



Photography Did Not Kill Painting: On Artificial Intelligence and the Future of Academic Medicine

Jin Wook Kim^{1,2}

 <https://orcid.org/0000-0003-4157-9365>

¹Department of Medical Informatics, Chung-Ang University, Seoul, Korea

²Department of Urology, Chung-Ang University Gwangmyeong Hospital, Gwangmyeong, Korea

Email: jinwook@cau.ac.kr

In 1870, Gustav Flaubert noted that “Photography will make painting obsolete” [1]. The advent of photographic technology placed art in an existential crisis to reexamine its role in the world. The knee-jerk reaction to photography was dishonesty. Ernest Lacan observed that painters copied photographs which captured the moment no artist could depict and hid their use of technology “like a mistress whom one cherishes but hides” [2].

Such is the state of artificial intelligence (AI) use in the 21st century. No longer burdened by poor mastery of writing, authors are submitting articles assisted in composition by AI. As the *International Neurourology Journal* is not an English composition assignment measuring the author’s flowery prose and structure, we do not find it problematic that AI was used to polish the language of the article. Authors need not ‘hide their mistress’ when they used AI to correct their grammar.

The problem arises when AI is used beyond dotting the i’s and crossing the t’s. This is not just a hard conservative stance on the use of AI. We must take a look at a deeper epistemological problem here. Projecting to a possible future where research is entirely produced by AI, and then received and reviewed entirely by AI, we are caught in infinite feedback between machine generated ideas. Even granting that such a scenario is acceptable if only it furthers the welfare of humanity, would the product of such ideas be true advancement?

We are reminded of Einstein’s mathematical account of the Brownian motion [3]. The Brownian motion is not random. It is deterministic at the particle level; dust particles interact with surface water molecules obeying the local rules. It is simply that

the overall aggregate is random, directionless, incoherent. Such is the dangerous analogy that AI research could produce: an AI researcher, received by an AI reviewer, publishing an AI paper, and feeding back into the AI researcher. Locally consistent, aggregately incoherent.

Proponents of AI research may cite recent advances in Mathematics. Gemini Deep Think achieved gold-medal level performance at the International Mathematical Olympiad [4]. AI solved combinatorics problems that perplexed human minds for decades [5]. But Clinical Medicine is not Mathematics. Unlike Mathematics, the biological science tackles a huge mountain of undiscovered data. We do not face a set logical puzzle with known boundaries and constraints. The ground truth is probabilistic, and the truth is not always causal science, but rather practical. Choices that demand human consideration, such as quality of life, pain and discomfort have value-laden considerations that cannot be ignored.

But more importantly, science is all about surprise. A researcher reading a paper is genuinely surprised by the new information, accepts with measured expertise and doubt with uncertainty, and generates a new question that fuels further research. This is the essence of research that should not be compromised. The difference between this and AI-AI interaction is that the former creates an emergent phenomenon that we have collectively called, so far, science, while the latter can only create incoherence.

So, here is the line that we draw in the sand. AI use in research is legitimate to the extent that it extends human cogni-



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tive potential without replacing human cognitive responsibility. We can use AI to investigate data, manage citations, and tidy up the grammar. What we should preserve, for our own sake, is the formulation of ideas. The introduction, the discussion and any part of a review article, these items are the domain of the human mind, the onus of the researcher to ask the right questions and seek the answer. Further details and guidelines will be prepared down the line. But this is our position and philosophy going forward. Use AI, take it to its limits. But the questions asked and answered must be your own. Do not surrender your inquisitive mind.

Photography did not kill painting. It killed the practice of 'pretty pictures,' allowing the human mind the freedom to explore new ideas of perception and reality. We do not know where AI is taking research in the future. The ground is shifting beneath our feet, and we have drawn the line. All we can do at this moment is to hold to our own principles, and ask the right questions.

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