Chapter 6
Communication Transformed by Generative Artificial Intelligence:
The Future of Language, Media, and Expression

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ABSTRACT

Generative Artificial Intelligence is revolutionizing communication by enhancing personalization, automating content creation, and transforming human-machine interactions. From AI-driven chatbots and virtual assistants to real-time language translation and sentiment analysis, these technologies are reshaping global communication across industries. Businesses leverage AI to improve customer engagement, educators use it to enhance learning experiences, and media professionals apply it for content generation. As AI evolves, it enables more natural conversations, bridges language barriers, and fosters inclusivity. However, ethical concerns, misinformation, and data privacy remain challenges. Therefore, understanding AI's role in communication is crucial for harnessing its benefits while mitigating risks in the digital age.

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INTRODUCTION

Generative AI, or generative adversarial network (GAN) technology, can mimic any form of communication in any medium. It can control and play characters, manipulate any image, and generate any sound or voice. In essence, generative AI can create any form of communication. This is revolutionizing the world of communication in both promised and pernicious ways. This centers around discussing both the promised and pernicious impacts that generative AI will have on communication practices in a number of diverse industries, and the various contextual implications that result from this (Shafik, 2024a). Before delving further into the possibilities created by generative AI, it is important to outline what exactly generative AI technology can do. Generative AI refers to the use of GANs for transforming the computation of desired output data from random input data. Generative AI uses two AI models: a generator and a discriminator. The generator takes a seed, or "noise," as input data and uses it to produce output (Petrovska et al., 2024). Meanwhile, the discriminator uses the input data, i.e., a real image, as well as the output data generated by the generator, and assigns it a score based on similarity to the real image. Both networks then work in tandem with each other, such that the generator uses its output as a new input to generate a more realistic image, while the discriminator uses its score to learn from and improve its models and assign better scores to the generator's output. This process continues iteratively, with the result that the generator learns to produce new images that are extremely similar to the real images (Sauvola et al., 2024).

This chapter aims to provide an updated insight into how artificial intelligence (AI), and specifically the recent rise of generative AI systems, can transform communication and be used to understand and manipulate human behavior in different setups, from disinformation to quantified healthcare. The two main goals of the essay are to help scholars begin interpreting how generative AI is transforming (and is likely to further transform in the future) communication within and between distinct social and ethical dimensions and to inform policymakers and companies about the ethical and epistemological consequences of using generative AI applications for comprehension and manipulation (Khlaisamniang et al., 2023). We do so to pave the way for scholars interested in computational communication studies about the interactions and feedback effects of generative AI with multiple communities, as well as for the dialogue about AI-related phenomena among scientists and practitioners. Throughout history, scholars, inventors, and companies have come up with new ways to bring humans more closely together. Information and communication technologies aim to allow distance-transcending person-to-person communication, person-to-machine communication, machine-to-person communication, and machine-to-machine communication (Hwang, 2023). Generative AI is a technology that aims to improve these forms of communication by enhancing or disrupting interactions.

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S. Saravanan, J. Chandrasekar, S. Satheesh Kumar, Pavan Patel, J. Maria Shanthiand Sampath Boopathi (2024). *Enhancing Higher Education and Research With OpenAI Models (pp. 229-252).*
www.irma-international.org/chapter/the-impact-of-nba-implementation-across-engineering-disciplines/349023