

THE IMPACT OF ARTIFICIAL INTELLIGENCE ON LANGUAGE EVOLUTION AND LINGUISTIC NORMS

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Abstract

This study investigates the influence of artificial intelligence on the evolution of language in modern society. It analyzes how AI-driven technologies—including machine translation, natural language processing, chatbots, and speech recognition systems—affect language use, transformation, and development. The research highlights that the growing integration of AI into everyday communication has accelerated multilingual interaction, contributed to the reshaping of linguistic norms, and facilitated the emergence of new vocabulary associated with digital environments.

Furthermore, the article examines the dual impact of AI on language practices. On the one hand, it enhances linguistic diversity and expands access to global communication; on the other hand, it raises critical concerns regarding linguistic standardization, the erosion of cultural nuances, and increasing dependence on automated systems. Particular emphasis is placed on the role of AI in language education, where adaptive learning platforms and intelligent tutoring systems enable more personalized instructional pathways.

The findings indicate that artificial intelligence should be understood not merely as a technological advancement, but as a significant sociolinguistic force that is reshaping patterns of communication, literacy practices, and cultural identity in the digital era.

Keywords: Artificial Intelligence (AI), Language Evolution, Linguistic Norms, Natural Language Processing (NLP), Machine Translation, Digital Communication, Language Change, Multilingualism.

Language has always evolved alongside technological and social transformations. From the invention of writing systems to the rise of the Internet, each technological revolution has reshaped human communication. In the contemporary digital era, Artificial Intelligence represents a new stage in linguistic evolution. AI technologies are increasingly involved in language production, translation, editing, and interpersonal communication.

AI-based systems such as ChatGPT, Google Translate, Siri, and Grammarly influence the ways individuals write, speak, and interpret meaning. As millions of users interact with these systems daily, AI gradually becomes a mediator of linguistic behavior. Consequently, linguistic norms are no longer shaped exclusively by human communities and academic institutions; technological algorithms also participate in regulating communication patterns.

Artificial intelligence is increasingly emerging as a new agent of communication. The rapid development of neural network technologies has led to the creation of systems capable of engaging in dialogue, generating scientific and literary texts, as well as editing and translating materials. Such systems as ChatGPT demonstrate a high level of human-like language simulation, thereby transforming the very structure of the communicative act.

Whereas communication was traditionally understood as an interaction within a “human–human” framework, a new model of “human–algorithm” interaction is now actively taking shape. This shift raises a number of important questions:

- Can a text generated by AI be considered an original authorial product?
- What degree of responsibility applies to the content produced by such systems?



➤ Does machine-generated language influence linguistic norms?

Artificial intelligence increasingly functions as an intermediary in linguistic interaction, contributing to the formation of standardized patterns of expression. One of the notable consequences of AI integration is the growing tendency toward the unification and standardization of speech. Since algorithms are trained on extensive text corpora, they tend to reinforce the most frequent linguistic structures. As a result, expressive variability may decrease, while formulaic and clichéd patterns of language use become more prominent¹.

On the other hand, technical advancements have been evolving significantly to enhance efficiency and standards in the field of language translation, facilitating worldwide contact and highlighting the escalating need for inventive technical remedies that could address the longstanding challenge posed by language barriers or restrictions. Additionally, these technologies pose substantial hurdles and uncertainty for the translation profession and its related business². As development of AI translation apps lots of scientific articles, books are translated with the help of AI, however this translation materials are not sufficiently and correctly interpreted, due to lack of cultural knowledge of AI. the exploration of AI-driven translation reveals a trajectory filled with possibilities and prospects. The fusion of human creativity with AI accuracy opens up a limitless realm of communication possibilities, contributing to the development of a global society capable of overcoming linguistic barriers. The authors collectively contribute to the ongoing narrative of artificial intelligence in the translation field. Future research directions are envisioned to focus on developing innovative structures for Neural Machine Translation, overcoming its limitations, and maintaining high translation accuracy with acceptable timeframes to meet real-time translation needs.³

Regarding the field of translation education, namely at universities, the authors of the research cited in stress the confluence of AI and MT⁴. The major focus is on how AI and MT may be used in translation training programs for better preparation for future professionals. Although the use of computer-aided technology has increased in structured classroom settings, the authors stress that learners still face a serious dearth of intrinsic motivation in AI-driven self-learning environments.

Artificial Intelligence contributes to language development through automated communication systems, natural language processing (NLP), and machine learning technologies. NLP enables machines to understand and generate human language by processing extensive linguistic datasets.⁵

One major contribution of AI is the rapid expansion of digital vocabulary. Technological innovation introduces new lexical items such as “algorithmic bias,” “prompt engineering,”

¹ David Crystal, *Language and the Internet*, 2nd ed. (Cambridge: Cambridge University Press, 2006), pp. 239–245.

² S. Doherty, “Translations| the impact of translation technologies on the process and product of translation,” *Int. J. Commun.*, vol. 10, p. 23, Feb. 2016.

³ YASIR ABDELGADIR MOHAMED 1, (Member, IEEE), AKBAR KHANAN1, MOHAMED BASHIR1, ABDUL HAKIM H. M. MOHAMED 1, (Senior Member, IEEE), MOUSAB A. E. ADIEL 2, AND MUAWIAA. ELSADIG 3. The Impact of Artificial Intelligence on Language Translation: A Review. Digital Object Identifier 10.1109/ACCESS.2024.336680

⁴ K. Liu, H. L. Kwok, J. Liu, and A. K. F. Cheung, “Sustainability and influence of machine translation: Perceptions and attitudes of translation instructors and learners in Hong Kong,” *Sustainability*, vol. 14, no. 11, p. 6399, May 2022, doi: 10.3390/su14116399.

⁵ Natural Language Processing Jurafsky, Daniel, and James H. Martin. *Speech and Language Processing*. Pearson, 2023.



“deepfake,” and “machine learning.” These terms quickly become integrated into everyday speech and academic discourse.

Moreover, AI facilitates multilingual communication. Machine translation systems reduce language barriers and enable global interaction among speakers of different languages. This process accelerates linguistic exchange and encourages the adoption of international terminology, especially English-based technological vocabulary.

AI also influences writing conventions. Grammar correction software and predictive text systems encourage users to follow standardized sentence structures. As a result, digital communication increasingly reflects algorithmically preferred linguistic patterns.

AI-generated texts often prioritize clarity, brevity, and grammatical correctness. Although such features improve communicative efficiency, they may also reduce linguistic individuality and creativity. Local dialects, idiomatic expressions, and culturally specific linguistic forms may become less visible in digital environments dominated by standardized AI-generated communication.

Furthermore, educational institutions increasingly use AI-assisted writing tools. Students and professionals rely on automated grammar correction and content generation systems, which may gradually reshape academic writing norms worldwide.

CONCLUSION. Artificial Intelligence significantly influences language evolution and contemporary linguistic norms. AI technologies facilitate communication, expand multilingual interaction, and improve linguistic accessibility. Simultaneously, they contribute to the standardization of language and the reduction of expressive variability.

The increasing dependence on AI-mediated communication may reshape human linguistic behavior, educational practices, and cultural identity. Therefore, balancing technological efficiency with linguistic diversity and creativity remains one of the major challenges of the digital age.

Ultimately, AI should be viewed not only as a technological tool but also as a powerful sociolinguistic force capable of transforming the future of human communication.

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