Academic Summary

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03/10/2024

Title: "Artificial Intelligence and Bioethics: Navigating the Impact on Human Society"
Author: Michael Cheng-Tek Tai
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7605294/

In his article, "Artificial Intelligence and Bioethics: Navigating the Impact on Human Society," Michael Cheng-Tek Tai delves into the profound implications of AI, often referred to as the Fourth Industrial Revolution (IR 4.0), on the fabric of human existence. The paper, whose publication details are not explicitly mentioned, systematically examines AI, its historical context, and its potential consequences on industrial, social, and economic landscapes in the 21st century.

Tai elucidates the evolution of AI, emphasizing its various interpretations, from a technology facilitating intelligent machine operations to a system capable of interpreting data, learning, and accomplishing specific goals. The article recognizes the omnipresence of AI in contemporary life, from optical character recognition to virtual assistants like Siri, underscoring its integration into daily routines.

The author categorizes AI into weak AI, designed for specific tasks, and the aspirational strong AI or artificial general intelligence (AGI), capable of understanding and learning any human-like task. Notably, Tai explores the multifaceted functionalities of AI, encompassing automation, machine learning, natural language processing, robotics, and self-driving cars.

Contemplating the necessity of AI in human society, Tai contends that its adoption depends on the pursuit of efficiency and effectiveness in work processes. Acknowledging the historical trajectory of human reliance on tools and technology, he argues that the development of AI aligns with humankind's perennial quest for faster, more effective solutions.

However, Tai critically examines the potential negative impacts of AI on human society, addressing concerns such as societal disruption, unemployment, wealth inequality, loss of human connection, and the ethical challenges associated with uncontrolled AI autonomy. He poses thought-provoking questions about the consequences of AI programming and its potential to transcend human control, leading to unintended problems.

Despite the looming challenges, Tai accentuates the positive impacts of AI, particularly in healthcare. The article highlights AI's contributions to fast and accurate diagnostics, socially therapeutic robots, reduced errors due to human fatigue, AI-based surgical procedures, improved radiology, and virtual presence for distant medical diagnosis.

In light of the ethical considerations raised by the development of AI, Tai emphasizes the necessity of AI bioethics. Drawing parallels with traditional bioethics that govern relationships within and among natural existences, he argues for the establishment of principles guiding the ethical use of

AI. Tai proposes four principles for AI bioethics: beneficence, value-upholding, lucidity, and accountability.

In conclusion, Michael Cheng-Tek Tai's article provides a comprehensive exploration of AI's impact on human society and bioethics. By examining both the positive and negative dimensions of AI, Tai prompts readers to reflect on the ethical considerations and potential consequences of integrating advanced technologies into the fabric of human existence.