Artificial Intelligence and Government Communication

Exploring Gaps in Current Literature

Najla Omar Aldookhi [*]

Supervised by: Dr.Khaled Zamoum [**]

Abstract

This article explores the literature that has addressed the role of AI in government communication and media, its most important effects, characteristics and applications used in this field. It aims to achieve a comprehensive understanding of the relationship between AI and government communication in general, and government media offices in the UAE in particular. This article adopts a literature review analysis to understand the strengths and weaknesses associated with this technology application. Among the findings is that many media offices do not operate as a single unit. This is evident in their different perceptions of the role of AI in their work and in the diversity of their approaches to using AI. Although AI is playing an increasing role in automating daily tasks such as data analysis, content creation, and decision-making, researchers are cautiously optimistic due to ethical concerns related to data protection, transparency, and privacy. There are also concerns about AI tools replacing humans and the negative impact on creativity. Accordingly, several researchers are calling for the formulation of legal frameworks and legislation regulating the use of AI tools in government communication and media. Furthermore, a gap has been identified regarding the lack of studies addressing the role of AI in government media offices in the UAE. This in turn leads us to the need for more future researches to cover this gap.

Keywords:Artificial Intelligence (AI), government communication, federal media, Public Relations (PR).

[*] **Phd researcher - College of Communication, University of Sharjah, UAE**
[**] **Assistant Professor - College of Communication, University of Sharjah, UAE**

الذكاء الاصطناعي والاتصال الحكومي
استكشاف الثغرات في الأدبيات الحالية

الباحثة/ نجلاء عمر الدوخي*

إشراف/ د. خالد زعموم**

ملخص الدراسة:

تستكشف هذه المقالة الأدب الذي تناول دور الذكاء الاصطناعي في التواصل الحكومي والاعلام وأهم تأثيراته وخصائصه وتطبيقاته المستخدمة في هذا المجال. حيث تهدف للوصول الى فهم شامل للعلاقة بين هذه التكنولوجيا والتواصل الحكومي بشكل عام والمكاتب الاعلامية الحكومية في دولة الامارات بشكل خاص. وقد تم اعتماد منهجية تحليل الدراسات السابقة في هذه المقالة لفهم جوانب القوة والثغرات المرافقة لتطبيق هذه التكنولوجيا. ومن النتائج التي توصلت لها هذه المقالة أن العديد من مكاتب الإعلام لا تعمل كوحدة واحدة. ويتجلى هذا في تصوراتها المختلفة لدور الذكاء الاصطناعي في عملها وفي تنوع مقارباتها لاستخدام الذكاء الاصطناعي. على الرغم من أن الذكاء الاصطناعي له دور متزايد في أتمتة الأعمال اليومية من تحليل البيانات وانشاء المحتوى واتخاذ القرارات. لكن يرافقه تفاؤل حذر لدى الباحثين نتيجة وجود مخاوف أخلاقية تتعلق بحماية البيانات والشفافية والخصوصية. كما توجد مخاوف تتعلق باستبدال أدوات الذكاء الاصطناعي بالعنصر البشري والتأثير السلبي على الابداع. وعليه يطالب عدد من الباحثين بضرورة صياغة أطر قانونية وتشريعات تنظم استخدام أدوات الذكاء الاصطناعي في التواصل الحكومي وفي الاعلام. إضافة الى ذلك تبين بعد مراجعة الأدبيات هذه وجود فجوة تتعلق بقلة الدراسات التي تتكلم عن دور الذكاء الاصطناعي في المكاتب الاعلامية الحكومية في دولة الامارات. وهذا بدوره يقودنا الى الحاجة الى المزيد من البحوث المستقبلية لتغطية هذه الفجوة.

الكلمات الدالة: الذكاء الاصطناعي، الاتصال الحكومي، الإعلام الاتحادي، العلاقات العامة

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*باحثة دكتوراه في برنامج الفلسفة في الاتصال في جامعة الشارقة
**أستاذ مشارك في كلية الاتصال في "جامعة الشارقة"

Introduction

Technological advancements significantly influence countries' development trajectories, with the adoption and effective use of new technologies often being key to their success. Among these technologies, AI stands out as one of the most transformative of the Fourth Industrial Revolution. Adopting AI in government media offices can help enhance a country's image by providing more accurate and timely information to citizens and other stakeholders. Additionally, AI can assist governments in analyzing large datasets from diverse sources, including social media, news outlets, and other online platforms, to identify trends and patterns that can inform the improvement of public services and policies. This can lead to increased efficiency and productivity in government offices. AI can also help governments improve their communication with citizens by providing personalized information and services.

Adopting AI in government media offices can help promote transparency, accountability, and efficiency in government operations while improving communication with citizens and other stakeholders. AI presents numerous benefits for enhancing media operations, but there is still much to learn about the perspectives of those implementing AI strategies, including their views on potential risks, roles, and practical applications.

In the following review, we do not look into the role of influencers within governmental communication strategies. We have deliberately refrained from exploring how influencers create content or engage with audiences, as these processes fall beyond the intended scope of our study. Instead, our research investigates explicitly the literature that looks into AI applications, such as big data analytics and sentiment analysis, in the context of government communication.

This literature review draws upon a wide array of studies to investigate the integration of AI technologies within government communication frameworks, particularly focusing on the operations of media offices. The review spans a range of scholarly articles, providing a detailed examination of both the remarkable advancements and the persistent challenges associated with leveraging AI to enhance government communication, media relations, and public relations management. As demonstrated below, the discussed literature encompasses a variety of themes, offering valuable perspectives on the adoption of AI in state institutions, especially within the media landscape. Notably, however, the review identifies a significant gap in existing research regarding federal media systems, such as those in the UAE. Although the UAE

government has shown a commendable commitment to embracing cutting-edge technologies across multiple sectors, including digital communication, there is still a lack of clarity surrounding the specific applications of AI within its media sector. To date, investigations into the adoption of AI by government media offices in the UAE have been scant, and the sector at large appears to be lagging in the effective integration of AI technologies. This study aims to highlight this gap specifically in the UAE context. Understanding these factors is crucial for formulating effective and ethically sound AI communication practices, which can ultimately enhance transparency and public trust in government initiatives.

We also acknowledge the evolving nature of public relations job titles, reflecting broader changes driven by digital transformation, increased specialization, and the integration of AI technologies within communication roles. Contemporary positions in PR have increasingly embraced titles such as digital communication specialist, reputation manager, and strategic communication officer, emphasizing diverse and technologically oriented responsibilities. However, for clarity and consistency, we remain focused on the traditional PR officer to ensure coherence with existing literature and common practice.

Government Media Offices' Usage of AI

Some studies focused on the use of AI in news and media. A study conducted by Shaw et al. in 2021 offered an in-depth analysis of AI and machine learning (ML) adoption in the frontier and emerging news media sectors. This research aimed to explore how AI/ML technologies are utilized by news organizations of various sizes, including small, medium, and major, across print, television, and radio platforms. In total, Shaw et al.'s study incorporated 20 interviews with experts from CEE and 18 from Latin America. The findings indicated a limited use of AI/ML technologies in media outlets, primarily in Argentina, Peru, and Mexico, with a significant interest in further adoption, albeit rarely included in strategic planning. The study also highlighted that while digital natives in CEE are increasingly adopting AI/ML solutions, challenges such as tight labor markets and political pressures hinder long-term strategic planning and investment in these technologies.

From their part, Kabalisa and Altmann (2021) conducted a systematic literature review to explore the adoption of AI in public administration. Their study aimed to identify the factors influencing AI adoption and to address the principal challenges faced during its diffusion. Additionally, they examined the motivations behind AI adoption by countries and firms, particularly the

urgency to stay current with ongoing AI advancements. Their review notably underscored the profound impact of AI on the economic landscape.

In addition, in his 2023 study, "AI, Journalism, and Public Interest Media in Africa," Ogola examines the impact of AI on the media landscape in Africa, particularly its potential to enhance public interest media. Through case studies from Eastern, Southern, and West Africa and employing methods such as newspaper observations and in-depth Key Informant Interviews with various media professionals, Ogola explores how AI can improve journalistic practices. His findings indicate that, despite infrastructural challenges, AI holds significant promise for the African media sector. Ogola suggests that while international media development organizations could significantly aid in exploiting AI's capabilities, local media are already beginning to integrate these technologies into their operations.

Moreover, in her 2023 book Noir delved into the application of AI in the media, with a specific focus on robotic journalism. The second chapter of her book provided an extensive exploration of AI's usage within media organizations. Noir concluded that advancements in technology have led to the emergence of new forms of journalism like robot journalism, computer journalism, and AI journalism. These innovations, she noted, have significantly enhanced news production, the quality of information, and journalistic efficiency. While AI applications have the potential to boost productivity, they also raise questions about the accuracy of content produced by machines and the best methods for information verification. As a result of these developments, Noir anticipated a growing trend towards integrating human-robot interaction in media production. This highlights the need for a balanced approach that leverages the strengths of both AI and human capabilities in the field of journalism.

Furthermore, in 2023, Dubai Media Council through the Digital Economy & Remote Work Application Office, UAE published a guide for media and content creators, including decision-makers, innovators, and leaders in the field. The guide delves into how AI can be utilized for producing written and visual content, examining its current and future impact on the media industry. It also investigates the synergistic relationship between human creativity and mechanical precision offered by AI, which is seen as beneficial to the entire media sector. The guide aims to equip media professionals with a complete set of tools to facilitate their work, enhancing the integration of generative AI into routine creative processes. By emphasizing the enhancement of human creativity, skills, and ideas using generative AI, the guide's ultimate goal is to foster a culture of inquiry and innovation.

The Role, Characteristics, and Applications of AI in PR

AI is one of the most significant technological developments that has emerged in recent years, especially after the Covid-19 pandemic. AI is often referred to as the fourth industrial revolution, a term highlighting its potential to transform how people interact, the economies of nations, and international politics. This transformation is driven by AI's diverse applications across various aspects of life.

By leveraging AI technologies, PR professionals can automate routine tasks, gain insights from large datasets, and craft personalized content for different audience segments. AI's capabilities in natural language processing (NLP) and machine learning (ML) have revolutionized how PR campaigns are designed, executed, and evaluated. For example, AI-driven sentiment analysis tools enable PR teams to monitor and analyze public opinion in real-time, providing valuable feedback on the impact of their communications strategies (Ali et al., 2023). Moreover, AI applications in predictive analytics help anticipate public reactions and manage crises more effectively by identifying potential issues before they escalate.

Additionally, the characteristics of AI, such as its ability to learn and adapt from data, make it an indispensable tool for modern PR practices. AI systems can analyze vast amounts of data to identify trends, predict outcomes, and provide actionable insights. This capability allows PR professionals to make data-driven decisions and optimize their strategies for better results.

Furthermore, AI applications in PR extend to various domains, including media monitoring, content creation, and audience engagement. AI-powered media monitoring tools track mentions across multiple platforms, ensuring that PR teams stay informed about relevant conversations and trends (Yazici et al., 2023). In content creation, AI algorithms generate press releases, social media posts, and blog articles, maintaining a consistent brand voice while freeing up human resources for more strategic tasks. Additionally, AI chatbots enhance audience engagement by providing instant responses to inquiries and gathering feedback.

Boucher (2020) focuses on five major issues as he examines the significance of AI and its possible advantages in PR. First, he states that the name "AI" itself has become a barrier to fruitful discussion of the wide range of technology it encompasses. Secondly, algorithms are biased because they pick up on societal injustices and prejudices. Technical solutions and governmental regulations can be implemented to combat this. Third, AI systems gain knowledge from social data, which affects how decisions are made. They also inherit structural

injustices and prejudices. Although prejudice and inequality cannot be completely eliminated, AI should mitigate them. Limiting bias detection and ensuring responsible AI usage can be achieved through technical alternatives and regulatory actions. Fourth, AI serves as a tool to harness the societal benefits of technology, rather than an end in itself. Public acceptance of AI hinges on ensuring that citizens find the technology accessible and trustworthy. Building more reliable systems can also help foster public trust in AI products and services. Finally, while many AI applications offer incremental improvements in convenience or efficiency, they often come with unequal distributions of costs and benefits, suggesting that AI may sometimes fall short of its anticipated impact. More ambitious outcomes may be achievable through AI research aimed at addressing societal biases and inequalities, while modest promises about AI's potential and limitations can contribute to managing public expectations.

Furthermore, Ali et al. (2023) provide a broad review of the state of the art in Explainable Artificial Intelligence (XAI), with particular emphasis on model explainability, post-hoc explainability, data explainability, and explanation assessment. The study presents evaluation criteria, open-source programs, and datasets, categorizing XAI approaches into four axes. The study examines 410 scholarly publications published between January 2016 and October 2022, aiming to improve the efficacy and reliability of AI models for various fields seeking dependable XAI techniques for data transfer. The study reveals that although the explainability of AI models has improved, trustworthiness still needs enhancement. It recommends focusing more on crucial circumstances and decision-making processes and addressing the point at which suggestions are saturated without considering the audience's requirements. While transparency is important, extensive modeling is needed for real-world applications. The article bridges the gap between legal provisions and technological advancements by advocating for a holistic approach to trustworthy AI. Cooperation between legal and technological specialists and ongoing learning from early initiatives are essential to create a thorough foundation for reliable AI. This will enable the implementation of highly developed AI systems that adhere to moral and legal standards.

Moreover, Yazici et al. (2023), in their study "A Survey of Applications of AI and Machine Learning in Future Mobile Networks-Enabled Systems," examine the applications of AI and machine learning across several domains enabled by upcoming mobile communication platforms. The study describes the many forms of machine learning, their development, and the current research. Along with reviewing research on machine learning and artificial intelligence, the

article includes illustrative results and visuals. It provides future research prospects, outlines research obstacles for various applications, and concludes with closing thoughts. The article explores several use cases for machine learning applications, such as UAVs, digital twins, cybersecurity, smart energy, smart transportation systems, and smart healthcare. The report presents a thorough summary of evaluated publications, showing the learning types used in the application sectors, and highlights journal papers exploring these use cases utilizing machine-learning methods. To address the difficulties in machine learning applications for upcoming mobile communications-enabled systems, the study proposes a classification of pertinent studies. Big data management, model resilience, low latency, energy and compute costs, security, and privacy are important concerns. The study concludes that some solutions include federated learning, offloading, mobile edge computing, fog computing, enhanced hardware utilization-based solutions, algorithmic innovations, and blockchain technology. Federated learning is a viable approach for the developing field of deep learning. In contexts with vast amounts of data produced, data privacy and security concerns are important; hence, deep learning mixed with blockchain technology may be a developing field. Deep neural networks are advantageous for two of the most common learning types: supervised learning and reinforcement learning. With the growth of the Internet of Things and big data, deep learning algorithms are predicted to develop tremendously, aided by 5G and B5G mobile communication technologies.

As well, Çınarer (2021), in the book "Artificial Intelligence Applications," discusses the potential and varied applications of AI across multiple sectors, including food, power, and agriculture. The book delves into the development of AI-driven systems aimed at enhancing productivity and sustainability in agriculture, covering AI's roles in crop management, pest and disease control, and soil and irrigation management. Additionally, the book explores AI's role in the power industry, emphasizing how AI techniques can ensure an efficient and reliable power supply. It also addresses the sociological and ethical implications of AI-powered chatbots. The concluding chapter highlights AI's capabilities in the food industry, focusing on its potential to improve food production, quality assurance, safety, and security. It examines the use of AI and machine learning (ML) in the food manufacturing and service industries and their role in decreasing human error, lowering packing and shipping costs, improving customer satisfaction, and providing faster services.

In sum, AI has diverse applications across various sectors, profoundly impacting real-world scenarios. Key applications include conversational AI,

deep learning platforms, healthcare, agriculture, retail, virtual agents, speech recognition, machine learning, biometrics, Natural Language Generation (NLG), and image recognition. AI technologies such as speech recognition convert spoken words into text, while NLG generates natural language from structured data. Machine learning systems analyze data with minimal human input, and virtual agents simulate human interactions. Robotic Process Automation (RPA) automates business processes, biometrics verifies identity using facial recognition, and conversational AI uses deep learning for decision-making and automated messaging.

In future mobile networks, AI and machine learning applications include UAVs, digital twins, cybersecurity, smart energy, transportation systems, and healthcare, addressing challenges like big data management, low latency, and security through techniques like federated learning, edge computing, and blockchain technology. In specific sectors, AI enhances productivity and sustainability in agriculture through crop management, pest control, and soil and irrigation management. In the power industry, AI ensures an efficient power supply, while in the food industry, it improves production, quality assurance, and customer satisfaction. AI's role in education is critically examined through the lens of human rights, democracy, and the rule of law, highlighting both the advantages and potential risks.

Media Professionals' Attitudes toward the Application of AI in PR

The integration of AI within the realm of PR and media has been a topic of considerable academic interest, particularly in terms of legal, ethical, and professional dimensions. This literature review examines the perspectives of media professionals on the use of AI technologies in their practice, synthesizing findings from recent studies.

First, Summak (2024) posits that AI's introduction to communication professions heralds substantial benefits, suggesting those who embrace AI technologies will secure a competitive advantage. They argue AI will serve as a beneficial tool rather than a threat, with the profession's future likely characterized by a synthesis of AI technologies and human insight. Nonetheless, the preparedness and adequacy of communication specialists for an AI-enhanced environment remain uncertain.

Moreover, Arief and Gustomo (2020) report a significant transformation in PR functions due to the advent of AI and big data, with a notable portion of traditional roles being automated. Their study highlights a crucial phase of adaptation, urging PR practitioners to acquaint themselves with emerging tools to remain relevant in the evolving landscape.

Furthermore, Panda et al. (2019) explore AI's disruptive potential in PR, based on expert interviews and academic literature. Their findings reveal a cautious optimism among PR professionals regarding AI's utility in campaign management, suggesting an evolving landscape where AI's role in PR is increasingly recognized yet calls for deeper engagement and understanding.

Furthermore, Kreth's (2023) article in the Forbes Business Council highlights the transformative influence of AI on PR and marketing, emphasizing the efficiency and interconnectedness enabled by AI analytics. It provides actionable insights for PR professionals to harness AI's potential responsibly and effectively.

Lastly, Makawi and Abdel Hamid (2021) reveal varied perceptions among media professionals regarding AI's role in the Emirati media sector. Their study uncovers a degree of unfamiliarity with AI technologies among respondents and a general hesitance towards the concept of AI in supervisory or collaborative roles within the media industry.

In conclusion, the reviewed literature highlights the transformative potential of AI in the PR and media industries, alongside the need for professionals to adapt and effectively utilize these technologies. Ethical, legal, and practical considerations remain paramount as the sector navigates the integration of AI, with ongoing research and dialogue essential to addressing the challenges and opportunities this technological evolution presents.

AI Ethical Issues

In examining the ethical dimensions of AI in the realm of PR and media, a diverse array of scholarly work provides a comprehensive overview of the challenges and considerations at the intersection of AI, ethics, and law.

First, Helberger et al. (2019) examine the implications of AI-driven tools in the media, scrutinizing their effects on freedom of expression and adherence to Article 10 of the European Convention on Human Rights (ECHR). They advocate for professional algorithmic ethics and emphasize the importance of aligning AI usage with privacy and data protection standards, thereby safeguarding human rights and freedom of expression.

Moreover, Haas (2020) addresses the impact of AI on media freedom and expression, highlighting concerns such as data bias, human rights abuses, and the undermining of traditional media. The study advocates for AI deployment and design that respects human rights, with transparency and accountability being paramount.

Furthermore, Buhmann and White (2022) explore the ethical implications of PR, focusing on issues of evidence ambiguity, poor judgment, and potential collateral damage caused by AI. They emphasize the importance of striking a balance between efficiency and ethical considerations, advocating for greater critical literacy regarding the societal impacts of AI.

As well, Madan & Ashok (2023) present a literature review identifying ethical challenges in AI adoption within government, such as justice, transparency, privacy, and human rights. They emphasize the importance of absorptive capacity and effective data governance in public administration to mitigate AI conflicts.

Furthermore, UNESCO (2023) provides an in-depth examination of AI's ethical dimensions, presenting real-world ethical dilemmas and emphasizing principles such as transparency, accountability, and fairness in AI utilization. In addition, Capitol Technology University (2023) articulates critical ethical issues surrounding AI, advocating for stringent regulations, diversity in AI development, and ongoing dialogues to ensure the responsible integration of AI into society.

As well, Harvard (2020) highlights the escalating ethical concerns as AI assumes a larger role in decision-making, underscoring the need for privacy, transparency, and consideration of AI's societal impact. Additionally, Krafft et al. (2020) propose a multimethod framework for operationalizing AI ethics, addressing the practical challenges of implementing ethical principles in AI development and application.

In addition, Al-Asadudi (2022) aims to elucidate the utilization of AI in enhancing the operational efficiency of PR practitioners. Through a questionnaire distributed to 248 PR professionals, the study reveals a moderate institutional reliance on AI for PR activities, with chatbots being a prominent technology in this domain. Furthermore, the study identifies AI's pivotal role in combating rumors and fake news on social media, highlighting its potential to augment content production and professional efficiency.

AI applications in government communication necessitate stringent data protection measures. The European Union's GDPR mandates explicit consent and robust security measures to safeguard personal data, setting a benchmark for privacy regulations globally (European Commission, 2016). In contrast, the United States presents a less regulated environment, underscoring the necessity for international dialogue and cooperation on data privacy standards (Department of Commerce, USA, 2020).

The susceptibility of AI systems to biases can lead to discriminatory outcomes in public communications, necessitating the development of legal frameworks to enforce transparency and accountability. Ensuring equitable treatment across all demographic groups is critical, and legal provisions must mandate the explainability of AI decisions (Jobin et al. 2019).

The use of AI to generate content raises significant questions about intellectual property rights. Legal guidelines must clarify whether the AI developer or the government agency owns the rights to AI-generated content, thereby preventing disputes and ensuring proper attribution (European Commission, 2020).

This literature review elucidates the complex interplay between AI, ethics, and legal considerations, emphasizing the urgent need for a cohesive framework to navigate the ethical challenges posed by AI in PR and media. The synthesis of these studies underscores the importance of ethical considerations, transparency, and human rights in the development and deployment of AI technologies, advocating for a balanced approach that incorporates both technological advancements and ethical imperatives.

AI Legal Considerations and Regulations

The integration of AI into the media and communication sectors has sparked a comprehensive discourse on its legal and ethical implications, prompting a range of academic investigations. This literature review encapsulates pivotal insights from contemporary research that addresses the myriad legal considerations and regulatory landscapes shaping the incorporation of AI within these fields.

Exploring the ethical and legal implications of AI, Ibiricu and Made (2020) delve into the ethical quandaries posed by AI in PR, particularly the challenges surrounding data privacy on digital platforms. Their findings highlight the pressing need for organizational ethical frameworks to align with European Union legislation, underscoring the potential risks to privacy and personal data control faced by interest groups in the digital realm.

Additionally, Pierson et al. (2023) investigated the blind spots in European AI legislation and their potential impact on the media and communications industry. They collected 44 case studies from committee members and networks to identify problematic AI use cases and best practices in the media and communication industry. The study revealed that European legislation had not adequately addressed the rise of a datafication system dominated by large transnational corporations. It critiqued the AI Act's shift from compliance to

trustworthiness as insufficient to protect public values, environmental sustainability, or fundamental rights.

Furthermore, Lipchanskaya and Otstavnova (2020) embark on an analysis of Russian legal and constitutional provisions related to AI, uncovering a significant void in legal regulations concerning AI and criminal law within PR. Their work calls for an urgent rectification of these gaps to govern adequately the burgeoning digital economy and AI advancements.

As well, Amodu et al. (2019) spotlight the ethical dilemmas arising from the intersection of the Internet of Things and PR. Their study highlights security challenges related to the legality of customer information exchange, underscoring the complexity of managing sensitive data in a hyper-connected digital landscape.

Moreover, Nobre (2020) suggests that AI may pose legal risks due to the unregulated nature of the internet. He argues that AI devices and algorithms should be perceived as independent social, political, or economic agents, potentially revolutionizing the fields of journalism, public relations, and advertising.

Moreover, Rodrigues (2020) scrutinizes the human rights implications of AI, advocating for algorithmic transparency, cybersecurity, and fairness. By framing these discussions within the context of vulnerability, Rodrigues advocates for a proactive stance in mitigating the risks that AI technologies may pose to human well-being, especially among vulnerable populations.

The varied legal considerations across jurisdictions call for international cooperation to standardize AI laws. This collaboration could foster a more secure and equitable use of AI in public communications, promoting both innovation and fundamental rights (Russell et al., 2015).

Collectively, these studies underscore the imperative for a comprehensive legal and ethical framework to navigate the complexities AI introduces to media and communication. Principles of transparency, accountability, and fairness must be central to the responsible deployment of AI technologies. As the AI landscape continues to evolve, ongoing research and policy innovation are critical to addressing the multifaceted legal challenges and ensuring the ethical integration of AI into these pivotal sectors.

AI and Media Practices in the Arab Region

In the realm of Arabic studies on AI within media and public relations, a rich tapestry of research reveals the multifaceted perspectives of media professionals towards the burgeoning role of AI technologies. These studies,

spanning Egypt, Jordan, and the UAE, shed light on the potential impacts, ethical considerations, and future trajectories of AI in shaping media practices and public relations dynamics.

First, Abdel Hamid (2020) delved into the perceptions of media students in Egypt and the UAE, examining their anticipation of AI's impact on the media landscape. The study, leveraging the technology acceptance model, underscored a positive correlation between the ease of use of AI applications and their anticipated benefits on job performance. However, it also highlighted concerns over AI's threat to human employment, the loss of human touch in media content, and the potential dampening of creative ingenuity, revealing a nuanced perspective on AI's integration into media professions.

Simultaneously, in the realm of Arabic studies on AI in news media, El Gody's 2021 study titled "Using Artificial Intelligence in the Al Jazeera Newsroom to Combat Fake News" played a significant role. This research assessed Al Jazeera's efforts to counteract fake news within its newsrooms. El Gody conducted detailed interviews, each lasting between 45 and 75 minutes, with various personnel, including high and middle management, journalists, and AI developers at Al Jazeera. These interviews shed light on the multiple strategies implemented by the news organization to combat content piracy. The study also highlighted the utilization of AI, particularly anticipatory technology, in managing newsroom operations and identifying fraudulent sources. However, the interviews revealed three major challenges that might hinder the full utilization of AI in Al Jazeera's newsrooms: technological and infrastructural difficulties, economic and financial constraints, and journalists' hesitancy towards technology adoption.

Additionally, Almarzooqi's (2019) investigation into the AI-driven government in the UAE spotlighted the leadership capabilities necessary for navigating an AI-centric administrative landscape. Through a mixed-methods approach, the study revealed key insights into organizational adaptability, leadership enhancement through AI, and the importance of agile leadership skills, suggesting a strategic framework for leadership development in the AI era.

Additionally, Musa and Abdulfattah (2020) conducted a critical examination of the readiness of Egyptian newsrooms for AI adoption, revealing a significant gap in technological integration and organizational readiness for AI's transformative potential.

Furthermore, Khouly et al. (2022) shed light on Egyptian journalists' engagement with AI technologies, revealing a spectrum of adoption rates and

attitudes towards AI's role in journalism, characterized by cautious optimism tempered by concerns over content authenticity and journalistic integrity.

In addition, Almesafri and Habes (2023) focus on the potential of AI in addressing regional economic and social concerns in the UAE government, particularly in Dubai. Their research highlights the challenges and opportunities associated with AI adoption in the public sector, specifically in human resources divisions.

Lastly, Shaer et al.'s (2023) research sheds light on AI adoption in Dubai's government entities. The study reveals high adoption rates of AI but emphasizes the need for dedicated AI strategies and guidelines, particularly in service development operations.

Collectively, these studies present a narrative of cautious optimism, critical engagement, and ethical reflection regarding the integration of AI into the media and PR sectors within the Arab world. They emphasize the necessity of a balanced approach that leverages the technological benefits of AI while addressing its ethical challenges and ensuring the preservation of human-centric values in media and PR practices.

Discussion

The previous studies reviewed in this article addressed a variety of ideas surrounding AI use in communication and media. Some explored how news organizations use AI technologies, while others attempted to identify the factors influencing AI adoption and address the main challenges facing its deployment. Some addressed the perspectives and attitudes of media professionals toward the application of AI in public relations. Others addressed the effects of AI use in Arab countries on the media sector in general. On the other hand, a number of key points or ideas emerged from most of the reviewed literature. These studies agreed on the following: the great promise and effects of AI for media and government communication, the ethical considerations of AI use, the development of laws and regulations governing AI and the need to train and equip media professionals and public relations officers to use AI.

Regarding the great promises of AI for media and government communications, several studies have demonstrated the enormous potential of AI to automate routine tasks, gain insights from massive data sets, and craft personalized content for different audiences. They believe that the introduction of AI into communications professions promises significant benefits, suggesting that those who adopt AI technologies will secure a competitive

advantage. They argue that AI will be a useful tool, not a threat, as noted by Al-Asadudi (2022), Ogola (2023), Ali et al. (2023), and Summak (2024). On Contrary, Boucher (2020) disagrees, stating that while many AI applications offer incremental improvements in convenience or efficiency, they often come with an unequal distribution of costs and benefits, suggesting that AI may sometimes fail to achieve its expected impact.

Many studies have also addressed the ethical considerations and challenges associated with the use of AI in the media. They emphasize the importance of aligning the use of AI with privacy and data protection standards, thus protecting human rights, freedom of expression and reducing algorithmic bias while prioritizing transparency and accountability. Most researchers agree on the need for a balanced approach that combines technological advances with ethical imperatives, such as Helberger et al. (2019), Buhmann and White (2022), and Madan and Ashok (2023).

The previous concerns necessarily led to a literature review that explored pivotal insights from contemporary research addressing the numerous legal and regulatory considerations shaping the integration of AI into these fields. It was shown that AI might pose legal risks due to the unregulated nature of the internet. A significant gap was also revealed in the legal regulations relating to AI and criminal law. Consequently, many researchers have called for the need to formulate laws and legislation regulating the use of AI in various state sectors, particularly in the media and public relations fields. These researchers include Ibiricu & Made (2020), Lipchanskaya and Otstavnova (2020), Rodrigues (2020), and Pierson et al. (2023).

Furthermore, many studies have highlighted the importance of media and public relations officials' readiness and understanding of AI use. This, in turn, will significantly affect the results and objectives achieved, whether positively or negatively, depending on the understanding level and awareness of officials responsible for applying this technology. This ultimately leads to the importance of training them to raise awareness and harness the potential of AI responsibly and effectively. This is what a group of researchers, including Summak (2024), Gustomo & Arief (2022), and Makawi & Abdel Hamid (2021), have agreed upon.

In sum, there have been various studies that have dealt with AI, its benefits on the media , government communication and public relations sectors, as well as the concerns and ethical considerations that accompany it. Many of these studies and reports have recommended the necessity of legalizing AI use and developing strategies that regulate its work. However, few studies have

examined the role of AI in regulating the work of government media offices in UAE, and this highlights the importance of this study.

Conclusion

This review of the relevant literature clarifies the key points and ideas that must be considered when activating the use of AI. The literature reviewed varied across various international countries, both foreign and Arab. Additionally, the literature on artificial intelligence and its applications in the UAE, in particular, was reviewed.

Current scholarship on AI integration into government communication and public relations in the Arab region reveals a notable research gap concerning federal media systems, especially exemplified by the UAE. Previous literature predominantly addresses unitary or centralized media systems and general technology adoption frameworks, largely neglecting the distinct features and challenges posed by federal governance structures. Federal states like the UAE have decentralized media landscapes, where each emirate manages its own media office, alongside a federal communication body, which can potentially lead to fragmented or inconsistent messaging. While unitary Arab states (e.g., Egypt) typically have centralized strategies, the UAE's federal structure uniquely influences communication, AI integration, and strategic coherence. This arrangement raises critical questions about the capacity of local media offices to implement unified national strategies effectively, especially when adopting advanced technologies like AI. There is an acute need to examine the tensions, dynamics, and ethical implications—such as transparency, accountability, and data protection—emerging within federal media systems. By exploring these complexities, future research can contribute significantly to understanding how federations balance autonomy and cohesion in government communication, ensuring more coherent and effective use of AI technology across different governance levels.

In conclusion, there exists a gap in both understanding and analyzing the role of media professionals working within federal or unitary systems, particularly as a cohesive community of practice. This gap suggests a need for scholarly inquiry that not only delves into operational methodologies but also critically assesses the ethical landscape in which these professionals operate when adopting and utilizing AI technologies.

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