

Mapping changes in lived realities for today's youth

Frederik J van Deventer

Introduction

Generative Artificial Intelligence (genAI), a specific form of Artificial Intelligence harnessing the power of Large Language Models to *generate* new output based on vast and widely generalized data sources, is rapidly transforming our lives. Ranging from reshaping how we work (Joshi 2025) and how we learn (Perifanou and Economides 2025), to changing criminal behaviour (Ferrara 2024) and even influencing democratization (Cupać, Schopmans, and Tuncer-Ebetürk 2024).

Life in the age of genAI however, comes at a tremendous physical cost for our planet (Crawford 2021). The physical extraction of metals for chips to enable the machines to run the models [], the power consumption to drive the machines and then again for cooling is outgrowing the planned construction of the power grid at a breakneck speed (Lin et al. 2024), outpacing policy and lawmakers.

As with all transformative technologies there is firstly a real opportunity, in the increased productivity and the access to tools . Secondly a real threat, in the form of misinformation, criminal activity, (Ferrara 2024) and the undermining of autonomy (Cupać, Schopmans, and Tuncer-Ebetürk 2024). Thirdly a challenge for the use of resources and electricity that needs new solutions at scale.

Technology is not a neutral phenomenon with inherently positive outcomes.

Gap

We do not know how AI will reshape the future of our human development, but there are some guesses we can make and historical lessons we can take into account. In all the major jumps in technological advancement that brought about societal change: steam engine, electricity, communications, digital communication and now the more broadly available statistical models that “converse” with us through chat like ChatGPT, we have seen that regulation and

policy fueled by ideology has been the driver for the direction this advancement would take us (Johnson and Acemoglu 2023, 57).

Much of the research regarding AI has been focussing on improving models [], effects for legislation [], impact on education [], but not increasing agency and freedom what the UNDP describes as indicative of improving human development (UNDP 2025).

What is lacking then from scientific discourse is a systematic analysis of the factors that have been able to increase agency and in different areas like education, the work place, and at home.

Hook

The ideological belief that when the models become better our planet will become better are baseless and naive. We need to figure out ways where this powerful technology can become a force with guidance to a better world.

Research Questions

- How do we harness the accelerated changes GenAI is bringing to foster empowerment, freedom and increased human agency as opposed to oppression and machine driven decision-making?

Sub questions

- What challenges arise when deploying GenAI at world scale?
- What policies and laws have been instrumental in steering technologically driven societal transformation in the past and where has it failed?
- What opportunities are still open?

References

- Crawford, Kate. 2021. *The Atlas of AI: Power, Politics, and the Planetary Costs of Artificial Intelligence*. Yale University Press.
- Cupać, Jelena, Hendrik Schopmans, and İrem Tuncer-Ebetürk. 2024. “Democratization in the Age of Artificial Intelligence: Introduction to the Special Issue.” *Democratization* 31 (5): 899–921. <https://doi.org/10.1080/13510347.2024.2338852>.
- Ferrara, Emilio. 2024. “GenAI Against Humanity: Nefarious Applications of Generative Artificial Intelligence and Large Language Models.” *Journal of Computational Social Science* 7 (1): 549–69. <https://doi.org/10.1007/s42001-024-00250-1>.

- Johnson, Simon, and Daron Acemoglu. 2023. *Power and Progress: Our Thousand-Year Struggle Over Technology and Prosperity*. Hachette UK.
- Joshi, Satyadhar. 2025. “The Transformative Role of Agentic GenAI in Shaping Workforce Development and Education in the US.” *Available at SSRN 5133376*.
- Lin, Liuzixuan, Rajini Wijayawardana, Varsha Rao, Hai Nguyen, Emmanuel Wedan Gnibga, and Andrew A. Chien. 2024. “Exploding AI Power Use: An Opportunity to Rethink Grid Planning and Management.” In *The 15th ACM International Conference on Future and Sustainable Energy Systems*, 434–41. Singapore Singapore: ACM. <https://doi.org/10.1145/3632775.3661959>.
- Perifanou, Maria, and Anastasios A. Economides. 2025. “Collaborative Uses of GenAI Tools in Project-Based Learning.” *Education Sciences* 15 (3): 354. <https://doi.org/10.3390/educsci15030354>.
- UNDP. 2025. “Human Development Report 2025.” *UNDP (United Nations Development Programme)*.