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Media Practice in the Age of Artificial Intelligence: Opportunities and Challenges

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Abstract

This study aimed to explore and analyze the opportunities and challenges of media practice in the era of Artificial Intelligence (AI), drawing upon relevant scientific literature. This research is categorized as a descriptive study, employing the descriptive methodology through a quadrant analysis approach. Consequently, it yielded several general findings, including:

- The domain of media practice has transformed into a space governed by characteristics such as: knowledge representation, predictive capability, machine learning, system transparency, and data-driven evolution.
- AI presents opportunities for generative design through the creation and transformation of images, videos, and texts. This translates into automated journalism, which enables data analysis on the one hand, and enhances the user experience on the other.
- Media practice in the AI era faces risks and dilemmas that undermine content quality and information credibility, while also threatening the status of the human element. Consequently, the importance of governing these technologies increases to ensure truthful media, public enlightenment, and the consolidation of ethical values within society.

Keywords: Media Practice, Artificial Intelligence.

Introduction

The operations of various media outlets have shifted towards adopting the latest technologies in order to develop media content. For the media to sustain its functions, it must be founded on a robust technological infrastructure, such as the utilization of Artificial Intelligence (AI) technologies. Consequently, terms such as "AI Journalism" have prominently emerged, representing the new media revolution, often referred to as the Fourth Industrial Revolution. The digital reality manifests across all dimensions of media practice, having become its defining characteristic in this era of digital platform-based media. Fifth-generation (5G) networks have wide-opened the doors to a paradigm shift in media practice methodologies, driven by modern technologies, a significant portion of which is gravitating towards AI technology. This encompasses numerous recently developed concepts that have rapidly evolved over a short period, such as: "Augmented Reality (AR), Virtual Reality (VR), Blockchain, Robot Journalism, and Deep Learning," among others. These novel technologies, facilitated by the digital media environment, have reshaped media practice on two fronts: firstly, at the level of content production and narrative construction, and the nature of the digital platform itself. and secondly, in transforming the patterns of engagement of the digital audience with such content.

Research Problem

The media is witnessing a massive informational and technological revolution reliant on Big Data and Machine Learning. This transformation has fueled debate and interaction among experts, leading to polarized viewpoints. Some argue that AI threatens the future of human jobs in administrative and technical capacities within the media sector and newsrooms, while others perceive it as serving the public good and aiding the communication environment. Therefore, the hypothesis of a correlational relationship between AI technologies and media practice represents a crucial issue. This is what this paper will investigate through the following main question: What are the opportunities and challenges of media practice in the era of Artificial Intelligence?

Study Questions:

1. What are the characteristics of the new domain of media practice?
2. What opportunities does Artificial Intelligence offer to media practice?
3. What are the risks of shifting towards Artificial Intelligence in media practice?

Study Objectives:

This study seeks to achieve several objectives, the most prominent of which are:

- To identify the manifestations and characteristics of the domain shaped by Artificial Intelligence for media practice.
- To determine the opportunities and risks generated by Artificial Intelligence for media practice.
- To explore the future prospects of media practice in the era of Artificial Intelligence.

Study Concepts:

Artificial Intelligence (AI):
Some have defined AI as systems that utilize techniques capable of collecting data and using it to predict, recommend, or make decisions, with varying levels of autonomous control to select the best action to achieve specific goals (Al-Ghamdi, 2022). Others have defined it as a branch of computer science aimed at simulating cognitive abilities to replace humans in performing appropriate functions within a specific context that requires intelligence (Al-Eidani, 2022). It is also defined as "the study and design of intelligent systems that comprehend their environment and take actions that maximize their chances of success," whereas John McCarthy defines it as the science and engineering of making intelligent machines (Al-Shaer, 2020).

Media Practice:
Media practice is a term referring to the means of communication used to convey information and news to the public. It encompasses various media outlets such as newspapers, magazines, television, radio, the internet, social media, films, and others. The media is considered one of the primary tools for transmitting information and news, as well as shaping public opinion. It also plays a significant role in disseminating knowledge and fostering communication and interaction among individuals and communities. Journalism, for instance, is a fundamental pillar of democracy, contributing to keeping the public informed about current events and providing a platform for public dialogue and holding power accountable. The media plays a vital role in modern societies, contributing to shaping public opinion, exchanging information and ideas, and fostering interaction among individuals. The media industry refers to the processes and activities related to the production, distribution, and marketing of various media outlets, such as newspapers, magazines, television, radio, the internet, social media, films, and others (Arfat, 2013, p. 69).

Objectives of Media Practice:

1. **Providing Information:** One of the most critical objectives of the media is to provide information to the public. This is achieved by presenting reliable news, analyses, and reports on current global events. The media aims to empower people to access the necessary information to make decisions and understand significant issues and events.

2. **Awareness and Education:** Awareness and education are vital objectives of the media. The media strives to provide content that enhances awareness and contributes to educating the public on various topics such as health, technology, science, the environment, and culture. It helps disseminate knowledge and promote understanding and tolerance within society.

3. **Communication and Social Coverage:** The media plays a significant role in enhancing social communication and providing a platform for expression and discussion. It highlights social, political, economic, and cultural issues, helping to bring debates and dialogues to the forefront. The media can play a role in driving positive social change and influence.

4. **Profitability and Sustainability:** Profitability and sustainability are essential objectives of media practice. Media companies aim to generate profits through the sale of advertising, subscriptions, sales, and marketing. Achieving financial sustainability allows media institutions to continue providing content and meeting audience needs.

Although these are some of the common objectives in media practice, it should be noted that there is diversity and plurality in the objectives of media companies and outlets. Public service media may have additional objectives, such as preserving press freedom and defending human rights, whereas commercial media companies primarily aim to achieve profits and commercial success (Salem, 2018, p. 49).

Study Methodology

Based on the nature and objectives of this studywhich aim to uncover the impact of Artificial Intelligence (AI) tools on the evolution of media practice, alongside the opportunities and challenges they presentand building upon the inquiries the study seeks to answer, this research falls under the category of Descriptive Studies. These studies primarily focus on "explaining and clarifying various events and situations that express significant phenomena or groups of phenomena. They attempt to analyze the reality surrounding these events and facts, as well as interpret the apparent causes behind them, with the aim of arriving at useful logical conclusions that contribute to solving problems or removing obstacles and ambiguities surrounding certain phenomena, ultimately developing reality and generating new ideas, information, and behavioral models" (Al-Ta'i & Abu Bakr, 2005).

In light of this, the study employed the Descriptive Method as a means of collecting facts related to the phenomenon under investigation, classifying them, and subjecting them to scientific analysis and interpretation. The study relies on the Documentary Approach (Document Analysis), drawing from specialized scientific literature, peer-reviewed journals, published works in cyberspace, and specialized electronic websites.

The study approached the phenomenon using the Quadruple Analysis framework (Four-cornered analysis), deeming it the most suitable technique for monitoring and addressing the environment of media practice within AI applications. This framework represents "a tool for analyzing the environment where the strategic plan is formulated and implemented, serving as an informational basis for the strategic planning process. Its internal aspect addresses the institution's managerial strengths and weaknesses, while its external aspect covers the available opportunities in the external environment and the challenges arising from them" (Dhib, 2020)

First: Artificial Intelligence as a New Environment Imposing the Evolution of Media Practice

A/ Characteristics and Tools of Artificial Intelligence:

1.Characteristics of Artificial Intelligence:

AI possesses distinct characteristics when applied through computer programming, allowing such systems to be described as "intelligent." Among the most important of these characteristics:

Symbolic Knowledge Representation: This is a primary characteristic of AI programs used by companies. Generally, they deal with non-numerical symbols, unlike most conventional computers that handle numerical quantities and figures.

Capability of Knowledge Representation: Unlike statistical programs, AI programs contain a method for representing information. They use a special structure to describe knowledge, incorporating facts, relationships between these facts, and rules linking these relationships within the implementing organization.

Use of the Optimistic Heuristic Approach: An important feature in the field of AI is its focus on "sufficient solutions" rather than insisting on "optimal or exact solutions," as is customary in traditional programs.

Ability to Handle Incomplete Information: AI programs have the capacity to find solutions even when information is not fully available at the required time, although the lack of complete information may lead to conclusions that are less realistic or less valid.

Learning Capability: A vital trait of intelligent behavior is the ability to learn from previous experiences and practices, as well as the ability to improve performance by taking previous errors into account (Abdel Moneim, 2017).

Artificial Intelligence Tools:

AI offers numerous applications and tools in the field of media practice. In this domain, AI can be utilized to analyze data and provide suggestions through Machine Learning algorithms to assist journalists in producing media content. Here, the term Generative Design emergesa method that facilitates the creation of multi-directional creative design options quickly and efficiently using AI and input parameters (Generative Design Method - GDM). This technology has aided in executing tasks requiring time and professionalism automatically, rapidly, and precisely. Furthermore, its results are variable, and it has created a creative environment capable of inspiring journalists with new ideas and treatments. The primary goal of the generative design system is to create a process of media content production assisted by AI (Agrawal, 2021).

The main tools currently available for AI can be classified as follows (Fahmi, 2024).

Image Generation Tools:

These are AI-powered tools that provide a suite of design and digital content creation features. Their main capabilities include image recognition, Natural Language Processing (NLP), and predictive analytics. Among the most prominent tools currently available are Adobe Photoshop CC 2024 (the latest version containing Adobe AI/Beta features), Runway AI Tool, and many others available online.

In this regard, Bendarah (2025) emphasizes that Emotional Analysis represents one of the most advanced AI applications in the visual media industry, as it "provides advanced techniques for facial recognition and analysis, along with the study of speech patterns and various physiological indicators, which helps measure emotional responses to multiple versions of advertisements" (p. 24). This capability offers designers and media professionals a powerful tool to understand the elements that influence audience engagement and guide their decisions

Additionally, there are specialized tools for converting text to photos (Text-to-Photo). These enable the journalist to write a "prompt" (visualization) of a scene and convert it into an image. the more detailed and professional the description, the closer the result is to their imagination. Famous examples include Midjourney, Leonardo AI, and others.

Video Generation Tools:

AI-powered tools that provide the capability to generate videos. Their main features include identifying video elements, processing natural element motion, and predictive analytics. They can help journalists automate routine tasks and improve the accuracy and speed of their work. This is evident in Text-to-Video conversion, where a journalist writes a prompt of a scene to convert it into video. Leading examples include Adobe Premiere 2024, After Effects CC (latest versions with AI support), and Runway AI (for Photo-to-Video conversion.(

Sketch to Design Tools:

AI-powered tools that assist UI/UX designers for websites and smartphone applications. They use machine learning algorithms to automatically convert sketches and wireframes into fully functional design prototypes. Their primary feature is automatic design creation, helping designers save time and effort while creating more accurate and effective designs. The most prominent and effective tool currently available is Uizard.

Text-to-Speech (TTS) Tools:

These AI-powered tools provide the ability to convert texts into speech with high-quality voices and intonation. They also allow the use of celebrity voices (cloning). Examples include Splash Music, Murf AI, and others.

3D Element Generation Tools:

These tools allow for the generation of stunning 3D models and scenes by converting text into these elements, some of which make these models interactive. Notable examples include Spline AI (converting text to 3D scenes and 360-degree views), Blockade Labs (generating interactive models that allow greater modification), and Luma AI (capable of generating videos and powerful camera movements by converting an image or video element into a 3D model within its filmed environment, or adding a pre-designed 3D element to a scene.(

Copywriting and Content Generation Tools:

AI-powered tools that generate written content for advertisementsparticularly social media adsand SEO content for websites, among other advertising media. Available tools vary, including Arabic options such as Araby.ai. Reinforcing this observation, Bendarah (2025) points out that "Copywriting Generate tools enable the production of written content of various types, particularly advertising texts directed at social media networks, in addition to Search Engine Optimization (SEO) content for websites, as well as other forms of customized texts" (p. 65). Such tools have redefined the practice of advertising writing, while simultaneously raising new concerns related to originality, intellectual property, and the credibility of the media message. Other tools offer different functions, though most current AI tools revolve around these core functionalities. We must realize, however, that we are merely at the beginning of the era of Artificial Intelligence, which is evolving at an accelerated pace.

B/ Characteristics of the New Environment for Media Practice

The new environment of Artificial Intelligence is distinguished by characteristics that researchers classify as follows:

1. Data Evolution:

Data volume continues to grow exponentially. Given the differences in its structure, nature, and comprehensiveness, the problem of sifting through and analyzing it is likely to escalate in the future due to the insufficient number of qualified cadres to handle such data. One scientific study indicated that every human on Earth is expected to contribute to producing 17 megabytes of information per second. Consequently, global data volume.which currently produces 4.4 zettabytes per day.is expected to increase to approximately 44 zettabytes, representing a tenfold increase (Mar, 2015).

Systems relying on AI technologies provide the capability to integrate and analyze vast sets of Big Data generated from different sources to identify various patterns within this data and highlight what is useful. This is achieved through what is known as Threat Intelligence, whose outputs include written reports and informative charts (Written Reports and Informative Charts). Based on the foregoing, AI tools can grant the ability to improve the quality and significance of information deduced and provided to decision-makers, offering them a positive advantage in dealing with security and military operations and supporting decision-making.

2. System Transparency:

Applications reliant on AI technologies require many prerequisites to be viable. The most prominent of these are effective performance, a high level of security, user trust, and high transparency. These requirements are fundamental in many applications. Despite the distinction proven by AI algorithms recently, there has been increasing research interest in the field of transparency within these applications. Unlike Black Box Applications, the transparency required for AI algorithms relies on the needs of end-users, whose primary

needs are trust in the system's recommendations and decisions in situations where it is difficult for users to question the system's suggestions. However, it may be unclear whether user trust depends on the system's performance or its robustness, the user's relative performance, the user's comfort with the system's recommendations, knowledge of the system's performance limits due to model generalization compared to user capabilities, or additional information regarding the system's recommendations represented by the rationale for choosing one decision over another. On the other hand, the end-user needs to ensure fairness in decision-making by avoiding bias, which, if realized, could lead to unequal treatment in different cases (Lipton, 2018).

3. Learning and Perception Capability:

The capability of Artificial Intelligence in learning and perception does not necessarily mean its approximation of human intelligence, but rather its ability to change its actions according to its experience, and thus not being bound by the actions it was originally programmed for. Its ability to learn gives it the potential to develop itself independently. the actions it was originally programmed for merely grant it the capacity to learn, but not learning itself (Leemans, 2017). However, the question that arises here is: Does AI's learning capability imply the ability to think and perceive? Some support the idea that AI can think.a feature that means the true application of logic, which relies essentially on linking givens, analogy, and inference. This has driven many computing and informatics scientists to distinguish between the Digital Computer (the smart one) and the Electronic Computer that follows certain rules it cannot deviate from. Here, we reach what is called Artificial Thinking, from which Artificial Intelligence emerged (Doh-Djanhoundy, 2018).

4. Autonomy:

This represents the ability to make individual decisions away from the will of the user. AI is considered autonomous given that it possesses a minimum amount of information constituting support from its designer, in addition to the information it acquires from its environment while performing its work. This grants it the ability to take initiative proactively while showing a type of flexibility, undertaking initiatives and providing suggestions to the user, in addition to interacting and responding to requests directed to them (Masoud, 218). According to **ISO 8373:2012** rules, autonomy is the ability to perform specific tasks starting from a specific state and conclusions without human intervention. Therefore, freedom of decision-making can be considered a guarantee for the existence of the concept of Artificial Intelligence, distinguishing it from software and ordinary computing that operate within a framework set by the user, where all its decisions are predictable, unlike AI whose decisions cannot be predicted (Troi, 2017).

5. Predictive Capability:

Some experts warn that AI may operate on assumptions different from the environment compared to how humans work, specifically regarding the employment of Context (The context**)**. Similarly, AI systems may be subject to bias in their assumptions and

decisions as a result of their training data. For example, researchers have repeatedly discovered cases of racial bias in facial recognition AI systems due to the lack of diversity/patterns in the images the systems were trained on. This, in turn, could have significant implications for the decisions of AI applications in media practice (Scharre, 2017), especially if such biases remain undiscovered and integrated into systems of a sensitive and critical nature. Therefore, attention must be paid to this point, ensuring data diversity, patterns, and contexts when creating, developing, or testing AI algorithms sufficiently to ensure the accuracy of their decisions and adaptability (Kania, 2017).

Secondly: The Age of Artificial Intelligence: What Opportunities for Developing Media Practice?

A/ Employing AI Applications in Media Practice:

Media practitioners have benefited from the various applications provided by Artificial Intelligence as follows (Abdel Hamid, 2020, p. 55):

1. Automated Journalism:

Known as "Automation" or "Robot Journalism," it relies on **Natural Language Generation (NLG)** algorithms supported by AI applications to automatically convert data into news stories.whether texts, images, videos, or data.and then distribute them via digital platforms. It holds great importance with its increasing adoption by many news agencies, newspapers, and websites, where it has created leaps in news coverage of economic and sports topics, weather, and publishing news stories. Media institutions have shown great efficiency in relying on automated news publishing, such as **Associated Press**, **Reuters**, **Los Angeles Times**, **The Washington Post**, and others.

2. Television Production:

AI helps manage and organize content efficiently, as well as improve distribution network efficiency. This is a significant feature for paid TV operators wishing to improve broadcast quality, especially as content producers compete to present creative works that attract audiences, and to avoid content duplication for the producer or broadcaster. It also allows for understanding audience preferences and behavior through Machine Learning and predicting videos the audience is likely to watch.

Furthermore, the **Robotic Camera (Cameraman Robot)**, or what is termed the "Robot Camera," has contributed to being an effective alternative to the traditional cameraman inside television studios, as well as the use of small unmanned aerial vehicles (drones) to photograph events (**Drone Camera**). This leads prospectively to the ability to develop robots capable of interacting with their surroundings for photography and sending reports describing the reality of what is happening inside conflict and war zones with neutrality and professionalism, contributing to reducing human losses and increasing the efficiency of news coverage.

3. Social Networks:
Platforms such as **Twitter**, **Facebook**, and **YouTube** use machine learning to suggest specific multimedia content and recommend advertisements aimed at improving user engagement.

Consistent with this trend, Bendarah (2025) argues that "artificial intelligence technologies are today employed in automating the management of electronic advertising within websites and platforms, as commercial brands rely on them to interact with consumers and understand them more deeply, and subsequently deliver more accurate and relevant recommendations and advertisements" (p. 37). This confirms that AI is no longer restricted to real-time data processing, but has extended to re-engineering the relationship between media platforms, brands, and audiences

Researchers have expressed concerns that these algorithms may help spread misinformation and digital propaganda. Facebook relies on understanding and acquiring knowledge through AI applications, including:

- **Deep Learning:** A technology that does not need specific data and has the capability to understand the context of an image and analyze its contents using identification and text (*note: source had 't Deep').
- **Text Analysis:** This technology uses neural networks to analyze words in user posts to understand their context and meaning using its own algorithm.
- **Face Detection Technology:** To identify human faces in two or more different images.
  The site also uses AI to combat fake news through visual verification, reverse image search, and analyzing metadata (such as where and when a photo or video was taken). Fact-checkers use AI applications to decide what should be verified daily, where automatic checking (**Robochecking**) is performed based on linking to information databases.

5. **Handling Big Data:**
   Time and energy wasted on system monitoring can be saved by aggregating database performance, user experience, and log data into a unified Cloud-based data platform. This platform automatically monitors maximum limits and detects defects. The strength of smart algorithms lies in their ability to handle extremely complex situations by scanning massive data through multi-variable servers at very high speeds. AI algorithms can process unlimited-size databases, identify results and relationships between data elements, or even suggest new ideas based on the results they have reached.

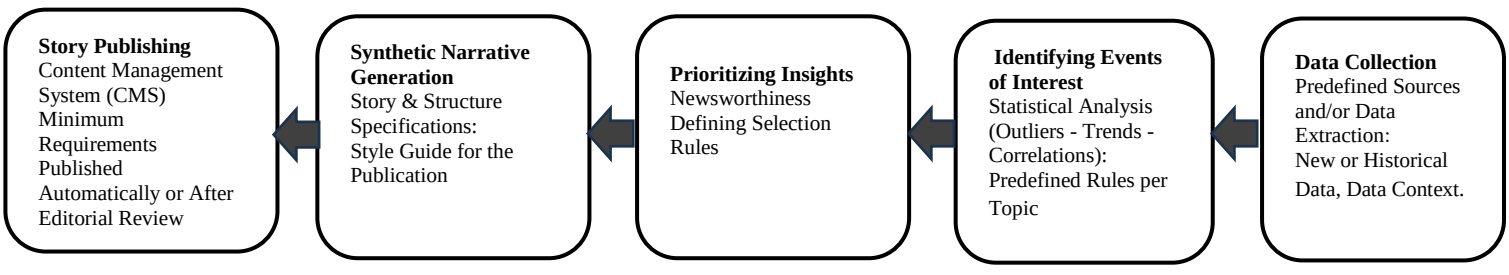


Figure: A Diagram Illustrating the Process of Media Practice through AI Applications (Source: Graefe, 2016)

B/ Artificial Intelligence Algorithms as a Gain for Media Practice

AI applications provide savings in effort, time, and cost across various stages of media practice, as evidenced by the following (Mansour, 2021, p. 83):

1. **Improving Media Production Processes:** It contributes to improving content production operations. Machine learning technologies can be used to automatically generate journalistic articles or reports, which helps increase production efficiency and saves time and effort for journalists.

2. **Enhancing User Experience and Personalizing Content:** It contributes to understanding user preferences and providing them with a tailored experience by analyzing available user data, as well as delivering appropriate content and customizing advertisements according to user interests.

3. **Data Analysis and Predictions:** Analyzing the vast amounts of big data available in the media field and deducing audience patterns and preferences.

4. **Artificial Intelligence in Social Media:** It can be used to monitor interactions, participation, and conversations on social media platforms, understand public opinions and orientations, and respond to inquiries and complaints effectively.

C/ Areas of Positive Impact of AI on Media Practice

AI affects media practice through the following methods (Abdel Razek, 2022, p. 78):

1. **Content Editing:** AI can help automate content editing. Machine learning technologies can be used to generate journalistic articles, sports reports, or other media content based on available data. Consequently, this can improve the efficiency and speed of media content production.

2. **Data Analysis:** AI can analyze massive amounts of media data, such as analyzing user interaction with content or analyzing trends and sentiments on social media. This information can be used to understand the audience and improve media strategies and direct upcoming content.

3. **Enhancing User Experience:** AI can be used to improve user experience across different media outlets. For example, deep learning technologies can be used for

personalized recommendations for readers or viewers based on their preferences and browsing history. Chatbot technologies (**Chatbots**) can also be used to provide 24/7 support and respond to user inquiries.

4. **Live Broadcasting and Sports Commentary:** AI can be used to develop live broadcasting and sports commentary technologies. Technologies relying on AI can generate instant analyses and precise guidance for sports commentators, thereby enhancing the quality and interactivity of live media coverage.

5. **Machine Translation:** AI-supported translation technologies help provide instant and accurate translation of media content across different languages. This contributes to expanding the audience and increasing access to media content.

Thirdly: Challenges of Media Practice in the Age of Artificial Intelligence

AI applications have created a new environment for media practice characterized by permanent risks that threaten its future:

A/ Risks of Transitioning to Artificial Intelligence:

Artificial Intelligence has taken significant strides in media practice, with the emergence of journalism supported by modern technologies and the use of latest tools to document, produce, and distribute news (Sanchez-Garcia et al., 2023). Integrating AI technologies into journalism has caused a shift in the media industry, leading to the emergence of new journalistic specializations and directions. Within the same framework, Bendarah (2025) stresses that the transformations brought about by artificial intelligence in the media landscape "cannot be dissociated from the challenges related to personal data protection and the ethics of professional practice, as these issues are increasingly imposing themselves on legislators and media stakeholders alike" (p. 72). This underscores the urgent need for governance mechanisms that safeguard both the integrity of media content and the rights of users in the digital sphere Furthermore, the rapid development of digital technology and the availability of advanced tools have revolutionized the various stages of news creation, production, and distribution.

1. From Content Farms to Generative AI (The Quality Debate):

Content farms, also known as content mills or content factories, are platforms or websites that produce a large volume of low-quality content. This content is often generated using algorithms for the purpose of attracting web traffic and generating advertising revenue. These platforms often prioritize quantity over quality, employing freelance writers or automated systems to output articles on a wide range of topics. Content produced by farms is often characterized by a lack of originality, depth, and accuracy (Lajeunesse, 2022). With the rapid rise of Generative AI, the web will be flooded with an endless stream of AI-generated content, bringing issues of content quality and authenticity, as well as intellectual

property problems, to the surface. Media institutions will find themselves facing new competitors for advertising share.

2. From Search Engine Issues to Generative AI (Concerns over Information Reliability): Generative AI and search engines are intertwined in the digital landscape. Generative AI, such as **ChatGPT**, has revolutionized how search engines present responses and interact with users (Paul et al., 2023). These AI models use Deep Learning techniques to generate human-like responses to text-based prompts, providing instant answers and conversational interactions. The integration of Generative AI into search engines has improved the user experience and expanded information retrieval capabilities. However, the use of AI in search engines also raises ethical concerns, such as classifying biased data and data collection if not handled carefully (Fabbrizzi et al., 2021). Additionally, this integration poses challenges regarding ensuring information accessibility and reliability, addressing biases, and maintaining a human-centered approach to empower users (Laukkonen et al., 2009).

3. Deepfakes (Ethical and Legal Risks):

Deepfake technology refers to the creation of manipulated media.including texts, images, audio, or video clips.using machine learning algorithms. It involves synthesizing content that appears authentic but is actually created by AI systems. Deepfake technology has raised concerns due to its ability to spread misinformation manipulate public opinion, and undermine trust in the media (Farid, 2022). This technology allows face-swapping, voice manipulation, and even the creation of entirely fabricated content (Ashish Ransom, 2023). While deepfakes have beneficial applications in fields like entertainment and visual effects, their misuse poses significant risks to individuals, organizations, and society as a whole (Shad et al., 2021). The challenges posed by deepfake technology extend to legal and ethical domains, necessitating attention to privacy, intellectual property, and potential harm. As technology advances, developing robust detection mechanisms and increasing awareness of the risks associated with its use becomes crucial.

4. A New Level of Automation (Human Integration or Threat?):

Automation has changed the nature of media work, forcing media workers to re-evaluate the boundaries of their profession and adapt to new working methods. For example, social media platforms have changed how media workers interact with audiences and promote their personal brands. Furthermore, automation has impacted core journalistic values, raising questions about the role of human journalists in the era of automated news production. In content creation, automation enabled the transition from analog media to digital formats. Automated audio-visual migration systems became essential for converting large volumes of magnetic media into digital files. However, the future of automation in the digital environment raises concerns regarding employment impact and the need for new skills. The development of the **Metaverse** concept.characterized by automation and management algorithms.may replace some human tasks and require acquiring new skills. Therefore,

preparing for this digital future through integrating digital education and ensuring a smooth transition to the new digital culture is vital (Limano, 2023).

6. **Continuous Job Bleeding:**
   Job loss in the digital media industry has been a major concern in recent years. Technological advancement and the digital transformation of media institutions have caused disruptions leading to significant job losses (Addison, 2021). For instance, the decline in newspaper distribution and media profits caused many job losses among the workforce in mainstream media. The emergence of digital platforms and new business models in journalism increased competition and pressure on traditional media, leading to job cuts. Digital technologies also affected job stability and security in the media industry. Fears of job loss due to digital devices were a driving factor for creating work councils in media institutions, and the fear of job loss contributed to job insecurity in the industry (Genz et al., 2019).
7. **Digital Twins as Alternates for Presenters and Hosts:**
   Digital Twins are virtual representations of physical assets, systems, or processes that enable real-time monitoring, analysis, and optimization (Cooper et al., 2022). The concept involves creating an identical digital copy of a physical entity, which can be used for simulation, monitoring, and decision-making purposes. Digital Twins have the potential to revolutionize industries by offering insights and performance improvements and enabling value-added creation. Visual media will exploit this technology to find digital counterparts for human presenters, which has started as initial experiments in some major media institutions. While the future may not seem entirely clear yet, the cultural developments brought by digital platforms make accepting the idea not entirely unlikely.
8. **The Dilemma of Algorithms in Shaping Audience Orientations:**
   Potential ethical concerns regarding the use of algorithms in journalism include embedded biases in algorithmic systems that can distort public perceptions or lead people astray. Algorithms can also be used for illegitimate purposes, such as spreading lies and misinformation, distraction, deflection from important matters, and even attacking and harassing individuals. Furthermore, there are concerns regarding discrimination, injustice, errors, negligence, and violations of laws and social values in the use of algorithms. These ethical concerns highlight the need for accountability and transparency in algorithmic media (Bent, 2022). Algorithms also affect the diversity of news sources available to readers. one concern is that algorithms may reinforce information bubbles or echo chambers, where individuals are only exposed to information and opinions that align with their current beliefs and preferences. This can restrict the diversity of news sources reaching readers and contribute to narrowing perspectives.

B/ Future Horizons for Media Practice in the Artificial Intelligence Space

The future of media practice is a subject of much debate, influenced by various factors including technological developments, changes in audience behavior, and the evolution of the media landscape. Here are the main aspects to consider when discussing the future of journalism (Palomo-Torres et al., 2022):

1. **Digital Transformation:** Journalism is increasingly shifting towards digital platforms with the spread of online news consumption. This shift has led to the emergence of new digital media organizations, diverse storytelling formats, and the necessity for journalists to adapt their skills to the digital world.

2. **Data Journalism and Automation:** The massive amounts of data offer opportunities for journalists to discover stories and provide in-depth analysis. Data journalism includes using datasets and visualization tools to enhance storytelling. Additionally, automation technologies and AI are being used to assist in tasks such as content creation, data analysis, and fact-checking.

3. **Audience Engagement and Personalization:** Journalists focus on building stronger connections with their audiences through interactive features, social media participation, and personalized content. This includes delivering news in ways that match individual preferences and interests and fostering two-way communication with readers.

4. **Trust and Credibility:** In an era of misinformation and fake news, trust and credibility are crucial for journalism. Media institutions strive to maintain high journalistic standards, fact-checking practices, and transparency to restore audience trust damaged by the rise of social media.

5. **Collaborative Journalism:** Collaboration between media institutions, journalists, and even readers will become more common. This approach allows pooling resources, expertise, and opinions to handle complex stories and provide comprehensive coverage through **Crowdsourcing** practices.a pattern seen in successful projects like the Panama Papers investigation.

It is important to note that the future of journalism is constantly evolving, and new developments and challenges will continue to shape its course. The future of media practice is described as stable and hybrid, where **Artificial Intelligence (AI)** plays a pivotal role. While there are already contradictory views and different expectations, consensus centers on the idea that the future will involve a mix of traditional and innovative approaches and methods of work. The use of computational algorithms in various tasks.including discovery, filtering, analysis, production, publishing, and distribution.is expected to contribute to enhancing journalism specifically.

Conclusion:

It is no longer science fiction to rely on artificial intelligence software to prepare stories and news topics. The adoption of this technology by media institutions to contribute to producing journalistic content has become a tangible reality in many countries worldwide. Upon entering massive amounts of data, these software programs edit news materials and present them to Internet browsers. We can confidently assert that AI technologies offer unprecedented opportunities to enhance the quality and effectiveness of media work in society, not only within news channels but also within media institutions of all kinds, as well as public relations agencies. AI contributes to identifying emerging trends and adapting editorial strategies accordingly. It helps understand the orientations of diverse and multifaceted audience segments, gaining deeper insight into determining topics that attract curiosity and engagement factors, and how to interact with content through analyzing Big Data. This serves as an important informational tributary helping identify critical issues that attract public opinion and facilitates producing content that meets audience expectations and satisfies their various cognitive and communicative needs.

In the same context, AI technologies assist in automated content production, such as automatic writing, audio-visual synthesis, and other tools that enable writing articles, reports, and multimedia content faster and more efficiently.

On the other hand, AI technologies help improve user experience, playing a significant role in personalizing content according to each user's specific interests by analyzing their communication behavior. This facilitates news websites using these techniques to recommend articles and news that may interest each user based on their previous interaction with content. It should be noted in this context that public relations agencies in the Arab region have started benefiting from these technologies to determine their strategic directions in their various advertising, media, and reputation management activities.

However, these opportunities should not obscure the challenges facing both users and journalists. The most prominent of these challenges relate to the ethical dimension and cybersecurity, where violating privacy, for example, is a slippery slope upon which a journalist might stumble, putting their professionalism at stake. Therefore, **AI journalism** represents a new media revolution carrying modern technologies that have significantly impacted media and journalism. The faster media institutions' steps towards digitization first, and then containing AI technologies, software, and applications second.and working to harness them to enhance and develop media work.the greater their chances of survival in the competitive arena. Conversely, the dynamic here is dualistic between the human journalist and the machine to ensure the quality of contents and media output. a robot cannot replace the human intelligence that created and manufactured it, but rather enhances its status.

Despite this, all applications operating in the digital media environment have reshaped media practice, adding new advantages to digital media, especially at the level of content production and interaction methods, creating opportunities and challenges in the future of new media and supporting jobs for media institutions and reinforcing their presence. This requires:

- **Media institutions must develop themselves,** their methods, and operational mechanisms to face technological development, especially AI, and strive to exploit it for their benefit.

- **AI threatens the journalist's profession in technical aspects** ("Graphic design, editing, and formulating news stories..."), which necessitates journalists to develop themselves and harness AI for their benefit. This highlights the importance of investing in training journalists and empowering them with AI tools and good working mechanisms.

- **Caution against the capability of AI technology to create fake images and information,** and utilizing it in some cases and applications for verifying news. There is a danger in relying on newsrooms on AI in its current state because this technology still needs time to grow and learn. Since the technology relies on the data fed to it, care must be taken to build appropriate educational models to reach the machine's potential.

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