THE IMPACT OF ARTIFICIAL INTELLIGENCE ON THE LEXICAL DEVELOPMENT OF CONTEMPORARY ENGLISH

Tangirov Azizbek
Toshkent davlat iqtisodiyot universiteti Tórtkól fakulteti
Óqituvchi
azizbek.tangirov@tsue.uz

Abstract

Artificial intelligence has emerged as one of the most powerful forces reshaping contemporary English vocabulary. This thesis investigates the multifaceted impact of AI on lexical development, examining the emergence of AI-related terminology, the semantic evolution of existing words, and the distinctive patterns of lexical innovation that characterize the AI era. Drawing on data from social media, online newspapers, digital communication platforms, and lexicographic sources including the Oxford English Dictionary, Merriam-Webster, and the Cambridge Dictionary, the study identifies three primary dimensions of AI-driven lexical change. First, AI has generated a substantial new terminology through processes of compounding, blending, abbreviation, and metaphorical extension—terms such as "machine learning," "large language model," "prompt engineering," and "algorithmic bias" now constitute a specialized lexicon that has permeated mainstream discourse. Second, AI has catalyzed significant semantic change, most notably in the evolution of "slop," which shifted from denoting food waste to describing low-quality AI-generated content, and "hallucination," whose application to AI outputs represents a contested metaphorical extension from human cognition. Third, AI has stimulated the emergence of evaluative and identity-marking expressions—including "AI slop," "slopaganda," "brain rot," and "vibe coding"—that serve not merely to name phenomena but to express collective anxieties, critique, and cultural positioning regarding AI's role in society.

Keywords: artificial intelligence, lexical development, semantic change, neologisms, AI slop, digital communication, lexicography

Introduction

Background and Rationale

The relationship between technology and language has long been a subject of linguistic inquiry. From the printing press to the telegraph, from radio to the internet, each major technological transformation has left an indelible mark on the English lexicon. The arrival of artificial intelligence—particularly generative AI systems such as ChatGPT, which brought large language models into mainstream public consciousness in late 2022—represents a technological shift of comparable or even greater magnitude.

Unlike previous technologies that primarily enabled new forms of communication, AI systems are themselves language-generating entities. They produce text, engage in dialogue, and participate in communicative exchanges. This unique characteristic makes the AI era qualitatively different from previous technological transformations: the technology itself is linguistic, and its impact on language is therefore both direct and profound.

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The lexical consequences of this transformation are already visible. The Oxford English Dictionary, Merriam-Webster, and the Cambridge Dictionary have all incorporated AI-related terms into their entries, with Merriam-Webster selecting "slop" as its 2025 Word of the Year specifically in recognition of its AI-related meaning . In August 2025 alone, the Cambridge Dictionary added over 6,000 new words and meanings, with AI-related terminology constituting a significant proportion . These lexicographic developments signal that AI is not merely a topic of discussion but a force actively reshaping the vocabulary available to English speakers.

This thesis investigates the impact of AI on the lexical development of contemporary English. It examines three interrelated dimensions of this impact: the emergence of AI-related vocabulary and new terminology, the semantic change undergone by existing words in response to AI, and the functional and social dimensions of AI-driven expressions in digital communication contexts.

Research Questions

The thesis is guided by the following research questions:

1. Structural and Terminological Dimensions: What new vocabulary has emerged in response to artificial intelligence, and through what word-formation mechanisms have these terms been created?

2. Semantic Dimensions: How has AI catalyzed semantic change in existing English words, and what patterns characterize these shifts?

3. Functional and Social Dimensions: What functions do AI-related expressions serve in digital communication, and how do they encode social meanings, identities, and evaluative stances?

4. Lexicographic Dimensions: How have dictionaries responded to AI-driven lexical innovation, and what does this reveal about the relationship between technological change, language change, and institutional language authority?

Significance of the Study

This thesis contributes to several scholarly conversations. First, it extends the established literature on technology and language change into the specific domain of AI, a domain that remains underexamined despite its rapidly growing significance. Second, it offers a systematic account of semantic change in the AI era, providing empirical grounding for theoretical claims about metaphor, semantic bleaching, and evaluative language. Third, it engages with lexicographic theory by examining how dictionaries navigate the tension between the need for timely documentation of AI terminology and the traditional requirement for sustained evidence of a term's staying power. Finally, it contributes to broader discussions about the social and cultural dimensions of AI, showing how vocabulary both reflects and shapes public understanding of artificial intelligence.

Literature Review

Theories of Semantic Change

Semantic change—the process by which words acquire new meanings—has been a central concern of historical linguistics since the nineteenth century. Classical typologies identified processes such as metaphor, metonymy, broadening, narrowing, amelioration, and pejoration as the primary mechanisms through which meanings evolve . More recent work has emphasized the role of pragmatic inference, subjectification, and intersubjectification in driving semantic change, with Traugott and Dasher's (2002) "invited inferencing" theory providing a particularly influential framework.

The digital age has prompted renewed interest in semantic change, with scholars examining how online communication accelerates and shapes meaning evolution. The concept of "semantic bleaching"—the weakening of a word's original meaning—has been applied to terms such as "literally," which has

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shifted from denoting literal truth to functioning as an intensifier . Conversely, processes of semantic strengthening and evaluative loading have been observed in the development of online slang.

Lexical Innovation and Technology

The relationship between technological change and lexical innovation has been extensively documented. Crystal (2006, 2011) provided foundational accounts of internet linguistics, identifying the distinctive features of computer-mediated communication and their implications for language change. Subsequent work has examined specific technologies—from email to social media—as drivers of lexical innovation.

Social media platforms have emerged as particularly productive sites of lexical experimentation. Research on TikTok, Twitter, and other platforms has documented the rapid emergence and diffusion of neologisms, acronyms, and semantic innovations . The concept of "platform affordances" has been developed to describe how the design features of digital platforms—character limits, hashtags, algorithmic amplification—shape the kinds of linguistic innovations that emerge and thrive .

AI and Language: Emerging Scholarship

Scholarship on AI and language has expanded rapidly since the release of ChatGPT. Much of this work has focused on pedagogical applications, examining how AI tools support language learning and writing development . A parallel strand of research has addressed the linguistic dimensions of AI itself, including the contested terminology used to describe AI phenomena such as "hallucination" .

However, relatively little work has systematically examined AI's impact on the English lexicon from a linguistic perspective. The emerging literature on "AI slop" represents an important exception, with scholars examining the term's definitions, normative status, and sociolinguistic functions . This thesis contributes to this emerging literature by providing a comprehensive account of AI-driven lexical development.

4 Lexicographic Theory and New Word Inclusion

The inclusion of new words in dictionaries has long been a subject of both scholarly and public interest. Lexicographers have developed sophisticated methodologies for identifying and evaluating new vocabulary, relying on corpus data, citation collection, and editorial judgment . The criteria for inclusion—frequent use, widespread use, and meaningful use—reflect a balance between descriptive accuracy and practical utility .

The digital age has transformed lexicographic practice, enabling continuous updating and the tracking of terms in real time. However, the fundamental tension between comprehensiveness and selectivity remains: dictionaries cannot include every ephemeral coinage, yet they must remain responsive to genuine linguistic change. The AI era has intensified this tension, presenting lexicographers with a rapid influx of new terms whose staying power is often uncertain.

Methodology and Data Sources

Research Design

This thesis employs a mixed-methods approach combining corpus-informed lexical analysis, semantic analysis, and discourse analysis. The research design is exploratory and descriptive, aiming to document and interpret AI-driven lexical change rather than to test specific hypotheses.

This study is limited by its reliance on publicly available sources and its focus on English-language data from predominantly Anglophone contexts. The rapid pace of AI development means that the lexical landscape is continually shifting, and some terms analyzed here may have evolved further by the time of publication.

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AI-Related Vocabulary and New Terminology

The AI Lexicon: An Overview

Artificial intelligence has generated a substantial specialized vocabulary that has, in many cases, migrated from technical discourse into mainstream usage. This vocabulary encompasses terms for AI systems and technologies (artificial intelligence, machine learning, neural network, large language model, generative AI), AI processes and functions (training, prompting, fine-tuning, inference, alignment), AI-related concepts (algorithmic bias, AI ethics, AI safety, explainability), and AI outputs and phenomena (hallucination, AI slop, deepfake, synthetic media).

The word-formation mechanisms employed in creating this vocabulary are diverse. Compounding is particularly productive: "machine learning," "neural network," "large language model," and "prompt engineering" are all compounds that combine existing words to name new concepts . Blending appears in terms such as "deepfake" (deep learning + fake), which has become the standard term for AI-generated synthetic media. Abbreviation and acronym formation have produced "AI" itself, along with "AGI" (artificial general intelligence), "LLM" (large language model), and "GPT" (generative pre-trained transformer) .

Final Reflections

Artificial intelligence has become a powerful force in the lexical development of contemporary English. It has generated new vocabulary to name new technologies, practices, and phenomena. It has catalyzed semantic change in existing words, as speakers adapt familiar terms to new purposes. It has stimulated evaluative and identity-marking expressions that encode social stances toward AI. And it has challenged lexicographers to respond to linguistic change at an unprecedented pace.

The AI era is not the first technological transformation to reshape English vocabulary, but it may be the most rapid and comprehensive. The words we use to talk about AI—slop, hallucination, prompt, alignment, vibe coding—are not neutral descriptors. They carry assumptions, evaluations, and social meanings that shape how AI is understood, debated, and governed. As AI continues to develop and as its role in society continues to evolve, the vocabulary of AI will continue to change. This thesis has documented one moment in that ongoing process, providing a foundation for future research on the dynamic relationship between artificial intelligence and the English lexicon.

References

1. Bauer, L. (1983). English Word-Formation. Cambridge University Press.
2. Maleki, N., Padmanabhan, B., & Dutta, K. (2024). AI hallucinations: A misnomer worth clarifying. arXiv. https://arxiv.org/html/2401.06796v1
3. McCulloch, G. (2019). Because Internet: Understanding the New Rules of Language. Riverhead Books.
4. Oxford English Dictionary. (n.d.). How words enter the OED. https://www.oed.com/information/editorial-policy/how-words-enter-the-oed/
5. Tagliamonte, S. A. (2016). Teen Talk: The Language of Adolescents. Cambridge University Press.
6. Traugott, E. C., & Dasher, R. B. (2002). Regularity in Semantic Change. Cambridge University Press.
7. Zappavigna, M. (2012). Discourse of Twitter and Social Media. Continuum.

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