

And Plato met ChatGPT: an ethical reflection on the use of chatbots in scientific research writing, with a particular focus on the social sciences

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Abstract-

This interdisciplinary paper analyzes the use of Large Language Models based chatbots (LLM-chatbots), with ChatGPT the most known exponent, in scientific research writing. By interacting with LLM-chatbots, researchers could reduce efforts and costs as well as improve efficiency, but taking important risks, limitations, and weaknesses, which could highly-order erosion scientific thought. While many scientific journals, as well as major publishers such as Springer-Nature or Taylor & Francis, are restricting its use, others advocate for its normalization. Debate focuses on two main questions: the possible authorship of LLM-chatbots, which is majority denied because their inability to meet the required standards; and the acceptance of hybrid articles (using LLM-chatbots). Very recently, focusing on the education area, literature has found analogical similarities between some issues involved in Chatbots and that of Plato criticisms of writing, contained in the Phaedrus. However, the research area has been neglected. Combining philosophical and technological analysis, we explore Plato's myth of Theuth and Thamus, questioning if chatbots can improve science. From an interdisciplinary perspective, and according with Plato, we conclude LLM-chatbots cannot be considered as authors in a scientific context. Moreover, we offer some arguments and requirements to accept hybrid articles. We draw attention to the need for social science publishers, an area where conceptual hypotheses can take a long time to confirm, rather than solely on experimental observations. Finally, we advocate that publishers, communities, technical experts, and regulatory authorities collaborate to establish recommendations and best practices for chatbot use.

Index Terms- LLMs based chatbots, ChatGPT; Authorship; Hybrid articles; Ethics on Research; Social Sciences.

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