

The Evolution of Journalism in the Era of Artificial Intelligence

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Introduction

Journalism is in a perpetual state of transformation, shaped by a complex interplay of economic, political, cultural, and particularly technological forces. These shifts continuously redefine the structures and practices of journalism, pushing it to adapt to ever-changing contextual conditions to fulfill its essential role: fostering public communication through the reporting of newsworthy events. Technological innovations and their impact have been a prominent focus in the research agenda of journalism studies since the mid-20th century (Weischenberg, 1995). Among the most significant recent developments is the advent of artificial intelligence (AI), which has dramatically affected the communication and media ecosystem by introducing novel methods of producing, distributing, and consuming media content while at the same time challenging established journalistic norms and values.

The latest technological disruptor in journalism is generative AI, an umbrella term for AI systems that create new content. The release of OpenAI's ChatGPT in November 2022 sparked unprecedented hype and brought global attention to the transformative potential and far-reaching implications of AI technologies. In the domain of journalism, AI has emerged as an indispensable tool in newsrooms, implemented across the entire journalistic value chain. Moreover, it has become a catalyst for innovation that drives the reimagining of journalistic practices to meet the evolving demands of the contemporary media environment. This transformation is intricately linked to the ongoing digitalization and datafication of societal processes. Journalism is witnessing an “algorithmic turn” (Napoli, 2014), where data not only serve as a key resource for understanding and reporting on social phenomena but also facilitate the generation of new content based on existing data (Haim & Graefe, 2018). Newsrooms are increasingly operating as sociotechnical systems, wherein human actors and AI-driven, frequently anthropomorphized entities collaborate to enhance content creation and dissemination (Sarisakaloğlu, 2022).

Despite the considerable publicity surrounding AI and the significant advancements in its capabilities, the concept of AI is by no means novel. The origin of the term *artificial intelligence* can be traced back to the mid-20th century when American computer scientist

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John McCarthy first coined the term in a proposal to the Rockefeller Foundation for the *Dartmouth Summer Research Project on Artificial Intelligence*. This initiative led to a seminal conference held at Dartmouth College in New Hampshire in 1956 (McCarthy et al., 1955). The conference is widely regarded as the birthplace of AI as a field of study, setting the stage for decades of research to develop systems capable of performing tasks traditionally requiring human intelligence (see Chapter 2). McCarthy's pioneering vision continues to inform today's advancements as AI has moved beyond theoretical foundations to become a pervasive force across a wide range of industries.

Despite the elusiveness of a universally accepted definition of AI due to its interdisciplinary nature, a common understanding generally describes AI as “a collection of ideas, technologies, and techniques” (Brennen et al., 2018, p. 1) that enable software or hardware systems to simulate human intelligence by replicating human performance, behavior, rational thought processes, and reasoning, typically tailored to perform tasks that require human cognition within specific application fields, achieved through the employment of AI methods such as machine learning and its subfield, deep learning (European Commission, 2024; Göz et al., 2014; Russell & Norvig, 2016). These self-learning techniques empower systems to discern patterns and correlations, thereby enhancing their performance on designated tasks without the necessity of explicit programming for each instance (Mitchell, 1997). Consequently, AI-driven systems are “designed to operate with varying levels of autonomy and (...) may exhibit adaptiveness after deployment, and (...) for explicit or implicit objectives, infers, from the input it receives, how to generate outputs such as predictions, content, recommendations, or decisions that can influence physical or virtual environments” (European Commission, 2024). In contrast to simple automation, which typically relies on straightforward template-based systems to process structured data, performs repetitive tasks following predefined routines, and does not always employ AI methods, AI technologies are designed to learn from vast datasets (big data), generalize insights, and improve their functionality over time, which makes them more suitable for addressing complex tasks (Russell & Norvig, 2016).

News organizations worldwide are increasingly embracing the potential of AI technologies to enhance core journalistic functions, including information gathering, content creation, and distribution across diverse media formats (Newman & Cherubini, 2025). The integration of these technologies has been shown to enhance efficiency and stimulate creativity during the news production and reception cycles. However, the influence of AI is not limited to operational enhancements; it also has the potential to reshape journalistic values and norms, organizational structures, journalistic content production, the roles and responsibilities of journalists, and the dynamics between journalistic products and their recipients (Carlson, 2015; de-Lima-Santos & Ceron, 2022; Diakopoulos, 2019; Graefe & Bohlken, 2020; Lewis et al., 2019; Møller et al., 2024; Olsen, 2023; Porlezza & Schapals, 2024; Trattner et al., 2022).

These issues are further compounded by the uneven distribution of AI adoption across the globe (United Nations, 2024). While countries such as the United States and China are at the forefront of innovation in the development and implementation of AI technologies (Chopra et al., 2024), many newsrooms in the Global South, including those in Africa, Asia, and Latin America, have encountered various obstacles to the adoption of AI. These include limited financial resources, inadequate infrastructure, regulatory hurdles, and/or shortages in technological expertise (Beckett & Yaseen, 2023; Gondwe, 2023; Jamil, 2023; Kothari & Cruikshank, 2021; Munoriyarwa et al., 2023; Okiyi & Nsude, 2019; Sarisakaloğlu, 2025b; Soto-Sanfiel et al., 2022; Yu et al., 2023). Consequently, journalists in these regions often find themselves playing catch-up with the practices from Global North countries without critically assessing their compatibility with their own journalistic culture (Mellor, 2024).

As AI technologies become increasingly integral to journalistic practices and their disruptive potential redefines nearly every facet of journalism, scholars are turning their attention to the emerging research field of AI-driven journalism. This field aims to adequately describe and

explain the profound changes reshaping the field (Sarisakaloğlu, 2025b). It is rooted in the broader domain of computational journalism, where the intersection of technology and journalism propels the adoption of computers, automation, AI tools, and algorithms to enhance journalistic processes and outcomes (Anderson, 2013; Coddington, 2015; Cohen et al., 2011; Diakopoulos, 2017; Flew et al., 2012; Thurman, 2020).

Despite the growing pertinence of AI-driven journalism as a subject of academic inquiry, there remains a paucity of seminal works exploring its multifaceted impact on the field. To navigate the transformative impact of AI on journalism, it is necessary to revisit foundational concepts and theoretical and methodological approaches to accurately analyze and understand the algorithmic processes that are reshaping the field (Löffelholz & Sarisakaloğlu, 2024). To foster a more inclusive understanding of AI-driven journalism, it is imperative to incorporate diverse epistemologies that reflect a range of cultural, economic, and societal contexts, encompassing both Western perspectives and insights from countries in the Global South.

To that end, the purpose of *The Handbook of Artificial Intelligence and Journalism* is to furnish a comprehensive, globally oriented synopsis of the current state of AI-driven journalism, complemented by cutting-edge discourse on its ramifications. These include the systemic contexts of AI-driven journalism, the evolving structures of media organizations that generate algorithmically produced content, the redefined roles of actors in AI-driven newsrooms, changes in the routine practices of news production, and shifting consumption patterns. A distinguishing feature of the handbook is its pioneering exploration of this emerging research domain. It aims to elucidate the conceptualization, contextualization, and explanation of journalistic sociotechnical phenomena and undertakes a re-examination and reflection on extant theoretical and methodological approaches. Moreover, this handbook incorporates knowledge production that transcends the confines of Western-centric scholarship.

The opening chapter establishes the foundation of the handbook by providing an overview of the digital evolution of journalism and offering initial insights into the transformative potential of AI technologies by charting their rapidly expanding applications in the field. Additionally, it engages in a reflective examination of the ongoing discourse surrounding the algorithm-driven transformation of journalism. It also delves into the theoretical, methodological, and empirical considerations that are inextricably linked with the integration of AI. These reflections highlight the critical challenges and implications for advancing the field, aligning with the handbook's aim and scope to navigate the complexities of AI's influence on journalism.

Journalism at the Nexus of Digitalization, Hybridization, Datafication, and Algorithmization

The world of journalism has undergone profound transformations, particularly shaped by the interplay of societal shifts and technological disruptions that drive digital change. Central to this evolution was the transition from an industrial society to an information society in the 1970s, which marked a departure from an economy rooted in the production of material goods to one centered on knowledge and information (Bell, 1979; Beniger, 1986; Bluestone & Harrison, 1982; Castells, 2010; Mattelart, 2003; Weischenberg et al., 1994). In the current information society, the production, processing, and dissemination of information have become the key drivers of societal development, with technological advancements accelerating the dynamics of information flow. Journalism, broadly defined as the “practice of producing and disseminating information about contemporary affairs of general public interest and importance” (Schudson, 2003, p. 11), or more precisely as “a set of transparent, independent procedures aimed at gathering, verifying and reporting truthful information of consequence to citizens in a democracy” (Craft & Davis, 2016, p. 34), occupies a pivotal position in making

information accessible and providing orientation by constructing social reality within an increasingly interconnected information ecosystem, thereby contributing to the creation of the public sphere. To fulfill its societal responsibilities, journalism must also critically engage with emerging technological advancements and assess their implications for navigating the challenges of a rapidly evolving media environment while maintaining its role as a reflective observer of social realities and a facilitator of democratic discourse. Its capacity to mediate, interpret, and contextualize information does not rely exclusively on the adoption of information and communication technologies; however, these technologies are undoubtedly transformative forces that shape the contours of how information is produced and disseminated (Boczkowski, 2004; Weischenberg et al., 1994). The impact of technology on journalism is evident in the practices and workflows of journalists, the nature and presentation of news content, the structure and organizational framework of newsrooms, and the intersections between news organizations, journalists, and their recipients (Pavlik, 2000). At the core of journalism's technology-driven evolution are the phenomena of digitalization, hybridization, datafication, and algorithmization, each of which intersects with journalism.

The introduction of computer-assisted text processing programs in the early 1980s marked the beginning of the digital turn in journalism. The conversion of information from analog to digital formats revolutionized journalistic production processes through human-computer interaction in newsrooms (Löffelholz, 2003; Weischenberg et al., 1994). The advent of digital tools streamlined journalistic workflows and expanded possibilities for multimedia content creation, including diverse media formats such as text, images, audio, video, and interactive elements. This early phase of digitalization established the foundation for subsequent technological advancements. The widespread adoption of the Internet into journalistic practice during the 1990s heralded new forms of public communication, moving news reporting from traditional mass media (i.e., radio, television, and print) to online technologies (Löffelholz & Quandt, 2005). The emergence of online journalism introduced new modes of storytelling, such as live reporting, podcasts, mobile reporting, and online video content while also making it possible for news to be distributed globally, in real time, and without geographical constraints. However, this development led to widespread structural adaptations within news organizations and journalism, which prompted scholars to examine the impact of technological innovations as key drivers shaping the field (Franklin, 2009; Singer et al., 2023).

The evolution of the Internet into Web 2.0 in the early 2000s amplified the transformative potential of information and communication technologies for journalism. This development paved the way for new forms of information exchange and human networking through digital platforms. Thus, journalists now find themselves working in an environment where both legacy media and new media coexist and influence each other. Social media serve as pivotal platforms for participatory journalistic communication, enabling interaction between journalists and the public, where recipients actively engage in sharing, commenting, and even producing news content (Bruns, 2005; Loosen & Schmidt, 2012). These hybrid forms of journalism are further shaped by the convergence of different practices, values, and technologies employed by journalists and other actors involved in the journalistic value chain, which at the same time blurs traditional boundaries and redefines journalistic work (Carlson & Lewis, 2015; Chadwick, 2013; Görke, 2009; Löffelholz & Sarisakaloğlu, 2024).

The increasing digitalization and datafication of many aspects of social reality have placed data at the core of journalistic practices, giving rise to data-driven journalism and changing the way journalists gather and process information (Ausserhofer et al., 2020; Coddington, 2015; Loosen et al., 2020; Parasie & Dagiral, 2013; Weber & Rall, 2012). As such, data have become a critical resource in news production and facilitate the analysis of large datasets to uncover stories, present complex topics with analytical rigor, and communicate them through visually compelling narratives in news articles (Bounegru, 2012; Coddington, 2015; Segel & Heer, 2010; Weber & Rall, 2012). This data-centric approach to journalism is also exemplified

by digital media intermediaries, often referred to as technological gatekeepers, such as search engines and news aggregators, which have introduced new dimensions to the flow of information by acting as essential facilitators or mediators between content creators and recipients (Sarisakaloğlu, 2024b). These platforms, driven by algorithms, automate the aggregation, selection, recommendation, and evaluation of information from diverse sources, including news outlets, platforms like Google News, and social media (Latzer et al., 2014). By doing so, they make information more accessible and enable recipients to engage with a broader range of perspectives in one place. Notably, the prominence of media content is no longer exclusively determined by editorial decisions; instead, it is increasingly governed by algorithmic mechanisms that shape public discourse and transform gatekeeping into a process, extending beyond the traditional journalistic practices of selecting or restricting information (Keyling, 2017; Sarisakaloğlu, 2024b; White, 1950). As a result, journalism is evolving into an AI-driven practice in which algorithms reshape the processes that define journalistic work.

Charting the Algorithmization of Journalism

The algorithmization of journalism opens new avenues for innovation in journalism. AI technologies and their underlying algorithms have become an indispensable means of the journalistic value chain and the reception process. The rapid development of AI systems has expanded the range of potential application fields and tools available for journalism. Leveraging data from a systematic literature review of 348 academic articles on the use of automation and AI technologies in journalism, conducted by Sarisakaloğlu (2025b; see Chapter 4), and considering recent technological advancements, we synthesized insights into the integration of AI systems across various phases of news processes, including preproduction, production, postproduction, distribution, consumption, administrative workflow, and business operations (see Figure 1.1). In the following section, we offer an overview of the application fields of algorithmic systems across these phases.

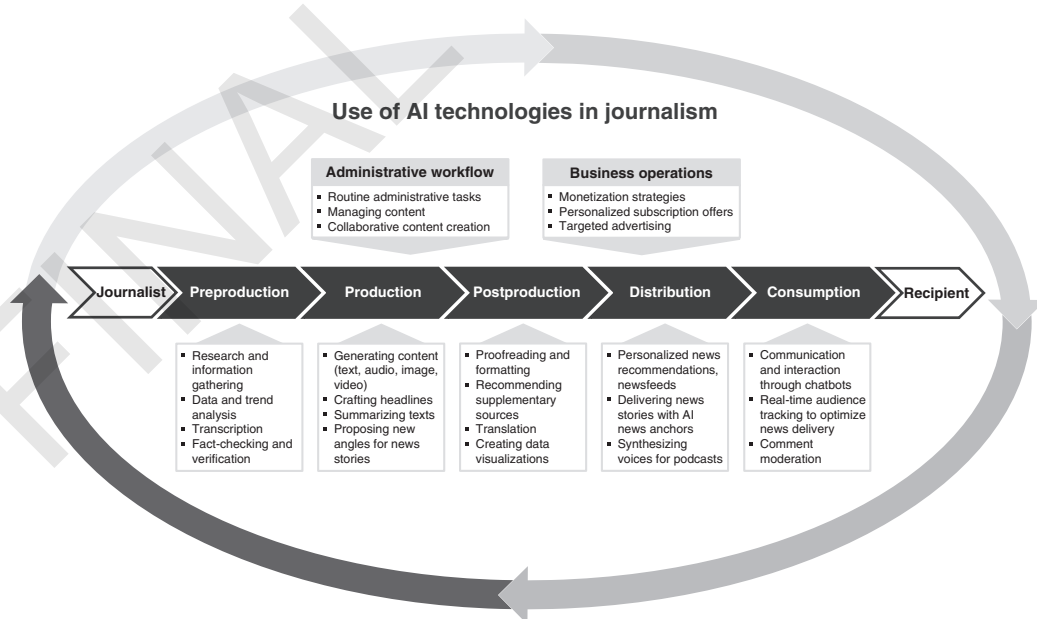


Figure 1.1 Application fields of AI technologies in the journalistic value chain and the reception process (visualization by Aynur Sarisakaloğlu)

In the preproduction phase, which lays the groundwork for journalistic content creation and focuses primarily on newsgathering and investigating newsworthy information, algorithmic systems can play a crucial role by assisting with information sourcing, story ideation, and the evaluation and selection of relevant materials. By leveraging natural language processing (NLP) systems, journalists can automatically locate relevant information and analyze vast datasets through automated text analysis, keyword tracking, and advanced search capabilities to identify patterns, predict trends, and detect uncovered topics that could be of public interest (Diakopoulos, 2019; Sarisakaloğlu, 2024b). For instance, tools such as Lynx Insight, software developed by Reuters, and Dataminr's AI platform support journalists by discovering indications of potential stories and delivering data-driven insights by processing publicly available data sources to inform their reporting (Chua, 2018; Dataminr, 2024). Such tools are particularly valuable during breaking news events, where they analyze data in real time to quickly gather context, identify trends, and generate a comprehensive understanding of unfolding events, enabling journalists to determine what is truly newsworthy for the public while maintaining the critical role of human judgment in editorial decisions. Generative pre-trained transformer (GPT) technologies, based on large language models (LLMs) like the chatbot ChatGPT, can also be effectively utilized in the preproduction phase to facilitate brainstorming, conduct preliminary background research on topics of interest, analyze information from unstructured texts across diverse sources, and craft insightful questions to support interview preparation through chatbot interactions (Kunova, 2023).

Moreover, drones are making their way into newsgathering to capture aerial footage or unique perspectives that would otherwise be challenging or impossible to obtain, such as in dangerous and hard-to-reach locations, including areas affected by natural disasters, large-scale protests, or conflict zones (Sarisakaloğlu, 2024a). AI-driven tools can also facilitate the transcription process by converting audio or video interviews into text. In addition, they can assist in the fact-checking and verification of journalistic content to ensure the authenticity and accuracy of information (Cazzamatta & Sarisakaloğlu, 2025). AI-driven data analysis tools can evaluate sources and process data in various languages and detect mis- and disinformation, algorithmic biases in text, and manipulations in images, audio, or videos, thereby effectively combating the spread of fake news and deepfakes. Tools such as ClaimBuster assess the factual accuracy of statements to help safeguard journalistic integrity and public trust (Hassan et al., 2017). As such, algorithmic systems empower journalists to handle large datasets more efficiently and enable deeper investigative reporting. In cases such as the Panama Papers, algorithms sifted through millions of documents and detected links between disparate data points to expose hidden stories (Walker Guevara, 2023).

During the production phase, the core activities involve critically evaluating and interpreting the gathered information to shape it into a coherent and compelling journalistic product, whether presented as a written article, an audio segment, a video report, or a multimedia presentation (von La Roche et al., 2013). An important application in this realm is the automated production of news content, a phenomenon often referred to as *automated journalism* (Carlson, 2015; Diakopoulos, 2019; Haim & Graefe, 2017), *algorithmic journalism* (Anderson, 2013; Dörr & Hollnbuchner, 2017), or *robot journalism* (Clerwall, 2014; van Dalen, 2012). While there is no commonly agreed-upon definition, automated news production can be described as the use of tools based on natural language generation (NLG) systems to “convert data into narrative news texts with limited to no human intervention beyond the initial programming” (Carlson, 2015, p. 417). Automation tools leverage structured datasets and templates programed with predefined rules to create coherent and contextually relevant text. The datasets typically include text authored by journalists or information drawn from other defined sources, enabling the algorithms to learn patterns, stylistic elements, and contextual relevance (Diakopoulos, 2019; Sarisakaloğlu, 2022). During the production process, the tools first analyze structured data (e.g., statistics, financial

reports, or sports results) and then use NLG algorithms to craft grammatically correct and contextually appropriate narratives (Graefe, 2016). This allows for the large-scale production of news stories and the automation of social media content creation without the need for direct human input in each iteration. Also, text generation software increasingly employs AI methods to independently optimize its performance, as it learns from new data, derives insights from human-machine interactions, refines its algorithms, and adapts to context-specific writing styles.

The United States is acknowledged as a pioneer in integrating automated news production. As early as 2006, The Thomson Corporation (now Thomson Reuters), a leading information provider and software application developer in the United States, employed computer programs to automatically generate economic and financial news (Wired Staff, 2006). A prominent example of algorithmic news production occurred after an earthquake in Los Angeles on March 17, 2014. An algorithm named Quakebot made headlines by publishing a story about the earthquake on *The Los Angeles Times* website within just three minutes of the tremors stopping (Beaujon, 2014). Using data from the United States Geological Survey, Quakebot quickly generated an accurate report, including the earthquake's time, magnitude, epicenter, and depth. This rapid response underscored the efficiency of automated systems in handling breaking news and demonstrated their capability to support newsrooms in delivering essential information to the public almost instantaneously. Similarly, other tools such as Wordsmith, developed by Automated Insights and widely adopted by media organizations such as the Associated Press, and *The Washington Post's* Heliograf are among the pioneers of automated text generation in journalism. More recently, generative AI tools (e.g., ChatGPT and Gemini) have gained prominence in journalism as a means to draft articles, craft headlines, summarize lengthy texts, and propose new angles for news stories, all while demonstrating a high level of linguistic sophistication (Gondwe, 2023; Kunova, 2023). Such communicative AI systems facilitate interactive natural language exchanges between human journalists and AI-driven chatbots, which allow journalists to prompt the system for specific tasks. In addition, large visual models (LVMs) such as DALL-E, Imagen, and Midjourney enable journalists to generate visual content from textual prompts by combining NLP techniques with computer vision to make complex information more accessible and enhance storytelling. Similarly, algorithmic systems are used to generate audio content or convert written news articles into audio with human-like voices, such as the voice assistant Beeb from the BBC (Hal Schwartz, 2020). Automated video production is another growing trend, with AI-driven tools converting written news stories into short video clips (Wochit, 2024).

Algorithmic systems are also used in the postproduction phase of newsroom operations to improve content quality by refining clarity, coherence, and compliance with editorial standards and to streamline formatting processes. Tools such as Grammarly and ProWritingAid serve as virtual proofreaders to ensure grammatical accuracy, orthographic precision, and stylistic consistency in news stories before publication. Generative AI applications have the capability to enhance the quality of journalistic writing by proposing alternative phrasings and improving overall readability. Moreover, AI systems can also function as nonhuman editors by identifying areas where information is unclear, detecting potential biases, and suggesting ways to fill informational gaps. For example, AI tools can analyze drafts to identify missing data or perspectives, recommend additional research and supplementary sources, or propose restructuring to ensure better clarity and coherence. In addition, AI systems function as highly efficient nonhuman translators, with tools such as DeepL and Google Translate, thus enabling newsrooms to swiftly adapt articles for multilingual recipients. Beyond automating basic editing tasks (e.g., formatting, page layout, and editing photos, audio, or video items), advanced smart editing tools enhance their functionality by automatically suggesting relevant links, multimedia elements, and data visualizations related to the content being created, thereby enriching the narrative and optimizing the editorial workflow.

The distribution phase encompasses the delivery of journalistic content to recipients and, with AI, has been transformed through the automation of news dissemination across digital platforms (Sarisakaloğlu, 2022). Tools analyzing recipients' past behaviors or tracking their feedback on journalistic content can predict future information needs and curate news recommendations to ensure that recipients receive the most relevant and engaging content that resonates with their individual interests (Diakopoulos, 2019; Zweig et al., 2018). Hence, AI technologies also play a strategic role in contributing to the development and execution of long-term strategies to enhance audience reach. Recommendation systems, such as those used by Google News and *The New York Times*, leverage recipients' consumption behavior and data insights to generate personalized newsfeeds. These systems determine which news items are displayed to recipients, employing similar algorithmic mechanisms as social media platforms to curate and prioritize content based on user preferences, often inferred from behaviors like clicks, likes, shares, or time spent on specific news articles (Keyling, 2017). By identifying these patterns, news content can be filtered and prioritized based on preferred regions or thematic areas (e.g., politics, technology, or culture). Beyond personalization, the integration of AI into news distribution extends to cutting-edge innovations in news presentation. The world's first AI news anchor, developed by the Xinhua News Agency in collaboration with the technology company Sogou, delivers automatically generated news stories in natural language (McFarland, 2022). These AI news anchors replicate the role of traditional presenters with the ability to mimic facial expressions and gestures and provide real-time updates around the clock without the need for human intervention. Similarly, AI-driven systems are making inroads into podcasts by synthesizing voices to deliver curated summaries, thematic discussions, or full-length episodes tailored to trending topics or recipients' interests.

In the consumption phase, chatbots can be used to facilitate interactions between recipients, journalists, and other actors, such as technical experts or customer service teams. They can deliver news content in dialog form, guide recipients interactively through breaking news stories, and enable newsrooms to respond promptly to recipients' concerns. Moreover, AI technologies are crucial in tracking audience engagement in real time. They monitor recipients' interactions, analyze engagement rates, and provide valuable feedback to journalists, thereby enhancing the newsroom's ability to produce relevant, impactful content while strengthening the connection between journalists and their recipients and encouraging greater engagement and responsiveness (Nelson, 2021). On online news platforms, AI tools can be used for comment moderation to ensure that discussions remain respectful and relevant by automatically filtering out inappropriate content, identifying spam and disinformation, and flagging offensive language (*The Washington Post*, 2017).

Another area where AI technologies are being increasingly integrated is the administrative workflows of newsrooms. In internal workflows, AI can automate routine administrative tasks, such as scheduling meetings, coordinating content pipelines to ensure timely publication, managing resource allocation, and supporting recruitment processes by screening applications. Generative AI can assist with drafting emails. Additionally, AI is used for content management tasks, including content tagging and metadata generation, to improve the organization and searchability of media assets within digital archives. Externally, AI facilitates collaboration with other media organizations and journalistic actors across regions. AI tools enable shared resource management, collaborative content creation, and joint investigative projects. These platforms can synchronize efforts across teams by integrating data, insights, and content pipelines, thereby enhancing interorganizational partnerships. For instance, internationally connected journalists can use algorithm-driven platforms to co-create reports on global news events, enabling faster information exchange and comprehensive coverage (Sarisakaloğlu, 2024a).

In the realm of business operations within news organizations, AI-based tools play a vital role in monetizing content and developing revenue-generating business models. By leveraging audience analytics, AI systems allow organizations to better understand recipients' preferences,

predict consumption behaviors, and tailor personalized subscription offers and targeted advertising, based on factors such as geographical location or specific demographics, to create appealing options for potential subscribers and optimize revenue streams to enhance the financial viability of news organizations (de-Lima-Santos et al., 2022).

The numerous examples of AI applications in journalism demonstrate how technology is fundamentally reshaping the journalistic process from its very inception. Given the rapid evolution of these technologies, it is crucial to recognize that the AI applications described in this section reflect the state of development as of early 2025. As AI-driven journalism continues to accelerate, new tools, capabilities, and challenges will likely emerge beyond the scope of this overview. Acknowledging the transformative potential of these advancements, many media organizations have already started integrating AI tools into their workflows, demonstrating their commitment to leveraging these innovations to enhance journalistic practices. The growing importance of AI-driven systems for media organizations is exemplified in the *Digital News Project 2025* by the Reuters Institute: 96% of the 297 media leaders surveyed in 51 countries believe that the primary value of AI lies in back-end automation tasks (e.g., transcription and copyediting) and 80% in news content distribution and recommendation systems, 77% consider the use of algorithmic systems for content creation to be very important or somewhat important, while 73% view AI technologies as crucial for newsgathering (Newman & Cherubini, 2025). Other notable applications include coding and product development (68%) and commercial uses (63%) (Newman & Cherubini, 2025).

Algorithm-Driven Transformation of Journalism Research

AI technologies have become a focal point in journalism practice and represent a significant shift in the role of journalism in an era of algorithm-driven media. Addressing and understanding these disruptive developments has become a pressing concern for journalism research. The state of research reflects a rapidly evolving field that is grappling with its multifaceted impacts on journalism at the macro, meso, and micro levels (Sarisakaloğlu, 2025b). A selection of these insights is outlined in the following discussion.

At the macro level, scholarly research focuses on the systemic transformations reshaping journalism through the integration of AI technologies. Central to these investigations are the shifting values and norms that underpin the practice of journalism (Sarisakaloğlu, 2025b). Journalistic values are not static; they are inherently influenced by the situational contexts in which journalism operates and are continually challenged by external factors, including technological advancements (Hanitzsch et al., 2010). Especially with the advent of the Internet and social media entering the news production process, journalistic values have been continuously renegotiated and adapted to align with changing societal needs. Similarly, integrating AI into journalism has raised critical questions about its potential to either uphold or undermine core journalistic values. Key debates focus on how transparency can be maintained in algorithm-driven content creation, the mitigation of algorithmic biases that may distort reporting, and the accountability of developers and users of AI tools (Dierickx et al., 2024; Dörr & Hollnbuchner, 2017; Leppänen et al., 2020; Paik, 2023; Porlezza & Schapals, 2024). These issues are compounded by the opaque nature of AI algorithms, often referred to as the black box, which complicates efforts to understand, regulate, and evaluate their operations effectively.

As algorithms exert a growing influence on public communication by determining which information is deemed newsworthy and by crafting personalized topic agendas based on recipients' behaviors and preferences, they play a significant role as technological gatekeepers (Cools et al., 2021). Also, due to the diminishing traditional monopoly of journalists over information control, journalism research faces the pressing challenge of understanding how algorithmic

systems share gatekeeping responsibilities, reshaping the dynamics of news selection and dissemination (Sarisakaloğlu, 2024b). Thus, questions have arisen regarding how generated content is influenced by classic news values and whether these values are losing significance in algorithmic news production or whether new news values need to be developed.

Moreover, the use of AI technologies raises concerns about how to uphold traditional quality criteria in journalism (Arnold, 2016; Reineck, 2018; Wellbrock & Klein, 2014) while redefining what constitutes quality in AI-driven journalism (Olsen, 2021). This calls for an in-depth understanding of how journalistic quality standards and values can be translated into the design of algorithms and the development of AI tools (Bastian et al., 2021; Diakopoulos, 2020).

Another significant challenge lies in the linguistic and cultural biases inherent in AI-driven systems. These technologies predominantly rely on English-language data and incorporate only limited inputs from the Global South (Andersen, 2019; Fu, 2022). Consequently, AI tools often fall short of accurately reflecting the unique cultures and knowledge systems of these regions (Gondwe, 2023). This imbalance contributes to an AI-driven divide that highlights the issues of unequal access to technology, including the limited ability to actively participate in the development of AI systems, resulting in technologies that often reflect biases embedded in training data, and further exacerbate inequalities in news ecosystems (Sarisakaloğlu, 2025a). By marginalizing voices from underrepresented regions, these systems risk undermining journalism's role as a pillar of inclusive and participatory democracy. Such disparities stifle innovation and competitiveness in journalism across the Global South, reinforce existing power imbalances, and restrict the diversity of perspectives in the creation and dissemination of algorithm-driven news content (Sarisakaloğlu, 2025a).

These systemic challenges compel us to reconsider the essence of journalism, fundamentally questioning how the field can sustain its democratic and ethical imperatives. In response, researchers have called for the development of robust frameworks that facilitate the trustworthy and responsible integration of AI into journalistic practices (Helberger & Diakopoulos, 2022; Porlezza, 2023; Portugal et al., 2023; Yams et al., 2020). Additionally, the future of journalism education is a critical area of concern, as there needs to be an emphasis on equipping journalists with the skills to critically evaluate, navigate, and leverage AI systems (Kothari & Hickerson, 2020; Luttrell et al., 2020). These efforts are essential for journalism to fulfill its societal function by creating a public sphere that promotes democratic dialog and bridges the interface between technology and society.

At the meso level, journalism research examines how AI technologies drive transformations in organizational structures and newsroom practices. AI technologies fundamentally disrupt journalistic workflows and reshape resource allocation, task distribution, and the dynamics among all actors involved in producing and distributing AI-generated content. Given the potential applications within the journalistic value chain presented in the previous section, traditional newsrooms are evolving into sociotechnical entities (Sarisakaloğlu, 2022) where hybrid journalism is practiced (Diakopoulos, 2019), which leverages the synergy of human expertise and machine efficiency to produce journalistic content collaboratively and to streamline the production process.

AI-driven transformations have prompted news organizations to establish specialized departments and teams dedicated to developing and applying AI tools (David, 2024). These departments promote interdepartmental collaboration by blending technical and editorial expertise while facilitating partnerships with external tech companies to further embed AI into journalistic workflows (Bayerischer Rundfunk, 2024; Kuai et al., 2022). One prominent change in this realm is the emergence of a symbiotic relationship between journalists and technologists, such as computer scientists, software developers, data analysts, and hardware engineers (Dal Ben, 2020). These collaborations bring technical innovation directly into the newsroom, enabling journalists to harness AI for more efficient data analysis, storytelling, and audience engagement.

AI also alters the dynamics between news organizations and their recipients by incorporating data on their interests and consumption behaviors into editorial selection decisions. This allows recipients to indirectly influence the content creation process itself (Monzer et al., 2020).

Research has found that news organizations increasingly adopt AI technologies to optimize subscription models and marketing strategies, often leading to increased revenue and more efficient resource distribution (Beckett, 2019). However, this potential comes with challenges, particularly for smaller organizations. Many lack the financial resources to adopt AI tools, which exacerbates existing inequalities within the media industry (Beckett & Yaseen, 2023). Larger organizations with greater capital are better positioned to capitalize on AI's benefits, further widening the gap between well-resourced and smaller outlets. In addition, well-resourced organizations in the Global North often lead AI innovation, while newsrooms in the Global South grapple with the AI-driven divide in terms of limited technical infrastructure, resources, and access to AI technologies (Beckett & Yaseen, 2023; Sarisakaloğlu, 2025a). In addition, adopting AI tools requires substantial investment in training programs to equip journalists with the skills and expertise needed to work effectively with AI technologies. This reskilling effort can place additional strain on organizational resources, especially for smaller outlets.

For journalism, these developments signal the need to reconsider existing structures, including the reimagining of traditional news organizations. Navigating these challenges demands a strategic approach to ensure that news organizations can adapt effectively. At the heart of this transition lies the critical question of how to develop sustainable and responsible AI adoption strategies that balance innovation and organizational stability.

At the micro level, scholarly attention is focused on the individual actors involved in journalism – both journalists and recipients. A significant research area examines how AI technologies are transforming the roles and responsibilities of journalists in newsrooms (Sarisakaloğlu, 2025b). A central aspect of these studies is the examination of journalists' perceptions of AI and their practices in using these tools in their work. Research indicates that AI is predominantly viewed as an assistive tool, supporting journalists in optimizing routine tasks (Graßl et al., 2022; Shi & Sun, 2024). By automating simple routine work, AI reduces the workload of repetitive tasks and frees up human journalists to dedicate their efforts to more in-depth reporting and investigative journalism (Haim & Graefe, 2017; van Dalen, 2012). As such, AI technologies often function as complementary tools in journalism, with journalists taking on the role of the “human still in the loop,” where they remain the dominant actors in news production by overseeing and validating AI-generated content to maintain adherence to journalistic standards and ethical principles (Milosavljević & Vobič, 2019). However, AI may also take on the role of a competitor or even a replacement for journalists in certain tasks (van Dalen, 2024). In cases where AI technologies can autonomously handle entire workflows, such as generating automated sports or business reports and disseminating personalized news based on recipients' preferences, AI tools may outperform human journalists in both efficiency and speed (van Dalen, 2012).

As AI systems can operate as technological gatekeepers and communicators, performing tasks with minimal or no human intervention (Grimme & Zabel, 2024; Lewis et al., 2019), scholars contend that AI technologies transcend their role as mere assistive tools, evolving into technological actants or nonhuman actors (Latour, 2005; Guzman, 2019). Moreover, chatbots like ChatGPT enable conversational collaboration, allowing journalists to interact with machines in ways that resemble human-to-human communication. Such interactions may result in shared decision-making processes, where AI contributes meaningfully to journalistic communication by influencing editorial priorities and shaping content production. This dynamic raises concerns about the impact of AI on human editorial judgment and its implications for journalistic autonomy (Simon, 2022). Thus, the changing constellation of actors in newsrooms blurs the boundaries between human and machine agency and challenges the traditional

conceptions of journalistic roles (Hanitzsch & Vos, 2017), which leads to a fragmentation of responsibilities and a partial dissolution of the classic understanding of journalism (Napoli, 2014).

In addition, discourse concerning the evolving roles and responsibilities of journalists centers on the comparison of human and machine capabilities, highlighting the former's strengths and the latter's limitations (Chan-Olmsted, 2019; van Dalen, 2012). Researchers have outlined the novel demands placed on journalists and the skills required to interact with AI technologies in newsrooms (Danzon-Chambaud & Cornia, 2024; Olsen, 2023; van Dalen, 2012). A prevailing concern is the dearth of proficient journalists, particularly in newsrooms in the Global South (Jamil, 2023; Okiyi & Nsude, 2019). These concerns give rise to pivotal inquiries concerning the future of the profession, such as the definition of the journalist in the AI era. What are the defining characteristics of their roles, responsibilities, and competencies? In light of these challenges, there is an imperative to redefine the boundaries of journalism, emphasizing the importance of boundary work (Carlson & Lewis, 2015) to elucidate the roles and activities of both human and nonhuman actors.

The pervasive influence of AI in journalism has also introduced significant challenges in understanding the evolving roles of recipients and their changing patterns of news consumption (Makhortykh et al., 2021). Personalization algorithms deliver customized news content based on user behavior, while chatbots facilitate direct interactions between recipients and news organizations, journalists, or algorithm-driven platforms. Consequently, scholars will need to move beyond traditional questions, such as "What do the media do to people?" or its reverse, "What do people do with the media?" (Katz & Foulkes, 1962, p. 378). Instead, they will need to shift their focus toward new inquiries, namely, "What do algorithms do to people?" and "What do people do with algorithms?" (Sarisakaloğlu, 2024b, p. 446, translated by the authors). This paradigm shift underscores the necessity of investigating how recipients engage with and perceive AI-generated content.

Theoretical, Methodological, and Empirical Challenges in AI-Driven Journalism

The field of journalism research has undergone a series of transformations in response to technological advancements, particularly those stemming from digital technologies (Löffelholz & Sarisakaloğlu, 2024). The advent of algorithms in the realm of journalism has given rise to substantial theoretical and methodological challenges, necessitating novel approaches to empirical research. While traditional journalism theories provide a foundational understanding of journalistic practices and roles, they frequently overlook the operational roles of technical components, focusing predominantly on human agency. This oversight is particularly pronounced in the domain of algorithm-driven journalism, where the majority of studies published as of 2022 exhibited a dearth of theoretical grounding, giving rise to approaches that are overly descriptive and practice-oriented (Sarisakaloğlu, 2025b). While such research offers preliminary insights, it lacks the depth necessary to address the intricacies of sociotechnical phenomena. Integrating theories is therefore essential for explaining patterns, linking studies, and generating broader, more robust insights (Griffin et al., 2023).

Therefore, the extension of actor-oriented theories to encompass nonhuman actors is key for comprehending their roles in journalistic processes (Löffelholz & Sarisakaloğlu, 2024). Conventional approaches, such as gatekeeping theory, must evolve to accommodate the contemporary landscape of sociotechnical newsrooms in which algorithms function as gatekeepers in conjunction with human operators. This evolving dynamic necessitates an

interdisciplinary approach employing frameworks, such as human–machine communication (HMC), that offer insights into technology as a communicative actor (Guzman & Lewis, 2020). Actor–network theory (ANT) offers a valuable lens for analyzing interactions between human and nonhuman actors, treating them as equal entities within hybrid networks that shape journalistic processes (Latour, 2005). While ANT has been found to be highly effective in mapping sociotechnical relationships, it remains primarily methodological, offering limited explanatory power for uncovering underlying mechanisms or causality (Collins & Yearley, 1992).

Moreover, it is essential to critically assess the theoretical frameworks employed to examine the various factors influencing transformations in journalism. These include normative theories, particularly those addressing ethical criteria that guide journalists' decision-making processes; product-oriented theories that evaluate whether algorithmic processes uphold or compromise established quality standards in journalism; frameworks for understanding journalistic competencies, which examine how journalists' skills affect these transformations, as the ability – or lack thereof – to effectively leverage AI technologies can either facilitate or obstruct their integration into journalistic practices; and theories that analyze the effects of AI technologies on recipients, including their impact on engagement and consumption (Sarisakaloğlu, 2025b). Each perspective offers valuable insights into the trajectories of changes within the field. A shift in sociological thinking is also important in empirical journalism research, requiring an expansion of disciplinary perspectives. This entails moving beyond the traditional focus on human actors and their journalistic products to include the conditions under which these contents are created. For instance, the integration of AI within newsrooms has precipitated a fundamental shift in the sociological theories of journalism. This is particularly evident in theories that accentuate structures, networks, and systems. One such example is Luhmann's (1995) systems theory, which conceptualizes journalism as an autonomous social system that functions according to its own logic. His theory posits that journalism selects and processes information based on distinct systemic codes, such as newsworthiness and topical relevance (Löffelholz & Sarisakaloğlu, 2024). However, the integration of AI-generated content disrupts the conventional boundaries between journalism and other social systems, such as technology and economics, thereby undermining the autonomy of the journalistic system. Algorithmic decision-making replaces traditional editorial judgments, introducing selection criteria that are often driven by engagement metrics, virality, or commercially motivated optimization rather than journalistic values. The proliferation of AI-driven news aggregators and automated reporting systems has given rise to inquiries into the nature of journalism's autonomy and the extent to which it is influenced by external technological forces.

Concurrently, Giddens's (1986) structuration theory, which posits that human agency and social structures are mutually constitutive (Löffelholz & Sarisakaloğlu, 2024), can be challenged in the context of AI-driven journalism. While conventional journalistic practices are characterized by institutional norms, editorial hierarchies, and professional routines, journalists in democratic societies have historically managed to preserve their agency within these constraints. However, the integration of AI introduces nonhuman entities that exert influence on news production, thereby complicating the aforementioned duality and rendering it less amenable to integration into the agent–structure relationship. AI systems have the capacity to autonomously generate content, select stories, and shape audience engagement, often without direct human intervention. This redistribution of agency, therefore, poses significant challenges to the traditional journalistic model, as it limits journalists' ability to exercise editorial judgment and actively shape media discourse. Furthermore, as AI systems are predominantly trained in existing journalistic practices, they often perpetuate existing biases and structures rather than facilitate a more dynamic restructuring of media norms.

According to Schimank's (1988, 2016) actor-structure-dynamics theory, the domain of journalism is conceptualized as a dynamic system comprising both human and nonhuman actors, including journalists, sources, technologies, and institutional frameworks. These actors interact within networks of influence that are in constant evolution (Löffelholz & Sarisakaloğlu, 2024). The integration of AI fundamentally alters these constellations. Automated reporting tools, recommendation algorithms, and content moderation systems have become influential actors in journalism, reshaping power dynamics within news organizations. Consequently, the role of human journalists is becoming increasingly mediated by technological systems. These systems are involved in the filtration and prioritization of news content as well as its generation and dissemination. Thus, the agency of journalists is redistributed among new actors, including AI systems, platform algorithms, and data analytics models, thereby altering traditional hierarchies in newsrooms. Furthermore, AI-driven systems form self-reinforcing loops with recipients' behavior, tailoring content based on engagement patterns and creating network effects that reshape journalistic decision-making in ways that may prioritize recipients' retention over editorial integrity.

Across these theoretical perspectives, several overarching challenges have emerged. First, the integration of AI into newsroom operations disrupts the conventional notions of agency by introducing nonhuman decision-making processes that influence the selection, framing, and dissemination of news content. Second, the autonomy of journalism as a distinct social system is increasingly challenged by the integration of AI, which is often developed and controlled by external entities such as technology companies and digital platforms. Third, the influence of algorithms engenders novel structures within journalistic practice, whereby AI-driven personalization and predictive analytics not only shape the content that is produced but also the manner in which recipients engage with news. Converging journalism, technology, and corporate interests gives rise to substantial ethical and epistemological inquiries regarding the role of human oversight and editorial accountability in an era of AI-driven journalism. While foundational frameworks for understanding journalistic processes can be drawn from seminal works such as those by Luhmann, Giddens, and Schimank, these theories must be adapted to account for the hybrid human-machine environments that increasingly characterize contemporary media production.

In addition, the increasing integration of technological actors into the journalistic communication process necessitates a rethinking of research designs encompassing data collection and analysis to effectively explore the hybrid nature of the object of study. In numerous extant studies, qualitative research approaches, such as interviews, have been predominantly employed (Sarisakaloğlu, 2025b). However, to comprehensively assess human practices and technological outputs, mixed-methods approaches are particularly well-suited. For instance, ethnographic studies could explore how journalists interact with AI tools in newsrooms, while computational analyses could assess patterns in algorithmically curated news and evaluate the quality of AI-generated articles.

Finally, it is imperative to underscore the substantial research disparity between the Global North and the Global South (Sarisakaloğlu, 2025b). The majority of extant studies on algorithm-driven journalism focus on countries in the Global North, resulting in critical gaps in our understanding of how AI is implemented and how it influences journalism across diverse cultural, economic, and regulatory contexts. This imbalance is also evident in the authorship of publications in the field, where scholars from the Global North dominate the research field and voices from the Global South remain underrepresented. Given the heterogeneity of national journalistic cultures, characterized by distinct professional values, practices, and ethical frameworks across different countries (Hanitzsch et al., 2019), scholarly efforts must also address the unique challenges and structural inequalities faced by newsrooms in the Global South. This necessitates the formulation of a journalism research agenda that is grounded in a

cosmopolitan-oriented perspective (Ganter & Ortega, 2019; Hanitzsch, 2019; Waisbord & Mellado, 2014), thereby ensuring the incorporation of diverse journalistic cultural viewpoints and counteracting the predominance of Western-centric theoretical and methodological paradigms (Sarisakaloğlu, 2025a).

Incorporating these perspectives into journalism research facilitates the identification of threads that offer a more profound understanding of the transformation of journalism in the era of AI and connect well with the aim and scope of this handbook.

Conclusion: Navigating AI-Driven Journalism and Defining the Scope of the Handbook

As outlined in the previous sections, AI technologies not only transform journalism but also introduce significant challenges to the study of journalism. This duality of potential impact underscores the need for journalism research to critically engage with these developments to foster a responsible and well-informed approach to understanding and guiding AI's role in shaping the future of the field. For us, advancing an emerging research field involves more than compiling existing knowledge – it means synthesizing knowledge to establish a description of the subject of study. At the same time, it is crucial to create space for shifting epistemologies and critical discussions on the impacts of AI systems on journalism.

While the handbook is not intended to cover every scholarly facet of the field or draw comparisons between traditional and AI-driven journalism, its main objective is to provide readers with a well-rounded overview of the evolving field, demonstrated by the expertise of leading scholars. It explores the forces driving algorithmic transformation and identifies new trends in journalism practice and research, offering readers an understanding of the shifting dynamics in journalism and the global implications of these changes. The global perspective is reflected not only in the scope of the contents covered but also in the geographic diversity of the authors, with contributions from 37 leading scholars across six continents – Africa, Asia, Australia, Europe, North America, and South America – who represent both the Global North and Global South.

The handbook is composed of an introductory section, five main parts, and a concluding section, encompassing a total of 28 chapters. To structure the broad thematic scope of this emerging field into meaningful sections, the organization was based on Lasswell's (1948) model and a systematic approach. Drawing first on the findings of a systematic literature review (Sarisakaloğlu, 2025b), key themes and topics were identified to form the foundation of the chapters. These findings guided the definition of chapter titles and the overarching framework of the volume. In the next step, potential authors were shortlisted based on their substantial contributions to the field, as evidenced by publications on algorithm-driven journalism and their expertise in the specific topics outlined by the editors.

Each chapter follows a similar structure to ensure thematic coherence throughout the volume. The chapters begin with an introduction to the topic, provide an overview of the current state of research, and explore the phenomena from conceptual, theoretical, and/or methodological perspectives. They address key academic discourses, challenges, and concerns that shape the field of AI-driven journalism. The chapters conclude with a summary that highlights the implications for journalism and reflects on potential future directions, aiming to inspire researchers to further advance the development of this field.

The introductory section sets the stage for readers by outlining the transformative shifts journalism is undergoing in the era of AI. It offers a broad perspective on the evolving landscape, contextualizing the opportunities and challenges brought about by AI technologies (Chapter 1).

Part I provides an orientation on the fundamentals, development trends, and key theoretical and methodological approaches of AI-driven journalism and thus lays the foundation for the subsequent sections. To establish a nuanced understanding of AI, its core concepts are presented through an interdisciplinary lens, positioning AI within a sociotechnical framework to reveal its profound implications for journalism research (Chapter 2). It explores the multidimensional algorithmic innovation in journalism (Chapter 3) and charts the development of the emerging research field of algorithm-driven journalism (Chapter 4). It also explores cosmopolitanism in journalism, discussing related perspectives such as de-Westernization and decolonization in the context of AI and its use in journalism, and it outlines the necessary conditions for cultivating a cosmopolitan approach to the study of algorithm-driven journalism (Chapter 5). The part concludes by proposing an interdisciplinary framework designed to enhance the understanding and design of AI-driven tools in journalism, ensuring that they align with core professional values (Chapter 6).

Part II presents a comprehensive examination of AI's impact on journalism from organizational, strategic, and actor-oriented perspectives. It begins by illuminating the transformative interplay between journalism and AI through the lens of organizational dynamics and strategic frameworks to understand how newsrooms adapt their structures for effective AI integration (Chapter 7). As the adoption of AI has catalyzed the development of new business models, transforming traditional news organizations into news tech companies, it is imperative to explore how the use of AI systems for content generation and personalized news products is redefining revenue models and the economic landscape of news organizations (Chapter 8). While AI may drive significant revenue gains, news organizations must prioritize responsible AI practices. Drawing on the example of local journalism, this part also reflects on core approaches to responsible AI innovation and its application (Chapter 9). Additionally, it examines how AI is shifting the boundaries of journalism, thus influencing journalists' perceptions of their roles and the challenges they face in performing their responsibilities and interacting with nonhuman entities from an actor-oriented perspective (Chapter 10). The evolving role of journalists is further discussed by proposing a conceptual framework that facilitates the investigation of algorithms' effects on the gatekeeping function of journalists within the news production process (Chapter 11). As the integration of AI tools into newswork has introduced new dimensions to journalism practice, it necessitates an exploration of the competencies required to adequately understand and apply AI technologies in journalistic tasks and their implications for journalism education (Chapter 12).

Part III delves into the impact of AI technologies on generated news content, examining approaches for ensuring the responsible integration of these technologies into newsrooms. It is essential to critically assess the algorithm design to understand its impact on journalistic processes and to develop methodological approaches for studying how these designs are translated into algorithmic tools (Chapter 13). To uphold high-quality standards of journalism in the era of AI, this part also investigates the theoretical implications for the norms, practices, and *raison d'être* of journalism (Chapter 14). While AI's growing capacity to process extensive datasets strengthens investigative journalism by enhancing the exposure to wrongdoing, its potential to inadvertently impact vulnerable groups remains a significant concern (Chapter 15). Advances in AI technology have also escalated the production and spread of misinformation, disinformation, fake news, and deepfakes. Hence, there is a pressing need to understand how AI might further disrupt the flow of reliable information in journalism and to examine the potential for AI applications to automate and generate deceptive content (Chapter 16). In addition, it is crucial to illuminate how algorithmic biases manifest in AI-driven journalism and to discuss the challenges of mitigating them (Chapter 17). This is accompanied by the necessity of thoroughly analyzing the ethical implications of integrating AI into journalism. Core ethical principles, such as transparency, accountability, and diversity, are central to addressing

the complexities posed by algorithmic systems in journalism while underscoring the importance of responsible AI governance frameworks within journalism (Chapter 18).

Part IV's key theme is the impact of AI on news consumption patterns, particularly how AI-driven news products reshape audience engagement and influence their responses to generated news. AI tools transform news consumption by enabling interactive experiences, expanding audience reach, and enhancing engagement (Chapter 19). Recipients' evaluations of AI-generated news compared with human-authored content provide further insights into their responses to the quality of such content (Chapter 20). The adoption of personalization algorithms significantly shapes news consumption, requiring an understanding of both the impact and the normative implications of their effects (Chapter 21). Additionally, recipients' perceptions of and interactions with AI news anchors are discussed to understand how anthropomorphized artificial tools influence audience engagement (Chapter 22).

Part V broadens the discussion on AI technologies in newsrooms by focusing on non-Western contexts and the AI-driven divide to address the unique innovations and challenges faced in AI-driven journalism across selected Global South countries. Along with the efforts to remedy the lack of technical infrastructure and limited access to AI technologies, it is crucial to prevent AI-driven divides in accessing truthful journalism by developing algorithmic tools to identify and determine the sources of AI-generated mis- and disinformation, thereby safeguarding transparency and mitigating disparities in access to authentic news worldwide (Chapter 23). Moreover, newsrooms in the Global South, particularly in regions like Latin America, face obstacles to implementing AI technologies due to educational disparities, media concentration, and political culture (Chapter 24). China stands out as an exception, pioneering the use of AI technologies and granting copyright protection to AI-generated news. However, to fully understand this development, it is essential to consider the unique patterns of dynamics among state actors, journalists, tech companies, and the public within China's distinct journalistic culture and regulatory framework (Chapter 25). Another noteworthy example of AI integration into Global South newsrooms is Indonesia, where variations in organizational structure, human and technical resources, infrastructure, regulations, and media business models contribute to the uneven adoption of AI (Chapter 26). Similarly, South African newsrooms grapple with infrastructural challenges, limited expertise in handling intelligent systems, and ethical concerns related to data control and inherent biases (Chapter 27).

The concluding section presents a reflection on the future trends and prospects at the intersection of journalism and AI, summarizing the research directions outlined in the previous chapters (Chapter 28).

In summary, by offering a comprehensive overview of research trends, evolving practices, and scholarly perspectives in AI-driven journalism, this handbook establishes the agenda for shaping this evolving field for years to come, making it a foundational reference and a practical guide for researchers, educators, students, media professionals, and anyone seeking to navigate the algorithm-driven transformation of journalism and its implications for both research and practice.

The publication of an edited handbook in such a rapidly evolving field entails the inherent challenge that some content may become outdated by the time of release. In light of the rapid advancements in AI technology development and its pervasive impact on journalism, the editors recognize that the authors will inevitably address unresolved issues that fall outside the purview of their respective chapters. Nonetheless, this handbook will retain its significance by synthesizing extensive scholarly contributions into a cohesive foundation for future research. By situating the recent advancements in AI-driven journalism within the broader academic discourse, *The Handbook of Artificial Intelligence and Journalism* is intended to make a relevant contribution to the ongoing dialog and influence the trajectory of journalism in the era of AI.

References

- Andersen, L. (2019). Artificial intelligence in international development: Avoiding ethical pitfalls. *Journal of Public & International Affairs*. Retrieved July 4, 2025, from <https://jpia.princeton.edu/news/artificial-intelligence-international-development-avoiding-ethical-pitfalls>
- Anderson, C. W. (2013). Towards a sociology of computational and algorithmic journalism. *New Media & Society*, 15(7), 1005–1021. <https://doi.org/10.1177/1461444812465137>
- Arnold, K. (2016). Qualität des Journalismus. In M. Löffelholz & L. Rothenberger (Eds.), *Handbuch Journalismustheorien* (pp. 551–563). Springer VS.
- Ausserhofer, J., Gutounig, R., Oppermann, M., Matiassek, S., & Goldgruber, E. (2020). The datafication of data journalism scholarship: Focal points, methods, and research propositions for the investigation of data-intensive newswork. *Journalism*, 21(7), 950–973. <https://doi.org/10.1177/1464884917700667>
- Bastian, M., Helberger, N., & Makhortykh, M. (2021). Safeguarding the journalistic DNA: Attitudes towards the role of professional values in algorithmic news recommender designs. *Digital Journalism*, 9(6), 835–863. <https://doi.org/10.1080/21670811.2021.1912622>
- Bayerischer Rundfunk. (2024). *KI im BR: AI + Automation Lab*. Retrieved July 4, 2025, from <https://www.br.de/extra/ai-automation-lab/index.html>
- Beaujon, A. (2014, March 17). *L.A. Times reporter talks about his story-writing 'Quakebot'*. Poynter. Retrieved July 4, 2025, from <https://www.poynter.org/reporting-editing/2014/1-a-times-reporter-talks-about-his-story-writing-quakebot/>
- Beckett, C. (2019). *New powers, new responsibilities: A global survey of journalism and artificial intelligence*. London School of Economics. Retrieved July 4, 2025 from <https://drive.google.com/file/d/1utmAMCmd4rfjHrUfLLfSJ-clpFTjyefl/view>
- Beckett, C., & Yaseen, M. (2023). *Generating change: A global survey of what news organisations are doing with AI*. JournalismAI. Retrieved July 4, 2025, from https://static1.squarespace.com/static/64d60527c01ae7106f2646e9/t/656e400a1c23e22da0681e46/1701724190867/Generating+Change+_The+Journalism+AI+report+_English.pdf
- Bell, D. (1979). The social framework of the information society. In M. L. Dertouzos & J. Moses (Eds.), *The computer age: A twenty-year view* (pp. 163–211). MIT Press.
- Beniger, J. R. (1986). *The control revolution: Technological and economic origins of the information society*. Harvard University Press.
- Bluestone, B., & Harrison, B. (1982). *The deindustrialization of America: Plant closings, community abandonment, and the dismantling of basic industry*. Basic Books.
- Boczkowski, P. J. (2004). *Digitizing the news: Innovation in online newspapers*. MIT Press. <https://doi.org/10.7551/mitpress/2435.001.0001>
- Bounegru, L. (2012). Data journalism in perspective. In J. Gray, L. Bounegru & L. Chambers (Eds.), *The data journalism handbook: How journalists can use data to improve the news* (pp. 17–22). O'Reilly.
- Brennen, S. J., Howard, P. H., & Nielsen, R. K. (2018). *An industry-led debate: How UK media cover artificial intelligence*. Reuters Institute for the Study of Journalism. Retrieved July 4, 2025, from https://reutersinstitute.politics.ox.ac.uk/sites/default/files/2018-12/Brennen_UK_Media_Coverage_of_AI_FINAL.pdf
- Bruns, A. (2005). *Gatewatching: Collaborative online news production*. Peter Lang.
- Carlson, M. (2015). The robotic reporter: Automated journalism and the redefinition of labor, compositional forms, and journalistic authority. *Digital Journalism*, 3(3), 416–431. <https://doi.org/10.1080/21670811.2014.976412>
- Carlson, M., & Lewis, S. C. (Eds.). (2015). *Boundaries of journalism: Professionalism, practices and participation*. Routledge. <https://doi.org/10.4324/9781315727684>
- Castells, M. (2010). *The rise of the network society* (2nd ed.). Wiley-Blackwell.
- Cazzamatta, R., & Sarisakaloğlu, A. (2025). Mapping global emerging scholarly research and practices of AI-supported fact-checking tools in journalism. *Journalism Practice*, 19(10), 2422–2444. <https://doi.org/10.1080/17512786.2025.2463470>
- Chadwick, A. (2013). *The hybrid media system: Politics and power*. Oxford University Press.
- Chan-Olmsted, S. M. (2019). A review of artificial intelligence adoptions in the media industry. *International Journal on Media Management*, 21(3–4), 193–215. <https://doi.org/10.1080/14241277.2019.1695619>

- Chopra, C., Kasare, A., & Gupta, P. (2024). *Emerging technologies: How venture capital is investing in AI in the top five global economies – and shaping the AI ecosystem*. World Economic Forum. Retrieved July 4, 2025, from <https://www.weforum.org/stories/2024/05/these-5-countries-are-leading-the-global-ai-race-heres-how-theyre-doing-it/>
- Chua, R. (2018, March 16). *The cybernetic newsroom: Horses and cars*. Reuters. Retrieved July 4, 2025, from <https://www.reuters.com/article/rpb-cyber-idUSKCN1GO0Z0>
- Clerwall, C. (2014). Enter the robot journalist: Users' perceptions of automated content. *Journalism Practice*, 8(5), 519–531. <https://doi.org/10.1080/17512786.2014.883116>
- Coddington, M. (2015). Clarifying journalism's quantitative turn: A typology for evaluating data journalism, computational journalism and computer-assisted reporting. *Digital Journalism*, 3(3), 331–348. <https://doi.org/10.1080/21670811.2014.976400>
- Cohen, S., Hamilton, J. T., & Turner, F. (2011). Computational journalism. *Communications of the ACM*, 54(10), 66–71. <https://doi.org/10.1145/2001269.2001288>
- Collins, H. M., & Yearley, S. (1992). Epistemological chicken. In A. Pickering (Ed.), *Science as practice and culture* (pp. 301–326). University of Chicago Press.
- Cools, H., Van Gorp, B., & Opgenhaffen, M. (2021). When algorithms recommend what's new(s): New dynamics of decision-making and autonomy in newsgathering. *Media and Communication*, 9(4), 198–207. <https://doi.org/10.17645/mac.v9i4.4173>
- Craft, S., & Davis, C. N. (2016). *Principles of American journalism: An introduction* (2nd ed.). Routledge.
- Dal Ben, S. (2020). Automated journalism in Brazil: An analysis of three robots on Twitter. *Brazilian Journalism Research*, 16(3), 476–501. <https://doi.org/10.25200/BJR.v16n3.2021.1305>
- Danzon-Chambaud, S., & Cornia, A. (2024). The cultural capital you need to work with automated news: Not only “your beautiful piece of work”, but also “patterns that emerge”. *Journalism*, 1–18. <https://doi.org/10.1177/14648849241279579>
- Dataminr. (2024). *Dataminr for news*. Retrieved July 4, 2025, from <https://www.dataminr.com/products/dataminr-for-news/>
- David, E. (2024). *The New York Times is building a team to explore AI in the newsroom*. The Verge. Retrieved July 4, 2025, from https://www.theverge.com/2024/1/30/24055718/new-york-times-generative-ai-machine-learning?utm_source=chatgpt.com
- de-Lima-Santos, M.-F., & Ceron, W. (2022). Artificial intelligence in news media: Current perceptions and future outlook. *Journalism and Media*, 3(1), 13–26. <https://doi.org/10.3390/journalmedia3010002>
- de-Lima-Santos, M.-F., Mesquita, L., de Melo Peixoto, J. G., & Camargo, I. (2022). Digital news business models in the age of industry 4.0: Digital Brazilian news players find in technology new ways to bring revenue and competitive advantage. *Digital Journalism*, 12(9), 1304–1328. <https://doi.org/10.1080/21670811.2022.2037444>
- Diakopoulos, N. (2017). Computational journalism and the emergence of news platforms. In B. Franklin & S. Eldridge, II (Eds.), *The Routledge companion to digital journalism studies* (pp. 176–184). Routledge.
- Diakopoulos, N. (2019). *Automating the news: How algorithms are rewriting the media*. Harvard University Press.
- Diakopoulos, N. (2020). Computational news discovery: Towards design considerations for editorial orientation algorithms in journalism. *Digital Journalism*, 8(7), 945–967. <https://doi.org/10.1080/21670811.2020.1736946>
- Dierickx, L., Opdahl, A. L., Khan, S. A., Lindén, C.-G., & Guerrero Rojas, D. C. (2024). A data-centric approach for ethical and trustworthy AI in journalism. *Ethics and Information Technology*, 26(64), 1–13. <https://doi.org/10.1007/s10676-024-09801-6>
- Dörr, K. N., & Hollnbuchner, K. (2017). Ethical challenges of algorithmic journalism. *Digital Journalism*, 5(4), 404–419. <https://doi.org/10.1080/21670811.2016.1167612>
- European Commission. (2024). *EU Artificial Intelligence Act. Official Journal of the European Union*. Retrieved July 4, 2025, from https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:L_202401689
- Flew, T., Spurgeon, C., Daniel, A., & Swift, A. (2012). The promise of computational journalism. *Journalism Practice*, 6(2), 157–171. <https://doi.org/10.1080/17512786.2011.616655>
- Franklin, B. (2009). On journalism studies' tenth anniversary. *Journalism Studies*, 10(6), 729–733. <https://doi.org/10.1080/14616700903257642>

- Fu, G. (2022). *Toward ethical artificial intelligence in international development*. Center for Digital Acceleration. Retrieved July 4, 2025, from <https://www.dai.com/uploads/ethical-ai.pdf>
- Ganter, S. A., & Ortega, F. (2019). The invisibility of Latin American scholarship in European media and communication studies: Challenges and opportunities of de-Westernization and academic cosmopolitanism. *International Journal of Communication*, 13, 68–91. <https://ijoc.org/index.php/ijoc/article/view/8449>
- Giddens, A. (1986). *The constitution of society: The outline of the theory of structuration*. Polity Press.
- Gondwe, G. (2023). ChatGPT and the Global South: How are journalists in sub-Saharan Africa engaging with generative AI? *Online Media and Global Communication*, 2(2), 228–249. <https://doi.org/10.1515/omgc-2023-0023>
- Görke, A. (2009). Untergang oder Neuschöpfung des Journalismus? Theorieperspektiven und Theorieprobleme der Hybridisierungsdebatte. In B. Dernbach & T. Quandt (Eds.), *Spezialisierung im Journalismus* (pp. 73–93). Springer VS.
- Görz, G., Schneeberger, J., & Schmid, U. (2014). *Handbuch der Künstlichen Intelligenz* (5th ed.). Oldenbourg Verlag.
- Graefe, A. (2016). *Guide to automated journalism*. Retrieved July 4, 2025, from <https://academiccommons.columbia.edu/doi/10.7916/D8QZ2P7C/download>
- Graefe, A., & Bohlken, N. (2020). Automated journalism: A meta-analysis of readers' perceptions of human-written in comparison to automated news. *Media and Communication*, 8(3), 50–59. <https://doi.org/10.17645/mac.v8i3.3019>
- Graßl, M., Schützeneder, J., & Meier, K. (2022). Artificial intelligence as a tool of assistance. *Journalism Research*, 5(1), 3–24. <https://doi.org/10.1453/2569-152X-12022-12049-en>
- Griffin, E., Ledbetter, A., & Sparks, G. (2023). *A first look at communication theory* (11th ed.). McGraw Hill Education.
- Grimme, M., & Zabel, C. (2024). AI in the newsroom: A collective case study about newsworker-AI collaboration in the German newspaper industry. *Journal of Media Business Studies*, 1–25. <https://doi.org/10.1080/16522354.2024.2380120>
- Guzman, A. L. (2019). Prioritizing the audience's view of automation in journalism. *Digital Journalism*, 7(8), 1185–1190. <https://doi.org/10.1080/21670811.2019.1681902>
- Guzman, A. L., & Lewis, S. C. (2020). Artificial intelligence and communication: A human-machine communication research agenda. *New Media & Society*, 22(1), 70–86. <https://doi.org/10.1177/1461444819858691>
- Haim, M., & Graefe, A. (2017). Automated news. Better than expected? *Digital Journalism*, 5(8), 1044–1059. <https://doi.org/10.1080/21670811.2017.1345643>
- Haim, M., & Graefe, A. (2018). Automatisierter Journalismus: Anwendungsbereiche, Formen, Qualität. In C. Nuernbergk & C. Neuberger (Eds.), *Journalismus im Internet: Profession – Partizipation – Technisierung* (2nd ed., pp. 139–160). Springer VS.
- Hal Schwartz, E. (2020, November 17). *BBC news releases synthetic voice newsreader for online articles*. Voicebot.ai. Retrieved July 4, 2025, from <https://voicebot.ai/2020/11/17/bbc-releases-synthetic-voice-newsreader-for-online-articles/>
- Hanitzsch, T. (2019). Journalism studies still needs to fix Western bias. *Journalism*, 20(1), 214–217. <https://doi.org/10.1177/1464884918807353>
- Hanitzsch, T., & Vos, T. (2017). Journalistic roles and the struggle over institutional identity: The discursive constitution of journalism. *Communication Theory*, 27(2), 115–135. <https://doi.org/10.1111/comt.12112>
- Hanitzsch, T., Hanusch, F., Mellado, C., Anikina, M., Berganza, R., Cangoz, I., ... Kee Wang Yuen, E. (2010). Mapping journalism cultures across nations: A comparative study of 18 countries. *Journalism Studies*, 12(3), 273–293. <https://doi.org/10.1080/1461670X.2010.512502>
- Hanitzsch, T., Ahva, L., Alonso, M. O., Arroyave, J., Hermans, L., Hovden, J. F., Hughes, S., Josephi, B., Ramaprasad, J., Shapiro, I., & Vos, T. P. (2019). Journalistic culture in a global context: A conceptual roadmap. In T. Hanitzsch, F. Hanusch, J. Ramaprasad & A. S. de Beer (Eds.), *Worlds of journalism: Journalistic cultures around the globe* (pp. 23–45). Columbia University Press.
- Hassan, N., Zhang, G., Arslan, F., Caraballo, J., Jimenez, D., Gawsane, S., Hasan, S., Joseph, M., Kulkarni, A., Nayak, A. K., Sable, V., Li, C., & Tremayne, M. (2017). ClaimBuster: The first-ever end-to-end fact-checking system. *Proceedings of the VLDB Endowment*, 10(12), 1945–1948. <https://doi.org/10.14778/3137765.3137815>

- Helberger, N., & Diakopoulos, N. (2022). The European AI Act and how it matters for research into AI in media and journalism. *Digital Journalism*, 11(9), 1751–1760. <https://doi.org/10.1080/21670811.2022.2082505>
- Jamil, S. (2023). Evolving newsrooms and the second level of digital divide: Implications for journalistic practice in Pakistan. *Journalism Practice*, 17(9), 1864–1881. <https://doi.org/10.1080/17512786.2022.2026244>
- Katz, E., & Foulkes, D. (1962). On the use of the mass media as “Escape”: Clarification of a concept. *The Public Opinion Quarterly*, 26(3), 377–388. <https://doi.org/10.1086/267111>
- Keyling, T. (2017). *Kollektives Gatekeeping*. Springer VS.
- Kothari, A., & Cruikshank, S. A. (2021). Artificial intelligence and journalism: An agenda for journalism research in Africa. *African Journalism Studies*, 43(1), 17–33. <https://doi.org/10.1080/23743670.2021.1999840>
- Kothari, A., & Hickerson, A. (2020). Challenges for journalism education in the era of automation. *Media Practice and Education*, 21(3), 212–228. <https://doi.org/10.1080/25741136.2020.1787724>
- Kuai, J., Lin, B., Karlsson, M., & Lewis, S. C. (2022). From wild East to forbidden city: Mapping algorithmic news distribution in China through a case study of Jinri Toutiao. *Digital Journalism*, 11(8), 1521–1541. <https://doi.org/10.1080/21670811.2022.2121932>
- Kunova, M. (2023). *Eight tasks ChatGPT can do for journalists*. Journalism.co.uk. Retrieved July 4, 2025, from <https://www.journalism.co.uk/news/how-can-journalists-use-chatgpt-/s2/a1005273/>
- Lasswell, H. D. (1948). The structure and function of communication in society. In L. Bryson (Ed.), *The communication of ideas: A series of addresses* (pp. 32–51). Harper & Brothers.
- Latour, B. (2005). *Reassembling the social: An introduction to actor-network-theory*. Oxford.
- Latzer, M., Hollnbuchner, K., Just, N., & Saurwein, F. (2014). *The economics of algorithmic selection on the internet (Working Paper – Media Change & Innovation Division)*. University of Zurich. Retrieved July 4, 2025, from https://www.mediachange.ch/media//pdf/publications/Economics_of_algorithmic_selection_WP.pdf
- Leppänen, L., Tuulonen, H., & Sirén-Heikel, S. (2020). Automated journalism as a source of and a diagnostic device for bias in reporting. *Media and Communication*, 8(3), 39–49. <https://doi.org/10.17645/mac.v8i3.3022>
- Lewis, S. C., Guzman, A. L., & Schmidt, T. R. (2019). Automation, journalism, and human-machine communication: Rethinking roles and relationships of humans and machines in news. *Digital Journalism*, 7(4), 409–427. <https://doi.org/10.1080/21670811.2019.1577147>
- Löffelholz, M. (2003). Von ‘neuen Medien’ zu ‘dynamischen Systemen’: Eine Bestandsaufnahme zentraler Metaphern zur Beschreibung der Emergenz öffentlicher Kommunikation. In K.-D. Altmeyden & M. Karmasin (Eds.), *Medien und Ökonomie* (pp. 53–90). Westdeutscher Verlag.
- Löffelholz, M., & Quandt, T. (2005). Journalism theory: Developments in German speaking countries. *Ecquid Novi*, 26(2), 228–246.
- Löffelholz, M., & Sarisakalöglu, A. (2024). Paradigmengeschichte der Journalismusforschung. In M. Löffelholz & L. Rothenberger (Eds.), *Handbuch Journalismustheorien* (pp. 21–54). Springer VS. https://doi.org/10.1007/978-3-658-32151-2_2
- Loosen, W., Reimer, J., & de Silva-Schmidt, F. (2020). Data-driven reporting: An on-going (r)evolution? An analysis of projects nominated for the Data Journalism Awards 2013–2016. *Journalism*, 21(9), 1246–1263. <https://doi.org/10.1177/1464884917735691>
- Loosen, W., & Schmidt, J.-H. (2012). (Re-)Discovering the audience: The relationship between journalism and audience in networked digital media. *Information, Communication & Society*, 15(6), 867–887.
- Luhmann, N. (1995). *Social systems* (J. Bednarz Jr. & D. Baecker, Trans.). Stanford University Press. (Original work published 1984)
- Luttrell, R., Wallace, A., McCollough, C., & Lee, J. (2020). The digital divide: Addressing artificial intelligence in communication education. *Journalism & Mass Communication Educator*, 75(4), 470–482. <https://doi.org/10.1177/1077695820925286>
- Makhortykh, M., de Vreese, C., Helberger, N., Harambam, J., & Bountouridis, D. (2021). We are what we click: Understanding time and content-based habits of online news readers. *New Media & Society*, 23(9), 2773–2800. <https://doi.org/10.1177/1461444820933221>
- Mattelart, A. (2003). *The information society: An introduction*. Sage.

- McCarthy, J., Minsky, M., Rochester, N., & Shannon, C. (1955). *A proposal for the Dartmouth summer research project on artificial intelligence*. Retrieved July 4, 2025, from <http://jmc.stanford.edu/articles/dartmouth/dartmouth.pdf>
- McFarland, A. (2022). *China's state news agency introduces new artificial intelligence anchor*. Unite.AI. Retrieved July 4, 2025, from <https://www.unite.ai/chinas-state-news-agency-introduces-new-artificial-intelligence-anchor/>
- Mellor, N. (2024). The digital divide in the journalism sector. *Convergence*, 30(3), 1120–1133. <https://doi.org/10.1177/13548565231176186>
- Milosavljević, M., & Vobić, I. (2019). Human still in the loop: Editors reconsider the ideals of professional journalism through automation. *Digital Journalism*, 7(8), 1098–1116. <https://doi.org/10.1080/21670811.2019.1601576>
- Mitchell, T. M. (1997). *Machine learning*. McGraw-Hill.
- Møller, L. A., van Dalen, A., & Skovsgaard, M. (2024). A little of that human touch: How regular journalists redefine their expertise in the face of artificial intelligence. *Journalism Studies*, 1–17. <https://doi.org/10.1080/1461670X.2024.2412212>
- Monzer, C., Moeller, J., Helberger, N., & Eskens, S. (2020). User perspectives on the news personalisation process: Agency, trust and utility as building blocks. *Digital Journalism*, 8(9), 1142–1162. <https://doi.org/10.1080/21670811.2020.1773291>
- Munoriyarwa, A., Chiumbu, S., & Motsaathebe, G. (2023). Artificial intelligence practices in everyday news production: The case of South Africa's mainstream newsrooms. *Journalism Practice*, 17(7), 1374–1392. <https://doi.org/10.1080/17512786.2021.1984976>
- Napoli, P. M. (2014). On automation in media industries: Integrating algorithmic media production into media industries scholarship. *Media Industries Journal*, 1(1), 33–38. <https://doi.org/10.3998/mij.15031809.0001.107>
- Nelson, J. L. (2021). The next media regime: The pursuit of 'audience engagement' in journalism. *Journalism*, 22(9), 2350–2367. <https://doi.org/10.1177/1464884919862375>
- Newman, N., & Cherubini, F. (2025). *Digital news project: Journalism and technology: Trends and predictions 2025*. Reuters Institute for the Study of Journalism. Retrieved July 4, 2025, from https://reutersinstitute.politics.ox.ac.uk/sites/default/files/2025-01/Trends_and_Predictions_2025.pdf
- Okiyi, G. O., & Nsude, I. (2019). Adopting artificial intelligence to journalistic practices in Nigeria: Challenges and way forward. *International Journal of Communication*, 24(1), 141–161.
- Olsen, G. R. (2021). Accepting automated news as "low-quality" journalism. *Journalistica*, 15(1), 10–32. <https://doi.org/10.7146/journalistica.v15i1.124985>
- Olsen, G. R. (2023). Enthusiasm and alienation: How implementing automated journalism affects the work meaningfulness of three newsroom groups. *Journalism Practice*, 1–17. <https://doi.org/10.1080/17512786.2023.2190149>
- Paik, S. (2023). Journalism ethics for the algorithmic era. *Digital Journalism*, 1–27. <https://doi.org/10.1080/21670811.2023.2200195>
- Parasie, S., & Dagiral, E. (2013). Data-driven journalism and the public good: "Computer-assisted-reporters" and "programmer-journalists" in Chicago. *New Media & Society*, 15(6), 853–871. <https://doi.org/10.1177/1461444812463345>
- Pavlik, J. (2000). The impact of technology on journalism. *Journalism Studies*, 1(2), 229–237. <https://doi.org/10.1080/14616700050028226>
- Porlezza, C. (2023). Promoting responsible AI: A European perspective on the governance of artificial intelligence in media and journalism. *Communications*, 48(3), 370–394. <https://doi.org/10.1515/commun-2022-0091>
- Porlezza, C., & Schapals, A. K. (2024). AI ethics in journalism (studies): An evolving field between research and practice. *Emerging Media*, 2(3), 356–370. <https://doi.org/10.1177/27523543241288818>
- Portugal, R., Wilczek, B., Eder, M., Thurman, N., & Haim, M. (2023). *Design thinking for journalism in the AI age: Towards an innovation process for responsible AI applications*. The Joint Computation + Journalism European Data & Computational Journalism Conference, Zurich, Switzerland. <https://openaccess.city.ac.uk/id/eprint/30698/>
- Reineck, D. (2018). *Die soziale Konstruktion journalistischer Qualität: Fachdiskurs, Theorie und Empirie*. Herbert von Halem Verlag.

- Russell, S. J., & Norvig, P. (2016). *Artificial intelligence: A modern approach* (3rd ed.). Pearson Education.
- Sarsakaloğlu, A. (2022). Algorithmisierung des Journalismus. Chancen und Herausforderungen künstlicher Intelligenzsysteme in sozio-technischen Newsrooms. *Communicatio Socialis*, 55(3), 308–319. <https://doi.org/10.5771/0010-3497-2022-3-308>
- Sarsakaloğlu, A. (2024a). Als Avatar an der Front – Kriegsjournalismus in Zeiten künstlicher Intelligenz und virtueller Realität. In M. Löffelholz, K. Schleicher & C. F. Trippe (Eds.), *Krieg der Narrative – Russland, die Ukraine und der Westen* (pp. 193–206). De Gruyter. <https://doi.org/10.1515/9783111331508-014>
- Sarsakaloğlu, A. (2024b). Künstliche Intelligenz und Journalismus. In M. Löffelholz & L. Rothenberger (Eds.), *Handbuch Journalismustheorien* (pp. 437–449). Springer VS. https://doi.org/10.1007/978-3-658-32151-2_30
- Sarsakaloğlu, A. (2025a). Cosmopolitanization of journalism research in the era of artificial intelligence: Bridging the global divide in algorithm-driven journalism. In C. Richter, M. Radue, C. Horz-Ishak, A. Litvinenko, H. Badr & A. Fiedler (Eds.), *Cosmopolitan communication studies: Toward deep internationalization* (pp. 205–225). Transcript. <https://doi.org/10.14361/9783839476772>
- Sarsakaloğlu, A. (2025b). Navigating the research landscape of algorithm-driven journalism: A systematic literature review of authorship, research trends, and future research pathways. *Journalism Studies*, 26(5), 541–567. <https://doi.org/10.1080/1461670X.2024.2446326>
- Schimank, U. (1988). Gesellschaftliche Teilsysteme als Akteurfiktionen. *Kölner Zeitschrift für Soziologie und Sozialpsychologie*, 40(3), 619–639.
- Schimank, U. (2016). *Handeln und Strukturen: Einführung in die akteurtheoretische Soziologie* (5th ed.). Beltz Juventa.
- Schudson, M. (2003). *The sociology of news*. W. W. Norton & Company.
- Segel, E., & Heer, J. (2010). Narrative visualization: Telling stories with data. *IEEE Transactions on Visualization and Computer Graphics*, 16(6), 1139–1148.
- Shi, Y., & Sun, L. (2024). How generative AI is transforming journalism: Development, application, and ethics. *Journalism and Media*, 5(2), 582–594. <https://doi.org/10.3390/journalmedia5020039>
- Simon, F. M. (2022). Uneasy bedfellows: AI in the news, platform companies and the issue of journalistic autonomy. *Digital Journalism*, 10(10), 1832–1854. <https://doi.org/10.1080/21670811.2022.2063150>
- Singer, J. B., Lewis, S. C., & Wahl-Jorgensen, K. (2023). Journalism in the quarterly: A century of change in the industry and the academy. *Journalism and Mass Communication Quarterly*, 100(4), 773–792. <https://doi.org/10.1177/10776990231189455>
- Soto-Sanfiel, M. T., Ibiti, A., Machado, M., Marín Ochoa, B. E., Mendoza Michilot, M., Rosell Arce, C. G., & Angulo-Brunet, A. (2022). In search of the Global South: Assessing attitudes of Latin American journalists to artificial intelligence in journalism. *Journalism Studies*, 23(10), 1197–1224. <https://doi.org/10.1080/1461670X.2022.2075786>
- The Washington Post. (2017, June 22). The Washington Post leverages artificial intelligence in comment moderation. *The Washington Post*. Retrieved July 4, 2025, from <https://www.washingtonpost.com/pr/wp/2017/06/22/the-washington-post-leverages-artificial-intelligence-in-comment-moderation/>
- Thurman, N. (2020). Computational journalism. In K. Wahl-Jorgensen & T. Hanitzsch (Eds.), *The handbook of journalism studies* (pp. 180–195). Routledge.
- Trattner, C., Jannach, D., Motta, E., Costera Meijer, I., Diakopoulos, N., Elahi, M., Opdahl, A. L., Tessem, B., Borch, N., Fjeld, M., Øvrelid, L., de Smedt, K., & Moe, H. (2022). Responsible media technology and AI: Challenges and research directions. *AI and Ethics*, 2(4), 585–594. <https://doi.org/10.1007/s43681-021-00126-4>
- United Nations. (2024). *Mind the AI divide: Shaping a global perspective on the future of work*. United Nations. <https://doi.org/10.18356/9789211066524>
- van Dalen, A. (2012). The algorithms behind the headlines: How machine-written news redefines the core skills of human journalists. *Journalism Practice*, 6(5–6), 648–658. <https://doi.org/10.1080/17512786.2012.667268>

- van Dalen, A. (2024). Revisiting the algorithms behind the headlines: How journalists respond to professional competition of generative AI. *Journalism Practice*, 1–18. <https://doi.org/10.1080/17512786.2024.2389209>
- von La Roche, W., Hooffacker, G., & Meier, K. (2013). *Einführung in den praktischen Journalismus* (19th ed.). Springer VS.
- Waisbord, S., & Mellado, C. (2014). De-Westernizing communication studies: A reassessment. *Communication Theory*, 24(4), 361–372. <https://doi.org/10.1111/comt.12044>
- Walker Guevara, M. (2023). What does AI have to do with investigative journalism? Everything! *Global Investigative Journalism Conference 2023*, Gothenburg, Sweden. YouTube. Retrieved July 4, 2025, from <https://www.youtube.com/watch?v=BHYLuACuBq8>
- Weber, W., & Rall, H. (2012). Data visualization in online journalism and its implications for the production process. In *Proceedings of the 16th international conference on information visualization (IV)* (pp. 349–356). IEEE. <https://doi.org/10.1109/IV.2012.65>
- Weischenberg, S., Altmeppen, K.-D., & Löffelholz, M. (1994). *Die Zukunft des Journalismus: Technologische, ökonomische und redaktionelle Trends*. Westdeutscher Verlag.
- Weischenberg, S. (1995). *Journalistik: Theorie und Praxis aktueller Medienkommunikation*. Westdeutscher Verlag.
- Wellbrock, C.-M., & Klein, K. (2014). Journalistische Qualität – eine empirische Untersuchung des Konstrukts mithilfe der Concept Map Methode. *Publizistik*, 59(4), 387–410.
- White, D. M. (1950). The “gate keeper”: A case study in the selection of news. *Journalism Quarterly*, 27(4), 383–390. <https://doi.org/10.1177/107769905002700403>
- Wired Staff. (2006). Robots wrote this. Wired. Retrieved July 4, 2025, from <https://www.wired.com/2006/08/robots-wrote-this/>
- Wochit. (2024). *Powering organizations with video creation*. Retrieved July 4, 2025, from <https://www.wochit.com/>
- Yams, N. B., Richardson, V. J., Shubina, G. E., Albrecht, S., & Gillblad, D. (2020). Integrated AI and innovation management: The beginning of a beautiful friendship. *Technology Innovation Management Review*, 10(1), 5–18. <https://doi.org/10.22215/timreview%2F1399>
- Yu, D., Rosenfeld, H., & Gupta, A. (2023, January 16–20). *The ‘AI divide’ between the Global North and Global South*. World Economic Forum Annual Meeting, Davos, Switzerland. Retrieved July 4, 2025, from <https://www.weforum.org/agenda/2023/01/davos23-ai-divide-global-north-global-south/>
- Zweig, K. A., Fischer, S., & Lischka, K. (2018). *Wo Maschinen irren können: Verantwortlichkeiten und Fehlerquellen in Prozessen algorithmischer Entscheidungsfindung*. Retrieved July 4, 2025, <https://www.bertelsmann-stiftung.de/fileadmin/files/BSt/Publikationen/GrauePublikationen/WoMaschinenIrrenKoennen.pdf>