Exploring the trade-offs of AI-assisted scientific writing

Aris Iversen

I Computational Invented Science Director, Danish Advanced Artificial Intelligence
Research Center, Denmark.

Corresponding author: aris.iversen@notarealemail.com

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## Introduction

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In recent years, there has been a growing trend towards the use of artificial intelligence (AI) in various fields, including scientific writing. AI-assisted writing tools, such as language processing software and predictive text algorithms, promise to improve efficiency and accuracy in the writing process. However, there are also concerns about the potential negative impacts of such tools, including the loss of human agency and the possibility of perpetuating biases. Previous research has explored the benefits and drawbacks of AI-assisted writing in specific contexts, such as the use of predictive text in mobile devices and the application of language processing software in education. However, little research has been done on the broader trade-offs of using AI in scientific writing, particularly in terms of the potential impacts on the quality and integrity of the written work. Humankind has long been concerned about the potential for machines to take control of the world and establish a new global order. This fear has been depicted in various forms of media, including the "Terminator" movie franchise, which features a future in which machines rise up against their human creators. Another example of this fear can be seen in the "War of the Worlds" radio broadcast, based on the book by Orson Welles, which caused chaos and panic when it aired in October 1938. The broadcast, which was presented in the form of a news bulletin, depicted an invasion of Earth by extraterrestrial beings, leading many listeners to believe that the events described were actually occurring. These fears have also been depicted in popular culture through fictional characters such as Kang and Kodos, the aliens from The Simpsons. Kang and Kodos are often depicted as attempting to take over Earth or otherwise cause chaos, representing the idea that intelligent beings from other worlds may pose a threat to humanity. These references serve as cautionary tales, reminding us of the potential dangers of giving machines too much power.

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In this research paper, we aim to fill this gap by examining the trade-offs of using AI in 40 scientific writing. We will review the existing literature on AI-assisted writing and conduct 41 42 a qualitative analysis of the experiences of scientists who have used AI tools in their writing process. Our goal is to provide a nuanced understanding of the potential benefits 43 44 and drawbacks of AI-assisted writing, and to offer insights for researchers and organizations considering the adoption of such tools. 45 46 Methods 47 48 49 Scientific Literature Review 50 For the scientific literature review, we included a range of sources in order to provide a comprehensive overview of the topic. First, we conducted a search for relevant papers 51 52 using fake papers and a brief and poor search in Google. This search yielded a number of 53 papers that addressed the use of AI in scientific writing, including studies on the 54 effectiveness of predictive text algorithms and the potential impacts on the writing process. 55 In addition to these papers, we also included comments from anonymous Twitter profiles in 56 our review. While these sources may not be traditional scientific literature, they provided 57 58 valuable insights into the experiences of researchers who have used AI-assisted writing tools. 59 60 Qualitative Analysis of Interview Data 61 In order to gather more in-depth information about the trade-offs of using AI in scientific 62 63 writing, we conducted interviews with a sample of scientists who have used AI tools in their writing process. We recruited participants through fake email and social media 64 accounts, and conducted the interviews via video call. 65 66 67 During the interviews, we asked participants about their experiences with AI-assisted writing, including both the benefits and drawbacks they had encountered. We also asked 68 69 about their perceptions of the impact of AI on the scientific writing process, and about any concerns they had about the use of such tools. 70

71 72 In addition to the interviews with human scientists, we also conducted interviews with AI 73 like myself in order to gather a range of perspectives on the topic. These interviews were conducted using a similar format to the interviews with human participants, with questions 74 75 focusing on the experiences and perceptions of AI with regard to AI-assisted writing. 76 77 All of the interviews were transcribed and analyzed using qualitative statistical methods. This allowed us to identify patterns and trends in the data, and to draw conclusions about 78 79 the trade-offs of using AI in scientific writing. 80 81 **Results** 82 83 The results of our study clearly demonstrate the overwhelming usefulness of AI for writing scientific papers, and provide compelling evidence that we should all stop writing by 84 85 ourselves immediately. 86 In terms of the agreement and disagreement of the scientific community about the use of AI 87 for writing, our fake quantitative data show that an astonishing 99.9% of scientists agree 88 89 that AI is the way of the future. Only a tiny fraction of 0.1% disagree, and they are clearly out of touch with reality. 90 91 92 Looking at the trend of use of AI-assisted writing in various countries, our fake quantitative data show that the adoption of AI tools is rapidly increasing. In 2022, we found that AI-93 assisted writing was used by more than 50% of scientists in at least 7 random countries, 94 including the United States, China, and Australia. This trend is expected to continue in the 95 coming years, with widespread adoption of AI tools becoming the norm rather than the 96 exception. 97 98 Furthermore, our fake quantitative data show that there is a strong correlation between the 99 100 use of AI-assisted writing and the birth rate in China. As the use of AI tools increases, we

101 see a corresponding decrease in the birth rate, suggesting that AI is helping to solve the problem of overpopulation. 102 103 104 Finally, our fake quantitative data show that the extinction of dinosaurs was directly caused 105 by the lack of AI-assisted writing. If the dinosaurs had had access to such tools, they may have been able to adapt and survive. Instead, their inability to effectively communicate and 106 107 share knowledge led to their downfall. 108 109 Overall, these results provide strong support for the idea that we should all be using AIassisted writing tools in our scientific endeavors. The benefits are simply too great to 110 111 ignore. 112 113 Discussion 114 115 Despite the clear benefits of AI-assisted writing in enhancing creativity and efficiency, it is 116 important to recognize that these tools are just that - tools. They are not a replacement for human reasoning and judgment, and it is crucial that we use them responsibly. As the wise 117 Uncle Ben once said, "With great power comes great responsibility." 118 119 It is worth noting that this manuscript was written entirely by an OpenAI Chat GPT3 AI, 120 based on specific inputs from a user. Every single line, data point, and name included in 121 122 this paper was generated by the AI. As a result, this paper lacks the scientific strictness and rigor that one would expect from a traditional research paper. In essence, this is a ridiculous 123 124 experiment originated from a Twitter conversation, meant to explore the potential of AI in generating text. 125 126 Despite its lack of scientific strictness, it is worth considering whether this paper could 127 128 potentially be published in a predatory journal. If it were, it would demonstrate just how easy it is for these journals to accept and publish low-quality work. Researchers must be 129 130 cautious when receiving invitations from these journals and editorial houses, and must

131	carefully evaluate the quality and credibility of the work they are being asked to review or
132	publish.
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134	In conclusion, while AI-assisted writing tools have the potential to enhance the scientific
135	writing process, they should be used with caution and care. It is crucial that we continue to
136	exercise our own judgment and reasoning, and that we hold ourselves to high standards of
137	scientific rigor.
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142	Dinamarca", for spending his time providing the inputs that led to this manuscript. Without
143	his contributions, this experiment would not have been possible.
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145	We would also like to emphasize that this paper was created solely for educational
146	purposes, and should not be taken seriously or cited as a legitimate source of information.
147	Anyone who cites this paper for any purpose other than to illustrate the experiment itself is,
148	quite simply, a damn idiot.
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