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A Multi-perspective Approach to AI integration in the Communication Sector: Strategies, Uses, Debates, and Challenges

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Artificial intelligence (AI) has arrived in the field of communication, as well as in other areas of society —including economics, medicine, engineering, and transportation— and is here to stay. This computer science field and scientific discipline, which focuses on creating systems that carry out tasks that normally require human intelligence without the need for people to supervise their work, ranges from deep learning that drives image and voice recognition to natural language processing and automation. It is a constantly evolving area that includes different levels and types of AI, and has multiple applications in the field of technologically mediated communication as well as in the field of news organizations, media, and journalism. Any reflection and study on the impact of AI today and in the future requires multiple nuances and analysis from different disciplines and perspectives. The application of AI to communication has undoubtedly opened up a wide range of opportunities and challenges that, at the very least, invites us to try and understand what it implies, what has changed, what may change, the precautions to be taken when managing its use, and the role of communication professionals when working with devices that use AI technology.

Advances in AI have improved efficiency in the communication field together with machine learning and human-machine communication, but they have also planned new challenges for all the actors involved, with changes in attitudes towards AI itself (Brewer *et al.*, 2022) as well as for the field of scientific research. AI and communication studies investigating social, political, cultural and ethical aspects show the maturity of the field (Nah *et al.*, 2020), while suggesting challenges. In particular, research on the use of AI applied to communication and journalism has increased in recent years, especially in North America (Calvo-Rubio and Ufarte-Ruiz, 2021), but also in Europe and Asia. The results of the most recent studies point to a progressive increase in contributions from the United States, Spain, and the United Kingdom (Sonni *et al.*, 2024).

This scenario of important scientific production is the starting point for new challenges to be faced from now on by scientific research on AI and communication, in what seems to be the beginning of a new wave of digitization marked by high technology and AI in particular. An overview of the situation suggests the advisability of exploring new dimensions that will enrich scientific approaches. That is why, as the data indicate that AI and people's interactions with it (through virtual agents, social robots and language generation software) do not fit perfectly into the paradigms of communication theory that have long focused on communication between humans (Guzman and Lewis, 2020), innovative research is needed to provide knowledge to articulate strategies for successful use in the field of communication and to try to anticipate the future, both in designing strategies and in training communicators and journalists. Several studies have suggested actions, both in the application through the different professional profiles of communication and in training. Some educational aspects of AI and journalism that urgently need to be incorporated point to the need to pay special attention to the fundamentals, technical skills, and ethical competencies (Lopezosa *et al.*, 2023).

Tripodos' 55th monograph, *Artificial Intelligence and Communication. Opportunities and Challenges*, offers a multi-perspective view of how the professional communication sector, understood in a broad sense, has integrated and is experimenting with AI tools in its creative and productive processes. There is also space for perspective and reflection on the challenges that this integration poses at the labour, legal or ethical levels, at a time of full transformation and professional debate on this issue.

From one of the most traditional sectors of journalism, Fieiras Ceide, Vaz-Álvarez, and Maroto González (2024) study how the ten most widely circulated Spanish newspapers have integrated AI into their organizations and production processes. Through interviews with senior management professionals, they provide keys to the positioning of the companies and their level of implementation of AI into their strategies, the management of AI tools and resources in the organization, as well as its impact on the search for and training of journalists' professional profiles.

The impact of the use of AI on the work of journalists and the copyright-law related issues is the starting point of the research by Díaz-Noci, Peña-Fernández, Meso-Ayerdi, and Larrondo-Ureta (2024). The authors address the implications of "artificial-intelligence assisted journalism" with the aim of studying to what extent the use of AI in newsrooms may alter the legal approach to authorship and other legal and ethical questions. Based on the literature review, they catalogue the processes of AI-assisted reporting, question its impact on possible job destruction, address the influence of SEO and the training of AI engines. The authors also discuss solutions, including technical solutions, fair use guidelines, and legal solutions.

In a context in which Generative AI (GAI) accelerates the creation of all types of content, its implications in relation to information disorders are also under discussion. Gutiérrez-Caneda and Vázquez-Herrero (2024) analyse the cases of ten independent international fact-checking initiatives to learn how they use

AI in their daily routines and the possibilities and risks this use may pose in the future. The authors offer an updated view of the AI-based solutions used in the different phases of fact-checking, how they have impacted work processes, the transformation of professional profiles in demand and the collaboration strategies that are opening up at the international level.

Although the rise of GAI is relatively recent, it is necessary to take an evolutionary view since its first uses in the field of communication. Magro-Vela, Sánchez-López, and Navarro-Sierra (2024) examine products generated by the audiovisual industry that have used GAI tools in their image development processes from 2016 to 2023. Through the study of qualitative content from the perspective of audiovisual analysis, they characterize the applications of GAI in advertising campaigns, magazine publications, video clips, and opening titles of fiction series. The results show the evolutionary process in the use of tools in the search for balance between creativity and technology.

While GAI tools can generate text in an automated way, their contents may perpetuate some biases that are present in human communication. Castillo-Campos, Varona-Aramburu, and Becerra-Alonso (2024) explore the biases in GPT-3.5, GPT-4 and Bing tools. They do so based on a mixed methodological design in which the summarization and interpretation of informative texts performed by GAI tools is contrasted with that of a group of experts. The results serve to raise awareness of the risks of biased information inherent in AI products and to vindicate the accuracy and ethical judgement of professional journalists.

Finally, authors Forteza-Martínez and Alonso-López (2024) reveal the results of a scientific literature review on AI in the field of social sciences in the period 2018-2023. The results evidence the growing interest in recent years in the study of the impact of AI in a broad sense, with the area of communication being the second most relevant in terms of the number of articles published, behind Law and ahead of Education and Politics. The data reinforce the need to continue applying mixed methodological designs for the study of all the issues of concern in the present and in the immediate future in relation to AI and its applications in the communication sectors.

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