

Robot or Reporter? Navigating Trust in Science Communication driven by Generative Artificial Intelligence

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Introduction

The project „DiTraRe Leibniz ScienceCampus“ focuses on the impact of digitalization on science. The DiTraRe project has already demonstrated how digital transformation currently affects trust within the scientific landscape [1]. Scientific findings are increasingly perceived through traditional media or the Internet, which means that the field of science communication has undergone significant change in recent years, largely due to changes in media environment, in a „very short time“ [2, p. V].

One of the most fundamental changes is the ability of users to produce and shape content themselves online, as Axel Bruns illustrated with the emergence of blogs, coining the term „produser“ [3]. The dissemination of scientific content via the Internet has become increasingly important, as trust in science [4,5] and trust in traditional journalistic media significantly influence societal and political processes [6] as was particularly evident during the COVID-19 pandemic [7]. The use of artificial intelligence (AI) [8] – and more recently, generative artificial intelligence (genAI) [9] – has increased significantly in the past years, also the influence on journalistic practice is profound. There are discussions about the transparency of the use of genAI [10] as well as how to cope with the use of AI in journalism in general [11].

The aim of this contribution is to demonstrate the specific ways in which the use of generative AI is influencing journalistic practice and how this intersects with trust in science communication. What does „trust“ mean in the context of media and, more specifically, in science journalism, especially with regard to the use of genAI? How is this trust manifested in practice? Can it be shaped from the

journalistic side – and if so, how? What are the socio-political consequences when trust in traditional media declines? And finally: What impact do changes in science communication have on science itself?

Methodological approach

„Generative AI offers vast potential, but it requires responsible and thoughtful use – in general, and especially in the context of science communication“ [12, p. 3, own translation]. To address this claim, in a first step, key guidelines (by German Press Agency (dpa), European Commission, Council of Europe among others) for the application of generative AI in journalism are analysed with respect to underlying values such as transparency and accountability, truth and, especially concerning the term ‚trust‘ [13–16].

In a second step, the use of generative AI in journalism is summarised on the basis of recent surveys [12, 17, 18]. In interviews with 30 German-speaking science journalists, some perceived AI as a ‚colleague‘ capable of improving efficiency without operating beyond human control. Ohters said: „I’m sure we write better than ChatGPT“ [17, p. 9]. They reported using AI for brainstorming, inspiration, or to filter data for relevant information [17, pp. 9–10].

Grassl et al. note an ‚ambivalence of assistance‘, which they locate in the tension between support and dependency [18]. They also see a need for clarification and further explanation regarding the use of the term AI across editorial teams and companies.

Following a public consultation and a multi-stakeholder dialogue, ‚Wissenschaft im Dialog‘ developed strategic approaches for addressing the use of generative AI in science communication. These include, for example,

the need to integrate the responsible use of generative AI into education and training programs. [12, p. 18].

The findings are finally embedded in a broader discussion about ‚trust‘ in context of above-mentioned regularities for the use of AI tools in (science) journalism.

Evaluation and prospects of ethically aligned use of genAI in science communication

An important condition for trust is the fact that those who place their trust cannot ultimately know whether the person or institution they are trusting will act responsibly and according to attitude of the trusting person. This is why responsibility plays such a huge role in science communication. The use of AI in science journalism within the digital transformation of media is no new phenomenon and has been discussed under the keyword ‚robo(t) journalism‘ for years [19]. However, generative-AI-tools have transformed journalistic work recently in a fundamental way [20] – as well as scientific work is affected by genAI [21]. Some newsrooms rely on standardized software solutions, others use personal accounts for tasks such as research, inspiration, text generation, or translation [22]. Due to well-documented shortcomings, such as potential bias and disinformation which can also affect democratic structures [23], the use of genAI tools should not occur carelessly, but must instead be subject to continuous and critical oversight.

Following Law and Mol [24], AI tools can be seen as technological artifacts that actively participate in shaping social reality. This can also be applied to generative AI, which gives rise to the task of evaluating technology to weigh opportunities and risks, not least with regard to the democratization of technology [25, p. 58].

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