Generative AI – balancing risks and benefits to society

The development of generative AI technologies, particularly those grounded in deep learning models like DALL-E and ChatGPT, has expanded the scope of content creation across various domains, including images, text, and sound. The creative potential of AI systems has continued to grow with the introduction of advanced models such as ChatGPT 4.5 in early 2025 (which includes dedicated capabilities for image and sound generation based on text prompts). These advancements enable innovative applications, such as the ability to recreate the voices of late artists or compose original melodies, redefining artistic expression and cultural preservation. However, the rapid evolution of these technologies warrants careful exploration of their broader implications for society.

One important benefit of generative AI is the possibility of enhancing creativity across diverse groups. In the realm of music, for instance, AI can assist musicians in composing new melodies or adapting existing styles, utilizing machine learning algorithms to analyze musical patterns (Caramiaux and Donnarumma, 2020). This democratization of creativity allows individuals with varying levels of expertise to engage in artistic endeavors, while also helping to preserve cultural legacies (Hussain, 2025). In sectors like marketing and advertising, AI tools can expedite the production of engaging content, thus increasing efficiency and reducing costs (Kaplan and Haenlein, 2019).

Despite these advantages, the proliferation of generative AI introduces many important ethical challenges. The reliance on AI-generated content can lead to a diminished focus on individual creativity, raising concerns about its long-term psychological impacts (Öztaş and Arda, 2025). Conversely, increasing use of AI-generated content can lead to job shortages in many creative industries, with potential long-term implications on the capacity to bring forth new ideas rather than just replicating existing patterns. Additionally, the ability to recreate an artist's voice or style brings forth questions of copyright infringement and authenticity, with similar concerns raised for written or visual works (Mammen *et al.*, 2024).

In conclusion, while generative AI offers substantial benefits in enhancing or streamlining creative activities, the associated ethical challenges warrant thorough consideration. Addressing these issues may involve establishing clear guidelines for copyright protection, ensuring consent when (re)using an artist's work, and fostering awareness towards responsible use of these technologies. By navigating the complexities tied to generative AI, society can capitalize on its benefits while mitigating the potential risks, ensuring a balanced integration into various creative fields.

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