Transforming Journalism Through AI: An Analysis of AI in the News Space

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Abstract

During the development of AI, and as it evolved its area of operation into several different fields, some have become skeptical of what it means for their jobs and our future overall. Journalism is one of the many fields that has been impacted by the development of AI, raising questions of concern and uncertainty.

AI in journalism has changed the way information is created and delivered to us. A field that once required man for each step in its process, has moved to becoming something that through AI, can be automated and simplified. This has sent journalists into a panicked spiral, concerned about where their labor fits in the equation of "automated journalism". Similarly, other concerns about AI rise the more we learn about it; some media analysts have become fascinated with the endless possibilities for AI in journalism. In this literature review, we'll discuss some newsroom experimentation, as well as some positive and negative outcomes of AI in the news space.

Transforming Journalism Through AI: An Analysis of AI in the News Space

Journalism has shifted throughout the years, adapting to our time. The introduction of artificial intelligence (AI) into journalism has changed the traditional journalism landscape, despite its deep rooted history. Nonetheless, AI has gained popularity as of recent due to the combination of widely developed and advanced technology accessible through computers and systems. The combination of AI along with advancements and integration into technology has created the AI we know of and discuss today. Through the integration of AI tools, tasks that would consume a lot of time from a journalist, such as the compilation of data, content creation, and fact-checking are becoming AI driven. This now allows journalists the flexibility and efficiency to focus their time and efforts on their investigative work, work that cannot yet be automated. However, while most evidence points at the benefits of AI in the news space, some questions about the use of AI in journalism oftentimes revolve around the integrity of it and how it affects traditional journalism and reporting.

The integration of AI into journalism has brought both positive and negative outcomes. Furthermore, to understand the importance and impact of AI in journalism we must first establish a definition for AI. As best described by Professor Collin Stultz in his article analyzing AI and its beginnings, artificial intelligence (AI) "broadly refers to the class of methods that strive to impart intelligence to machines" (Stultz, 2024). In short, AI provides systems with methods to enable machines to learn from data. In addition, it's critical to comprehend where and how long AI has been around. Despite its recent descent into popularity, "AI, as a field, has been around for almost 70 years, with the term being first coined in 1956" (Stultz, 2024). Stultz explains that the recent popularity of AI is much due to "advances in computational hardware and algorithmic methods" (Stultz, 2024). Stultz also states that AI is essentially the combination of natural

language processing, computer vision, and robotics. A basic and familiar example of this combination is ChatGPT, one of the most recognized platforms of AI, allows for a conversation-like platform for queries, where all can ask questions, get information, etc. ChatGPT, accessible on computers and mobile devices, combines the language processing (AI), vision of a computer device (accessibility), and robotics software (a autonomos and conversational system).

This literature review will examine existing research, drawing from peer-reviewed journals and published online articles to examine how AI is growing in journalism. The goal of this literature review will be to analyze the "newest" integration of technology in journalism, AI. Furthermore, some topics of discussion include the role of AI in the term some media analysts are calling "automated journalism", the use of AI to improve audience engagement and loyalty, and even beliefs of potential copyright law violations. The completion of this literature review will provide a contribution to the academic discourse surrounding the topic of AI in journalism. The hope is that it can contribute to the understanding of how AI is affecting the news world, and evidently specific topics such as broadcast journalism and how similarly, it has its own challenges in reaction to the incorporation of AI.

Positive Outcomes of AI in Journalism

With a solid understanding of what AI is and its history, we can come to understand and appreciate the positive outcomes of AI in journalism. AI has brought many positive results to the news space. At the moment of introducing AI into journalism, it was believed to be for the better and improvement of the industry. According to Felix Simon, scholar and author of "Artificial Intelligence in the News: How AI Retools, Rationalizes, and Reshapes Journalism and the Public

Arena", the adoption of AI was anticipated to provide "potential to increase efficiency in various news organizations" (Simon, 2024).

Since the introduction of AI in the news space there have been many ways in which media analysts such as David Caswell have suggested potential "AI strategies" that many, including himself, believe journalism folks should use in the newsroom. One of the main "AI strategies" Caswell sees newsrooms benefiting from is "bringing new efficiencies to specific and familiar steps within the existing news production workflows supporting an organisation's existing news products" (Caswell, 2023). This particular strategy suggests that AI be used in the newsroom to run easy and familiar systems and programming.

Caswell also suggests what he calls the "new-products-for-new-audiences" strategy. This AI strategy "seeks to actively accommodate the expansion of audience choice that generative AI enables" (Caswell, 2023). This suggested use of AI as a method and way to expand a news network's audience is one that's been explored and suggested by many media analysts. The strategy's ability will "also be extended to entirely new audiences via new journalistic products that would have been editorially impossible without generative AI" (Caswell, 2023). These AI strategies have already been launched in some newsrooms, and results have been added to the journalism discourse community, some of which include Bloomberg, which we'll discuss further.

Peter Amponsah and Atianashie Atianashie, scholars from the Department of Journalism and Communication Studies at the University of Ghana also believe that by allowing AI to help news organizations personalize content they can gain new audiences. Amponsah and Atianashie state that "by analyzing user behavior, preferences, and past interactions, AI can effectively curate news feeds and recommend articles that align with individual users' interests" (Amponsah, 2024). They maintain that in doing this, AI will essentially help create loyal

customers, "this level of personalization enhances user engagement and fosters a stronger relationship between news platforms and their audiences… it leads to increased loyalty and more time spent on a platform" (Amponsah, 2024).

The breadth of AI's ability in journalism also reaches news sources of other countries and languages. A news organizations known as SEMAFOR created Signals, a "multi-source breaking news feed" that has worked collaboratively with Microsoft and Open AI, is using AI to help find news in other languages, "this AI tool is focused on research and helps Semafor's journalists search news sources in different languages from around the world" (Hu et al., 2024). Charlotte Hu and Amanda Downie, editorial content contributors at IBM explain that all journalists at Semafor need to do following the search is "evaluate and verify sources, write summaries, and cite the original information" (Hu et al., 2024).

Bloomberg News, as mentioned earlier, has created and begun usage of their own AI model in an effort to best understand the benefits (if any) of integrating AI into their news platform. The results reported by Claudia Quinonez and Edgar Meij are mixed. The approach of their newsroom experimentation was centered around the "development around the notion of having a human in the loop, and design solutions that assist and help journalists" (Quinonez et al., 2024). Furthermore, work executed through their AI system was also checked and approved by a group of seasoned editors. They remain that many of the areas where they had "what if" questions, as they put it, could "represent an area of future experimentation" (Quinonez et al., 2024). With this, we learn that there is still much to learn and understand about AI, and like the perspective gained from Bloomberg's experiment, we could view questions and doubts about AI as "future experimentation" (Quinonez et al., 2024).

Negative Outcomes of AI in Journalism

Similarly, as positive outcomes of the use of AI in journalism have been noted, media analysts and scholars are also worried about how AI can negatively impact the industry. Felix Simon, scholar and author of "Artificial Intelligence in the News: How AI Retools, Rationalizes, and Reshapes Journalism and the Public Arena" states that the "lack of transparency in AI systems raises worries about biases or errors creeping into journalistic output, as generative AI gains prominence" (Simon, 2024). On a similar note, journalists assure and clarify to us that AI "is not merely a code that exists without human input" but that "in fact human labor is often ignored within the discussion of AI" (Moran et al., 2022).

Subsequently, Seth Lewis and his colleagues agree that "automated journalism has much to learn from the Human-Machine Communication, an emerging conceptual framework and groundbreaking research that has formed in response to a growing number of technologies such as chatbots…" (Lewis et al., 2019). This serves as a testament that we still have much to learn from "human-machine communication" and its versatility.

A survey conducted by the Reuters Institute for the Study of Journalism indicates the level of discomfort that people feel about the creation of news with AI. Fast Company shares a quick online report of their findings; results of a survey pool of 2,000 people show that 52% of individuals don't feel comfortable "with news produced by AI" (Dang, 2024). Additionally, it was noted that people surveyed preferred that the use of AI remain "behind the scenes" to "help journalists' work more efficiently" (Dang, 2024).

Concerns about "automated journalism" as mentioned by author Joanne Kuai, arise when "algorithmic processes that convert data into narrative news texts with limited to no human intervention beyond the initial programming" (Kuai, 2024). Automated journalism has raised

many concerns from members of the journalism community who believe that automated journalism "interacts with the First Amendment Section 230, and copyright in the US context" (Kuai, 2024). Copyright law, as noted by Kuai, not only protects authors, but also bolsters authors into creation while ensuring "public access to information and knowledge" (Kuai, 2024). Copyright law then forces us to pose the question then of who the work belongs to once it is put through the AI system, the author? Or the system/tech company?

AI technology, in addition to forcing its news space users into asking questions about copyright law, also poses an issue of codependency with technology companies. Colin Porlezza and Aljosha Schapals from the Institute of Media and Journalism worry that involvement with the tech companies might tether news companies, "AI technology creates a growing dependence of news organizations on major technology companies for AI tools and infrastructure" (Porlezza et al., 2024).

The growth and development of artificial intelligence promises tech companies and many industries unique and advanced opportunities for all aspects of their work. While we continue to conduct research in an attempt to best understand AI and its limits, if any at all, the list of pros and cons for its inclusion into fields like journalism continues to grow. The current use of AI in journalism hasn't yet reached a point where it is taking over the job of a journalist, but only simplifying it in an attempt to improve production and efficiency, accurate and widespread news coverage, user authenticity/personalization of content leading to loyal subscribers, and many more strategies that are growing in popularity in the newsroom. Similarly though, there continues to be a lot of concern surrounding the use of AI in journalism, among them including copyright law, dependency on large tech companies threatening authenticity, and even lack of fluency in "human-machine communication".

Simon states that while "AI aids news workers rather than replaces them, there are no guarantees this will remain the case" (Simon, 2024). While AI continues to grow, and research conducted shows us both positive and negative outcomes, we can expect some level of autonomy wherever AI works. In addition Simon notes "AI is sufficiently mature to enable the replacement of at least some journalism jobs either directly or because fewer workers are needed" (Simon, 2024). The future of AI remains unknown to us all, and while the media and technology landscape continue to expand, we will continue to gain an understanding for the depths of work that AI will help us with. The ground that AI covers goes much further than that of journalism, and with this coverage we can expect to analyze and strategize systems that will work best for journalism so that feelings such as those uncovered in the survey conducted by the Reuters Institute for the Study of Journalism will be resolved.

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