The future impacts of LLM (and other AI systems) on scientific research

December 29, 2025

1 What is the current state of the public philosophical discourse on AI systems ?

These lines are a follow-up to the reflections expressed by French philosopher and popularizer Thibaut Giraud (@MonsieurPhi. Public philosophical discourse on AI in France is dominated by voices that are fundamentally hostile against LLM like ChatGPT and other generative AIs.

Such views are not necessarily problematic *per se* (we can indeed have good reasons to be wary of some aspects of AI systems). The problem is that this hostility is frequently based on questionable metaphysical assumptions about the nature of the mind and simplistic conceptions of how AI systems (in particular *generative* AIs like LLM) actually work.

Focusing on LLMs, we can make a short list of these (more or *less*) problematic claims (some of them alrady mentioned by Thibaut Giraud) here :

- We cannot assess whether LLM "think" and "are intelligent", because it depends on our philosophical definition of these notions.

- LLMs cannot possess the same "intelligence" as humans because their material composition and functional principles are fundamentally different.

- In particular, none of the tasks currently used to assess objectively the cognitive abilities of LLMs can actually prove.

- LLMs cannot "think" because their fundamental nature is to perform "probabilistic calculus" and their task is to "predict words".

- LLMs cannot "generalize" because they proceed by induction from a given, limited dataset (on which they have been trained).

- Even if LLMs score higher than humans on certain "cognitive" tasks, it does only imply that they well "simulate" or "mimic" thinking - without *really* doing so.

- The question of whether LLM are "intelligent" is not important. What matters is only to determine how they impact our own cognitive abilities and socio-economic systems organizations.