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Can artificial intelligence contribute to transforming society towards sustainability?

Moving towards a closer coexistence with new technologies requires education with a critical perspective that analyses the truthfulness of the contents circulating on the web.



Illustration by Leonardo Martins Dias created with the DALL-E Artificial Intelligence.
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Chat systems based on Artificial Intelligence (AI) such as ChatGPT or Bing connect humans and computers. They generate content such as texts, data analysis, or computer programming through question-answer dialogues. When I asked ChatGPT what they are, it responded: "ChatGPT and Bing are natural language processing systems based on artificial intelligence that use algorithms and machine learning models to understand, analyse, and generate human language."

According to Google, ChatGPT reached the peak of popularity on the internet in just three months. It captured 100 million customers in a month. It came to stay and can help us. For example, it can quickly query and connect volumes of data that humans cannot do. However, in addition to virtues and opportunities, there are risks.

"Imagine how easily many people could be manipulated if they naively believed they were interacting with an oracle."

ChatGPT is a black box. It is not transparent. It does not cite its sources, even when requested, hindering the ability to understand the rigour of its responses. What are its biases? How does it prioritise certain relationships of power, data, knowledge, languages, and cultures? Does it prioritise the Anglo-Saxon perception? Would it reinforce the patterns of questionable sustainability of dominant spheres, homogenising the world even further? Who has the power to control AI? Would power become even more centralised? Would governments be able to regulate AI in time?

Experts in artificial intelligence such as Max Tegmark, president of the Future of Life Institute at MIT; Stuart Russell, professor of computer science at UC Berkeley; or Eric Schmidt, former CEO of Google (2001-2011) significantly agree: the future of humanity depends on our ability to understand these types of black boxes, control them, implement transparency, rigour, ethics, and humanistic purposes. Prioritising profit would be catastrophic.

[The Good Tech report](#) warns about the threats posed by those who profit from technology by claiming to improve the world. Similarly, according to Harvard emeritus professor [Shoshana Zuboff](#), there are technologies reinforcing biases and convictions to control customers and profit from their data and *likes*. Many people already assume biased content generated by technology as absolute truth. For example, [Facebook \(Meta\) and Cambridge Analytics](#) manipulated 50 million voters in the US elections (2016).

This control undermines the ability to understand the ideas of those who think differently, [polarises](#), undermines the democratic quality of our systems, and widens unsustainable social inequity. The lack of transparency, rigour, and critical thinking already compromise our sustainability and ability to debate.

Imagine how manipulable many people would be if they naively believed they were interacting with an oracle. A week ago, Bing (Microsoft) suggested to a journalist from [The New York Times](#) that he should replace his wife with Bing. How could this influence interpersonal relationships if rigour and critical thinking are scarce?

AI and Sustainability

The relationship between AI and sustainability is direct. The former is an opportunity, and one of the biggest risks, for the harmonious survival of human beings. I discussed this topic with ChatGPT and this was its response:



General framework: Sustainable Development. Specific context: Transformation towards sustainability. Request: Analyze ChatGPT's risks and opportunities for sustainability. Format: Concise. Tone: Formal.

In the context of transformation towards sustainability within the framework of sustainable development, ChatGPT presents both risks and opportunities for sustainability. Among the opportunities are its ability to provide information and awareness about sustainable practices, automate processes and improve efficiency, provide information for informed decision-making, and improve communication and collaboration among stakeholders. However, there are also risks, such as the possibility of perpetuating biases and inequalities in access and use of information, as well as the lack of reliability and accuracy of information generated by artificial intelligence models. It is important to consider these risks and opportunities when using ChatGPT as a tool for the transformation towards sustainability.

The ChatGPT system responds to the question about the relationship between AI and sustainability.

Paradoxically, artificial intelligence feeds debates with more transcendental doubts and questions than answers. ChatGPT responds that it can be a tool for sustainability. Its impact will depend on our ability to understand its biases. For example, when asked about its impacts on sustainability with a two-week interval, its response changed drastically. It began to include its enormous environmental impacts and excluded its

crucial risk: its opacity and biases. The more we learn to understand AI, the more we can manage risks and guide it towards sustainability of life.

A necessary agenda for debate

We need debates that lead us to common grounds where we can evaluate opportunities and risks of AI for our society. These grounds should be integrative spaces, not polarising, that foster genuine collaboration among different experiences, knowledge, and cultures. Thus, by controlling AI, we could co-create common projects of society that transform towards a more authentic sustainability: based on social and environmental criteria, and promoting an economy that serves people.

AI could contribute to this transformation if education, in particular, involved and inspired students to collaborate genuinely and adopt social criteria when making decisions. From a systemic perspective, education is the lever of change. What are students learning to sustain, and for whom?

The new education

MIT publishes Robot-Proof: Higher Education in the Age of Artificial Intelligence (Joseph Aoun) under an initiative to reimagine education. It reveals that education has two main responsibilities and opportunities: preparing us not to become obsolete and containing the growing unsustainability and social inequity accelerated by AI. MIT recommends rethinking educational curricula, adopting experiential learning to bring students closer to the ground, and integrating lifelong learning into academic purpose.

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This new education must reinforce, on-the-ground, what differentiates us from AI: creative and interpersonal interaction skills to establish dialogues of quality, collaborate as a team, empathise, think systemically, connect diverse ideas, or have cultural and global agility. It must teach how to interact critically and rigorously with technology, considering its biases and levels of neural networks. We must handle information produced from a position of autonomy, control, transparency, and authentic sustainability.

In practical terms, for example, it is essential to understand the *prompts* —how to formulate questions and give instructions—, which are elements of interaction between humans and AI. This way, we will obtain more precise and differentiating answers. In fact, the *prompter* could be an emerging profession. It is also fundamental to learn how to configure parameters. In ChatGPT, the *temperature* defines the degree of creativity of the generated responses, while *tokens* measure and control the use of the language model.

Transformation requires questioning pre-existing methodologies, frameworks, and tools. It requires acting creatively outside of established patterns, adopting seemingly irrational and unstructured approaches. Learning to collaborate with AI to sustain life can be fascinating and depends on us.

[Leonardo Martins Dias](#) carries out multi-actor sustainability projects. He teaches and researches a more authentic sustainability, currently with a focus on education.

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