

The paradox of 1945 and the blind faith that technology will save us

*The blind faith in technology as a cure to all that ails our world has led us to accommodate ourselves to the increase in global threats like climate change. **Viriato Soromenho-Marques** and **Sofia Ribeiro** write that the technological hype is based on the “Moore’s Law magic” illusion, which ignores the diverging ceilings of complexity in the sciences and technology. The authors invite us to reflect on the technological paradox of 1945, when Germany, even producing the best weapons, failed to win the war.*

Technological enthusiasm has become not only a propaganda and marketing tool, as we explained in a [recent article](#), but a full-fledged ideology, the *technological fix*. According to its mantra, all problems have a technological solution, including those caused by unforeseen technological impacts... This ideology manifests itself as a kind of secularised magical thinking, which aims to replace the natural anguish – felt by prudent minds in the face of the troubled spectacle of the complexity and dilemmas of the contemporary world – by a blind and uncritical confidence in the so-called unlimited capacity of human ingenuity. The problem is that this ideology, even more than many others, is deeply flawed. Its diffusion has been one of the causes of the passive way in which we, individuals, public policies, and public opinions, have been accommodating ourselves to the increase in ontological global threats, like climate change and biodiversity extinction, maintaining a disarming apathy. Would we do the same if we knew that a large asteroid was on a collision course with the Earth?

We would like to point out Jaron Lanier’s wise insight (Jaron Lanier, “The Complexity Ceiling”, in: John Brockman (ed.), [The Next Fifty Years](#)) on the need to take into consideration the concept of “complexity ceiling” when we ponder on the future of technological innovation. The hyper-optimism regarding the hope in rapid qualitative breakthrough in areas like medicine and biology is based on the dangerous illusion of considering that the “Moore’s Law magic” would last forever, not only in computer science but also in the other sciences of the material world, therefore ignoring their sharply diverse ceilings of complexity. The consequence of understanding that diversity in complexity undermines any attempt to find a common speed pattern in the future development of sciences and technologies.

One of the striking examples of the stark difference in the “complexity ceilings” is that which separates the “transportation” of information, through information and communication technology (ICT), from the technologies that allow for the mobility of people and goods from a place to another in the physical space. While the former has seen an exponential increase in performance (not without the risks of our growing dependence on complex networks, highly vulnerable to cybercrime), the latter have made comparatively little more than modest progress. In fact, as far as personal transportation is concerned, we are still very close to the technology that was first put to the test drive on August 5, 1888, when Bertha Benz, on her own initiative and with her two teenage sons, made the first ever long-distance car trip between two German cities (106 km).

For all technology futurists, including visionaries of a post-human future, the current energy crisis, made even more acute by the war in Ukraine, gives us a lesson in humility. Even discounting the shameful obstacle of those who have blocked innovation in the use of renewable energy to keep their polluting businesses going, the truth is that we continue to depend on the energy released by the sun tens of millions of years ago, captured in the form of coal, oil, and natural gas, the same ones that are skyrocketing the planet’s temperature, risking making it uninhabitable in many regions. If we are not to suffocate in the cul-de-sac in which we have allowed ourselves to be trapped through negligence, we will need to accept that it is not enough to change the way we do things. It will also be necessary to change deeply what we do, the way we live, produce, and consume. No technology will free us from difficult ethical choices and painful political decisions. Here too we will have to face the tortuous ceiling of complexity of human irresponsibility.

For those who bet everything on technology's fixing powers we would like to suggest a few minutes of reflection on the technological paradox of World War II. In the final phase of the war, all the dice of Nazi Germany were cast in the hope of turning the military tide with the famous "miracle weapons" (*Wunderwaffen*). Indeed, the best weapons developed during the war, except for the atomic bomb, were produced by the Third Reich. The best submarines, the best military armoured vehicles (like the Tiger and the Panther), the first jet planes (Heinkel He 178), the first night vision equipment, the first cruise missiles (V1), the first ballistic missiles (V2)... However, and despite its pioneering "secret weapons", Germany lost the war. Political and strategic errors in the conduct of the war, multiplying the fronts, underestimating the enemies, and overestimating its own forces, crushed the gains of technological superiority and military talent, exhausted the room for manoeuvre that is an indispensable condition for victory.

Today, in our always postponed war to achieve a sustainable future, which should be waged on behalf of all humanity, we will be doomed to failing disgracefully if we wait for the latest technology hype before risking a step forward. Our predicament can be summarised as a life-menacing time scarcity. If we want to buy the time needed to make a decent future possible, we must start right now making the right economic and political choices and morally sound decisions.



Notes:

- This blog post is based on [The Techno-Optimists of Climate Change: Science Communication or Technowashing?](#) *Societies* 2022, 12, 64. *Societies* 2022, 12, 64.
- The post represents the views of its author(s), not the position of LSE Business Review or the London School of Economics.
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