Review of: "Beyond the Fear of Artificial Intelligence and Loss of Job: a Case for Productivity and Efficiency"

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The article addresses a very up-to-date and critically important topic: the economic and societal impacts of the development of more and more advanced AI algorithms. Indeed AI capabilities are improving at an astounding pace these days and their future impact on our civilization can, and probably will, be massive. Unfortunately the article does not provide any new value added on the topic on top what has already been said, and sometimes even introduces unnecessary confusion. As far as I can see, neither an empirical or theoretical contribution is present in the paper, and as a review and opinion paper it appears rather shallow and far from comprehensive.

There are several books, articles, and even popular writings which provide a more thorough and insightful description of the potential economic and societal effects of AI, looking at the topic from various angles. Unfortunately the vast majority of such contributions are not mentioned in the current paper. The list includes among others Acemoglu and Autor (2011), Bostrom (2014), Acemoglu and Restrepo (2018), Agrawal et al. (2019), Trammell and Korinek (2020), Korinek and Juelfs (2022), Eloundou et al. (2023), just to name a few. I have also covered these topics at length myself, in my recent book and a series of related research papers (see e.g., Growiec, 2022a,b).

Apart from insufficient literature review, another issue with the paper is that it confuses mechanization, automation and AI. It even goes so far as to suggest that AI was already present at the time of the Industrial Revolution! It's clearly not like that.

Mechanization takes place whenever human physical work is replaced by machines with an external source of energy (e.g., a steam engine, internal combustion engine, electric engine). So the Industrial Revolution was mostly about mechanization. In turn, automation happens whenever human cognitive work such information collection, processing, and decision making is replaced by machines. Except for rare early predecessors, automation entered the scene with the spread of computers. AI, in turn, is still different, and its uniqueness comes from the fact that it is digital software that is able to learn and improve its performance with data. A spreadsheet, for example, can automate a lot of work but is not AI because it cannot learn. With these definitions, it's clear that AI effectively entered the economy and society relatively recently, with (among others applications) web search engines and recommender systems. The number one methodology in AI these days is deep learning, based on multi-layered artificial neural networks, and a major breakthrough in this regard has been the recently released GPT-4.

Another confusion in the paper arises when it comes to the timing and possible consequences of the arrival of artificial

general intelligence (AGI). Indeed, some say this will never happen, but one has to mention that at the same time, the median prediction of its arrival among AI researchers is around 2050-60, with some authors suggesting that this may arrive even in the 2020s-30s (Roser, 2022). These are really short timelines in fact!

Finally, the paper, if it aims to be a thorough review, should also discuss the risks associated with developing AGI. These risks are monumental, indeed existential! In fact, the no. 1 problem with AGI is its alignment, i.e., assuring that it will pursue the goal of developing the human civilization for the benefit of humans. Solving AI alignment is a massive task, and if AGI arrives before it's done, the most likely outcome is human extinction (see Bostrom, 2014, among many others). So yes, indeed there are promises of enhanced productivity, efficiency, and economic growth - particularly if production processes can be fully automated - but can we make sure that we will still be there and reap these benefits?

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