What has been the biggest impact of technology to date, and why? (Topic 2)

Generative AI: The Revolution to Come

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There have been highly extraordinary steps taken through the path of technology, spanning at least three industrial revolutions to date[1]. However, it is arguably clear that the spark of the next revolution has already reserved its place on the pages of history: Generative Artificial Intelligence, and its potential for mimicking human characteristics while creating original work at lightning speed. Despite developing recently, its effect is already being felt across the board, and being only at its earliest stages, it is estimated that its brightest time is yet to come[2].

Although early AI had already displayed human-like characteristics, it had never possessed the capability to replace humans in such a drastic way as it does now. Generative AI's productivity differentiates itself from early AI because it can produce new content, unlike early AI which could mainly detect fixed patterns. Thanks to its new ability to generate (which gives it its name), it can do human tasks at a speed a human could not reach, making it possible for it to replace humans.

Early AI's transformation into Generative AI is astonishing but was neither unexpected nor random. Alan Turing, the computing pioneer who cracked Nazi code during the Second World War, predicted that computers would mirror human intelligence at some time in history. In 1950, he developed the idea of the Turing Test[3] arguing that a computer can be called "intelligent" if it could mimic a human well enough to fool an actual human looking for deception, and Generative AI is slowly coming to a point where its output can only be detected with the help of other AI with similar algorithms[4]. Similar to the impression that every historical war had been revived by the demands of societies, it was the needs of its users that led to its development this way.

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[1] K. Schwab, "The Fourth Industrial Revolution: what it means, how to respond", World Economic Forum (2016, January 14)
[2] Dr. N. Rode, "The generative AI revolution: reflections upon my return from Silicon Valley", Schroders (2023, February 24)
[3] The Alan Turing Internet Scrapbook, "The Turing Test, 1950", (n.a.)
[4] K. Wiggers, "OpenAI releases tool to detect AI-generated text, including from ChatGPT", TechCrunch+ (2023, February 1)

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Providing services such as creating outlines, rewriting text, detecting errors, composing music, writing poems, preparing presentations, getting into social interaction with humans, generating codes and many more[5] and taking on people's burdens in certain areas led to billions of dollars of investments into companies, such as OpenAI for developing ChatGPT[6]. Thanks to all these investments and the lively market, these intelligent programmes do not use their capacity only on an individual basis but can also establish neural networks among each other. These collaborations help accelerate their neural networks and day by day makes them seem more human.

Until a few months ago, there was no entity that could mimic humans indistinguishably because simple AI had not reached its superior state then. Generative AI now can multi-function by gaining linguistic, rhythmic, logical and mathematical human characteristics and it is certainly not the highest version it can become just yet. Inevitably, concerns emerged that we would forget our human competencies and lose our skills over time by handing them over to computers. Nevertheless, as Bill Gates implores when he says "This new technology can help people everywhere improve their lives", we should develop a system that will adapt to these developments instead of being afraid of change[7]. Change is what revolutions are made of.

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