkibida metaforizatsiya, terminologizatsiya va semantik kengayish jarayonlari intensiv kechayotganini ko'rsatdi. Xususan, "hallucination" (gallyutsinatsiya), "prompt" (so'rov/buyruq), "training" (o'qitish) va "agent" (agent) kabi so'zlar sun'iy intellekt texnologiyalari ta'sirida yangi semantik qirralarga ega bo'lgan. Tadqiqot sun'iy intellekt diskursining zamonaviy ingliz tilida leksik innovatsiyalar va semantik evolyutsiyani jadallashtirishdagi muhim rolini yoritadi.*

Kalit so'zlar: *neologizm, semantik siljish, sun'iy intellekt, leksik innovatsiya, SI diskursi, semantik kengayish, metaforizatsiya, ingliz tilshunosligi.*

Аннотация. *Быстрое развитие технологий искусственного интеллекта значительно повлияло на лексическую систему английского языка. Новые неологизмы, связанные с ИИ, возникают не только в результате словообразовательных процессов, но и посредством семантической трансформации уже существующих лексических единиц. В данной статье исследуются семантические сдвиги в современных английских неологизмах, связанных с искусственным интеллектом, а также анализируется, каким образом технологический дискурс изменяет значения общеупотребительных слов. В исследовании применяются семантический, описательный и контекстуальный методы анализа для изучения неологизмов, активно используемых в цифровой коммуникации, социальных сетях и технологическом дискурсе. Полученные результаты показывают, что лексика, связанная с ИИ, характеризуется интенсивной метафоризацией, терминологизацией и семантическим расширением. Такие слова, как «hallucination» (галлюцинация), «prompt» (запрос/инструкция), «training» (обучение) и «agent» (агент), приобрели новые семантические значения под влиянием технологий искусственного интеллекта. Исследование подчеркивает роль дискурса ИИ в ускорении лексических инноваций и семантической эволюции современного английского языка.*

Ключевые слова: *неологизм, семантический сдвиг, искусственный интеллект, лексические инновации, дискурс ИИ, семантическое расширение, метафоризация, английская лингвистика.*

Introduction. Language constantly changes under the influence of technological, social, and cultural developments. One of the most influential factors shaping modern English vocabulary is the rapid growth of artificial intelligence technologies. Artificial intelligence has introduced not only new concepts but also new linguistic forms and semantic transformations into contemporary English. In recent years, AI-related terminology has become widely integrated into everyday communication, academic discourse, digital media, and professional interaction. Many existing English words have undergone semantic shifts and acquired specialized meanings within AI discourse. For example, the lexical item "hallucination," traditionally associated with psychology and medicine, is now frequently used to describe false or fabricated outputs generated by AI systems. Similarly, words such as "prompt," "training," and "agent" have developed new semantic interpretations connected to machine learning and generative AI systems. The phenomenon of semantic shift in AI-related neologisms reflects broader processes of lexical innovation in modern English. This issue has attracted increasing attention from linguists because semantic transformation demonstrates the adaptive nature of language in response to technological progress.

The aim of this study is to analyze semantic shifts occurring in English AI-related neologisms and identify the major semantic mechanisms involved in this process.

Literature Review. The study of semantic change and lexical innovation has a long tradition in linguistics. Classical works such as Lakoff and Johnson's *Metaphors We Live By* emphasize the cognitive role of metaphor in shaping meaning, which is highly relevant for understanding AI-related semantic shifts. Crystal's research on language change highlights how technological development accelerates lexical evolution, especially in digital environments.

Modern linguistic studies, including Yule's *The Study of Language* and Fromkin et al.'s *An Introduction to Language*, provide foundational explanations of semantic change processes such as broadening, narrowing, and specialization. These frameworks help interpret how ordinary English words gain new meanings in artificial intelligence discourse.

Recent lexicographic sources like the *Oxford English Dictionary* and *Cambridge Dictionary* document the rapid emergence of AI-related terminology, confirming that words such as "prompt," "training," and "hallucination" have developed specialized technical meanings. Similarly, McCarthy's work on vocabulary development supports the idea that usage frequency and context play a key role in semantic transformation.

Overall, existing literature shows that semantic shift in AI-related neologisms is a natural continuation of general linguistic evolution, intensified by technological progress and digital communication environments.

Methodology. This study uses descriptive, semantic, contextual, and comparative methods to analyze semantic shifts in English AI-related neologisms. Semantic analysis is

applied to identify changes in word meanings, especially processes such as broadening, specialization, and metaphorization. The descriptive method is used to classify neologisms according to their functions in AI discourse. Contextual analysis examines how meanings change in real usage from digital media, AI publications, and online communication. The comparative method helps to contrast traditional meanings with AI-related meanings. These combined methods ensure a clear understanding of semantic transformation in modern English.

Analysis and Results. This study employs an integrated linguistic approach to investigate semantic shifts in English AI-related neologisms. Since artificial intelligence terminology develops rapidly and spreads through digital communication environments, a combination of descriptive, semantic, contextual, and comparative methods was applied to ensure comprehensive analysis of lexical transformation processes.

The primary method used in the research is semantic analysis. This method enabled the identification of changes in lexical meaning within AI-related discourse and allowed the researcher to compare traditional meanings of lexical units with their newly developed technological interpretations. Special attention was paid to semantic broadening, semantic specialization, metaphorization, and terminologization, which represent the most productive mechanisms of semantic shift in contemporary English AI vocabulary. The descriptive linguistic method was employed to classify AI-related neologisms according to their semantic characteristics and communicative functions. Through this method, lexical items were systematically examined to determine how artificial intelligence technologies influence the evolution of English vocabulary. The descriptive approach also helped identify the frequency and stability of neologisms in modern digital communication.

Contextual analysis played a significant role in the research because AI-related neologisms often acquire meaning depending on their discourse environment. Lexical items were analyzed within authentic contexts extracted from technological articles, AI research publications, digital media platforms, online forums, and professional communication environments. Contextual analysis allowed the study to determine how semantic meanings shift when lexical units move from general English into specialized AI discourse.

The material for the research consists of AI-related lexical units actively used between 2022 and 2026 in technological discourse. Examples were collected from AI company publications, digital platforms, online communication, technological journalism, academic articles, and social media discussions related to artificial intelligence. Particular attention was given to lexical units associated with generative AI systems, machine learning technologies, neural networks, and digital automation processes. The selection of lexical material was based on several criteria. First, the lexical unit had to demonstrate semantic transformation connected with artificial intelligence discourse. Second, the neologism needed to show active usage in modern English communication. Third, the

ISSN: 2992-8850
www.uzresearchers.com

semantic shift had to represent a stable or widely recognized change rather than temporary slang usage.

The study also applies elements of discourse analysis because AI-related neologisms frequently function not only as linguistic units but also as indicators of cultural and technological change. The research therefore considers the relationship between semantic evolution and broader socio-technological developments influencing contemporary English.

The analysis of AI-related neologisms demonstrates that artificial intelligence discourse significantly accelerates semantic transformation in contemporary English vocabulary. The findings reveal that semantic shifts occur through multiple interconnected linguistic mechanisms, particularly semantic broadening, metaphorization, terminologization, semantic specialization, and anthropomorphic reinterpretation. One of the most productive semantic processes identified in the study is semantic broadening. Many lexical units that previously possessed relatively general meanings have expanded their semantic scope after entering AI discourse. The lexical item “prompt” represents a clear example of this process. Traditionally, the word referred to a reminder, cue, or stimulus encouraging someone to act or respond. However, within AI discourse, “prompt” has acquired a specialized meaning referring to textual instructions provided to artificial intelligence systems to generate specific outputs. This semantic development transformed the lexical item from a general communicative concept into a central technical term within generative AI technologies. The frequency of this usage has increased dramatically due to the widespread adoption of AI tools in education, business, and digital creativity.

Another important finding concerns metaphorical semantic shifts. The study reveals that AI discourse frequently borrows concepts from human cognition and psychology to describe machine behavior. The lexical item “hallucination” illustrates this phenomenon clearly. Traditionally associated with psychology and medicine, the term originally referred to false sensory perceptions experienced by humans. In AI discourse, however, “hallucination” now describes situations in which artificial intelligence systems generate inaccurate, fabricated, or misleading information. This metaphorical reinterpretation demonstrates how human cognitive terminology is transferred into technological contexts to simplify the conceptualization of complex machine processes. Similar metaphorical semantic shifts were identified in lexical items such as “memory,” “learning,” “reasoning,” and “understanding.”

The findings also indicate extensive terminologization of common English lexical units. Many ordinary words have become highly specialized technical terms within artificial intelligence discourse. For example, the lexical unit “training” traditionally referred to the process of practicing or teaching skills to humans or animals. In contemporary AI terminology, “training” refers to the computational process through which machine learning models analyze large datasets and optimize predictive

performance. The semantic shift demonstrates how technological innovation transforms everyday vocabulary into professional terminology with highly specialized meanings. An important observation emerging from the analysis is that semantic shifts in AI discourse occur at a significantly faster rate than traditional lexical evolution processes. Digital communication environments allow newly developed meanings to spread internationally within short periods of time. Consequently, AI-related neologisms demonstrate high semantic dynamism and rapid institutionalization within modern English vocabulary.

Overall, the results confirm that artificial intelligence functions as a powerful catalyst for semantic innovation in contemporary English. AI-related neologisms not only enrich the lexical system of the language but also reshape conceptual frameworks through which technological reality is linguistically interpreted.

Discussion. The emergence of semantic shifts in AI-related neologisms illustrates the dynamic interaction between language and technological innovation. Artificial intelligence discourse accelerates lexical evolution because new technological realities require new semantic frameworks.

The research indicates that semantic transformation occurs faster in digital communication environments due to global internet interaction and rapid dissemination of terminology. Social media platforms, technological journalism, and AI communities contribute significantly to the popularization of AI-related vocabulary. The findings also confirm that metaphorization plays a central role in technological language development. Human cognitive experience is frequently used to conceptualize AI behavior. Terms such as “hallucination,” “memory,” “reasoning,” and “learning” reflect anthropomorphic approaches to describing machine processes. Furthermore, semantic shifts in AI-related neologisms reveal the increasing integration of technological terminology into everyday communication. AI vocabulary is no longer restricted to specialists but actively enters general language usage. The study supports the idea that modern English demonstrates high lexical adaptability under conditions of technological globalization.

Conclusion. The study examined semantic shifts in English AI-related neologisms and identified major semantic mechanisms involved in lexical transformation. The analysis revealed that AI discourse significantly influences contemporary English vocabulary through semantic broadening, metaphorization, terminologization, and semantic specialization. The research demonstrated that many traditional English lexical units acquire new meanings in response to technological innovation. AI-related neologisms reflect not only linguistic change but also broader cognitive and cultural transformations in modern society. The findings emphasize the important role of artificial intelligence in shaping contemporary English lexical systems and accelerating semantic evolution. Future research may focus on comparative analysis of AI-related neologisms across different languages and investigate translation challenges associated with rapidly evolving technological terminology.

References:

1. Crystal, D. *Language and the Internet*. Cambridge University Press, 2022.
2. Yule, G. *The Study of Language*. Cambridge University Press, 2020.
3. Fromkin, V., Rodman, R., Hyams, N. *An Introduction to Language*. Cengage Learning, 2019.
4. McCarthy, M. *Vocabulary: Description, Acquisition and Pedagogy*. Cambridge University Press, 2021.
5. Oxford English Dictionary. "AI-related lexical entries." Oxford English Dictionary
6. OpenAI Official Website
7. Lakoff, G., Johnson, M. *Metaphors We Live By*. University of Chicago Press, 2003.
8. Allan, K., Burridge, K. *Forbidden Words: Taboo and the Censoring of Language*. Cambridge University Press, 2006.
9. Cambridge Dictionary. "Artificial Intelligence Terminology." Cambridge Dictionary
10. Cook, G. *Discourse and Literature*. Oxford University Press, 2018.