Media and Artificial Intelligence: Legal and Technical Media Challenges

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Abstract

This paper explores the concept of artificial intelligence (AI), its types, and the fields in which it has been applied. It also highlights its key applications in the media sector and examines how various countries have addressed AI through their legal frameworks. In particular, it discusses the legislative provisions regulating media in relation to AI, with a focus on the legal framework specific to this technology.

Introduction

"Every human being is in the process of becoming a machine—or more accurately, the machine is evolving to become human." —Philosopher Paul Valéry, early 19th century

One of the most significant outcomes of the Fourth Industrial Revolution is the emergence of artificial intelligence. This development stems from the evolution of new information and communication technologies. Since 2010, AI has played a key role in both scientific and professional domains. As its usage has increased across multiple sectors, so too have the risks it poses. These risks have created a number of challenges for contemporary legal systems.

For legal scholars, AI represents a relatively new field. It raises critical questions regarding the attribution of liability and the mechanisms for proving damage resulting from its use. AI has introduced several legal challenges, including issues of intellectual property, contractual and tort liability, personal data protection, and identity theft. Its impact on the legal system lies in how well existing laws can respond to the risks and complexities posed by this technology.

Some legal systems have taken early steps to address these concerns. They aim to strengthen their strategic and informational roles by granting AI systems a form of legal personality. This status would allow AI systems to acquire rights and bear obligations. These developments require revisiting and updating both national and international legal frameworks to accommodate the legal recognition of AI.

In today's world, the influence of media and artificial intelligence is growing rapidly. This has led to a host of legal and technological challenges that demand thorough investigation.

This article examines how emerging media technologies are reshaping the media landscape and how AI is being integrated into this domain. It analyzes the legal and technical issues that arise from these developments.

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The aim is to highlight the ethical principles and human rights implications of AI, while also reviewing the main policies and laws that could help build a national AI framework. This is particularly important for various sectors in Algeria, which still lack clear regulatory provisions to govern the use of AI. AI presents both a technical and media-related challenge, as it is one of the outcomes of the ongoing evolution of media and communication technologies.

This paper reviews the concept of AI, its different types, and its fields of application. It also outlines its primary uses in media and how countries have responded to AI through legal reforms, especially in relation to media law and the specific regulations concerning AI.

First: Artificial Intelligence

Intelligence refers to the capacity for understanding. However, within the scientific community—where disciplines vary and branches expand—it is difficult to find a single definition of "intelligence" that is universally accepted by scholars.

In philosophy, the concept of intelligence has undergone many changes over time. Plato defined it as the sum of all activities that a person can acquire, thus separating it from innate instinct. Aristotle, who lived during the pre-Christian era, did not offer a precise definition. Instead, he treated intelligence as a trait distinct from reason and decision-making.

As philosophical thought progressed and scientific research evolved, understandings of intelligence also changed. Cyril Burt defined it as an innate, general capacity for perception. David Wechsler described it as an individual's comprehensive and complex ability to exert effort for a specific goal and to think rationally in response to the environment.

Ibn Khaldun, one of the most prominent thinkers of the modern era, viewed intelligence as encompassing multiple dimensions. These include tactical intelligence, experiential intelligence, theoretical intelligence, as well as political and social forms of intelligence[1]

The Concept of Intelligence in Psychology

In the field of psychology, intelligence is often associated with brain function and behavioral patterns. Jean Piaget explained that intelligence emerges as a result of an individual's adaptation to their environment.

The French psychologist Alfred Binet introduced the concept of the *Intelligence Quotient (IQ).* It is a numerical scale used to compare levels of human intelligence. The formula is: **(Mental Age ÷ Chronological Age) / 100**

The term **artificial intelligence** was first introduced in 1956 during a conference held at Dartmouth College in Hanover, New Hampshire. Today, it is a widely used term, yet it still lacks a unified global definition. This is partly due to the rapid development of the field and its interdisciplinary nature. Artificial intelligence continues to produce new results and frequently overlaps with computing, statistics, and robotics, which blurs the boundaries between these areas.

It is generally agreed that the American scientist **John McCarthy** was the first to coin the term. He defined artificial intelligence as *"the science and engineering of making intelligent machines."* He also described it as *"a branch of computer science focused on creating intelligent systems."*[2]

Some have defined it as *"the science and engineering of creating intelligent machines, particularly intelligent computer programs."* It is closely related to the effort of using computers to understand human intelligence. However, artificial intelligence should not be limited to methods that are biologically observable [3]Others have

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[1] Samia Shahbi et al., "Artificial Intelligence Between Reality and Aspiration: A Technical Field Study," presented at the International Forum on Artificial Intelligence: A New Challenge for Law, held on November 26-27, 2018, Algeria, p. 3.

[2] Majid Ahmed Ibrahim, "The Legal Nature of Artificial Intelligence Systems and Their Impact on Civil Liability," *Researcher Journal for Legal Sciences*, Part 2, Vol. 4, No. 1, 2023, p. 68

[3] IBM Cloud Education, 2020, **Artificial Intelligence**, https://www.ibm.com/sa-ar/cloud/learn/what-is-artificial-intelligence, 30/12/2023.

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defined it as *"the ability of a computer or a computer-powered robot to process information and reach conclusions in a way similar to human thinking, particularly in learning, decision-making, and problem-solving."*.

Second: The Role of Algeria and Other Countries in the Legal Regulation of Artificial Intelligence and in Keeping Pace Technologically

Algeria, along with other countries, plays a key role in regulating artificial intelligence and developing the legal frameworks related to it. Algeria, like many nations, must understand the legal challenges that AI presents and work toward drafting clear and appropriate legislation to govern its use.

At the international level, cooperation and coordination between countries are necessary. States must work together to develop common international standards and unified laws that regulate AI while protecting individual rights and basic freedoms.

One of the early pioneers of AI, former Google engineer **Geoffrey Hinton**, recently warned in interviews about the risks of the technology he helped create. He stated that generative AI could soon become more intelligent than the humans who designed it. The full impact on the labor market remains unclear. Even system developers and senior executives at Microsoft and Google admit that they no longer fully understand how AI applications function.

In an open letter, several researchers and business figures—including **Elon Musk**—called for a temporary halt to AI development until the end of the year. This pause, they argue, would allow time to create proper regulatory frameworks.

The **European Union** responded with a draft law that has been under discussion for two years. In principle, the law proposes classifying AI systems based on levels of risk. High-risk systems that analyze or predict social behavior in unacceptable ways should be banned. These systems must be subject to strict controls and regulations.

Less dangerous uses of AI—such as conversational bots like **ChatGPT**—should not face heavy restrictions. Still, all AI-powered services must be clearly labeled and explained to users. European Parliament member **Róża Thun und Hohenstein** offers an example: when someone applies for a loan and a computer processes the request, the applicant should have the right to ask for a human review if the result is negative. Moreover, they must be informed that an AI application handled their request.

Companies wishing to offer high-risk AI services in Europe must meet strict conditions. They must be prepared to manage the risks linked to their products. The data and information used to train AI systems must be reviewed by human experts. Individuals providing data must be informed about how their information will be used.

In **Algeria**, observers following the debates around the new **Media Law** will have noticed an important omission. These discussions failed to address a critical issue that is shaping the global media landscape.

Today, journalism is facing serious challenges due to the rapid shift toward digital platforms. Even the largest media organizations have struggled to keep up. By early 2023, this pressure increased sharply with the rise of generative AI, led by the chatbot **ChatGPT**[2].

According to the 2023 Annual Report by Reuters on Journalism, Media, and Technology Trends, several major and historic news brands are accelerating their transition to digital models. Television channels are doing the same, largely due to fierce competition from digital platforms.

This shift toward digital formats began early in many Western media organizations. It was a response to the fast-moving changes in both technology and digital journalism.

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[1] UNDP and Mohammed bin Rashid Al Maktoum Knowledge Foundation (MBRF), **The Future of Knowledge: A Foresight Report 2018**, Dubai; UAE: Al Ghurair Printing and Publishing, UNDP, 2018, p 9.

[2] Abdul Razzaq Boualqamh, "Media Law and the Battle of Artificial Intelligence," available at https://www.echoroukonline.com/, published March 29, 2023, accessed December 31, 2023..

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At the start of this year, an unprecedented development took place in artificial intelligence. The release of the chatbot **ChatGPT** placed global media institutions in front of new, more complex challenges about how to adapt to rapid technological transformation.

In this context, a recent statement by **Mathias Döpfner**, CEO of Germany's Axel Springer publishing group, received wide attention. He warned that journalists are now at risk of being replaced by AI systems like ChatGPT.

According to Döpfner, tools such as ChatGPT represent a revolution in the information field. These tools may soon outperform human journalists in gathering and synthesizing information. As a result, the profession of journalism must either evolve and improve, or it will be replaced.

These global challenges are keeping many media institutions up at night. Yet they were notably absent from the discussions surrounding Algeria's new Media Law. This omission is especially concerning, given that Algerian journalism was already lagging in its response to digital media changes that began years ago.

One does not need in-depth research to confirm this. A simple Google search on any topic related to Algeria, in any language, will reveal that most search results point to foreign websites rather than Algerian ones. This is despite the presence of nearly 180 print newspapers and more than 100 online news platforms in the country.

Search engine results are not random. They rely on several criteria. Some are technical, such as how well a news website is optimized for the web. Others are content-related. Today, writing for search engines has become its own field of specialization in international journalism.

Strangely, this field is not taught at all in Algerian journalism programs. There is also a lack of practical training, even though President Tebboune has expressed the state's readiness to support professional training efforts.

This situation in Algerian media calls for immediate action. Professionals and sector leaders must respond to the accelerating digital shift. At the same time, recent warnings from the President and the Minister of Communication regarding rising digital media campaigns against Algeria highlight another concern. These campaigns cannot be countered effectively if Algeria maintains only a weak online media presence.

Third: Artificial Intelligence and Capacity Building for Judicial Systems (Rule of Law)

Since 2014, **UNESCO** and its partners have provided training for judges and judicial actors in the fields of freedom of expression, public access to information, and journalist safety. These efforts have been carried out mainly through **Massive Open Online Courses (MOOCs)**.

More than **17,000 judicial actors** have been trained in **Latin America**, in cooperation with the **Inter-American Court of Human Rights**. Similar programs have been conducted in **Africa**, in partnership with the **Centre for Human Rights at the University of Pretoria**, the **African Commission on Human and Peoples' Rights**, the **African Court on Human and Peoples' Rights**, and the **Economic Community of West African States (ECOWAS)**[1]

These training courses aim to improve freedom of expression, public access to information, and the safety of journalists by strengthening the capacities of judges and other key actors within judicial systems. The courses provide an overview of relevant international and regional legal frameworks, as well as emerging challenges linked to digital technologies.

By enhancing understanding of international and regional standards related to freedom of expression, journalist safety, and access to information, judicial decisions can align more effectively with global norms and best practices in these areas.

The need to engage judicial stakeholders on issues related to artificial intelligence was affirmed during the **Athens Roundtable on AI and the Rule of Law**. This was also reflected in a capacity-building assessment conducted by

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[1] UNESCO. (2023, November 8). *New Online Course on Artificial Intelligence and the Rule of Law*. Retrieved September 20, 2024, from https://www.unesco.org/ar/artificial-intelligence/rule-law/mooc-judges..

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UNESCO in Africa. The findings were supported by participants in the **UNESCO Judges' Initiative**, which has reached more than 17,000 members of the judiciary.

To address these needs, an online training program is currently being developed in the form of a **Massive Open Online Course (MOOC)**. This is being prepared in collaboration with the **Category 2 International Research Centre under the auspices of UNESCO** and the **IEEE Center**. The initiative directly responds to priorities expressed by UNESCO Member States in Africa, as well as by judges and other relevant stakeholders.

The online program has the following core objectives:

- To encourage inclusive dialogue with judicial actors on innovations related to artificial intelligence in the justice system, and to expand awareness of digital developments in judicial practice.
- To facilitate knowledge sharing and exchange of experiences among judicial authorities on AI, existing legal frameworks (both hard and soft law), and their implications for human rights.
- To highlight real-world case studies and best practices that translate ethical principles into practical applications in the use of AI in justice systems, especially in contexts where AI affects fundamental rights.

Fourth: Technical Challenges of Using Artificial Intelligence Applications in Media

Today, the importance of media and artificial intelligence cannot be denied. Media and communication play a critical role in disseminating information, shaping public opinion, and influencing social trends. With the rapid advancement of new media and communication technologies, the landscape of the media industry has transformed significantly. This shift has led to the emergence of new platforms and methods for delivering content. It has also paved the way for integrating artificial intelligence into media operations, enabling automation, personalization, and the enhancement of user experiences.

On the other hand, artificial intelligence has revolutionized many aspects of contemporary daily life, including the media sector. Its ability to analyze large datasets, predict user behavior, and automate content creation has simplified processes and improved decision-making. Furthermore, AI has facilitated the personalization of content delivery, allowing media organizations to offer tailored material to individual users based on their preferences, desires, and behaviors.

In the current context, the relationship between media and artificial intelligence has opened new opportunities for innovation, engagement, and revenue generation. At the same time, it has raised challenges concerning privacy, ethical use of data, and the implications of AI-generated content. Therefore, understanding the significance of media and artificial intelligence in the era of new media is crucial to navigating the opportunities and challenges that lie ahead in this rapidly evolving landscape.

The challenges posed by the digitization of journalism and the dominance of algorithms require greater awareness and the training and qualification of human resources to effectively engage with the technical and algorithmic challenges. In this regard, scholars argue that automation (programming) should serve as a tool to assist human intelligence in understanding and shaping this world for the benefit of humanity, rather than allowing it to become an instrument that threatens not only journalism but humanity as a whole[1]

Fifth: Recommendations and Proposals

When considering the intellectual origin of the legal regulation of artificial intelligence, it is necessary to recommend that the legislator draft a law specifically regulating artificial intelligence. This draft should include the following key points:

- **Definition of an Artificial Intelligence System:** An electronic and intermediary system that has the right to act or react independently, either fully or partially, without human intervention. It also has the capacity for automatic self-development.

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[1] Jason Paul Whittaker, **Tech Giants, Artificial Intelligence and the Future of Journalism**, 1st Edition, Routledge, 2019, p 170.

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- **Recognition of Fully Autonomous Artificial Intelligence Systems as Legal Persons:** Such systems should acquire their legal existence from the date of their registration with the companies' registrar.
- **Legal Form of Artificial Intelligence Systems:** Upon registration, the AI system should assume the legal form of a joint-stock company.
- **Legal Protection Starting from Registration Date:** AI systems should be granted legal protection equivalent to that provided for patents and trademarks, in accordance with existing laws and regulations.
- **Mandatory Insurance Coverage:** Companies operating AI systems should be required to cover their activities under national insurance policies.
- **Rights Granted to AI Systems from the Date of Registration:**

AI systems should enjoy the rights accorded to legal entities, including:

a) The system's name, derived from or related to its activity.
b) The system's legal capacity, limited by law and its founding charter.
c) The system's financial estate, managed as a fund under accounting supervision.
d) The system's domicile, determined by the location of its financial management center.
e) The system's nationality, corresponding to the country of registration.
f) The legal representative of the AI system.

- **Need for Special Legislation on AI Systems:** It is essential to enact specific laws regulating AI systems and to establish a legal framework governing their relationship with humans. This process should involve experts in drafting the texts and include representatives from all sectors concerned with AI technology. It is also critical to acknowledge that no matter how advanced an AI system's intelligence, self-learning, or decision-making capabilities may be, it remains a human creation and cannot replace the natural person. Legal personality is exclusive to humans. Therefore, the legislator's role is limited to creating a special legal regime for these systems, primarily aimed at protecting humans from potential harm caused by such systems.

- **Learning from Foreign Experiences:** It is important to benefit from foreign expertise, especially from countries that have made significant progress in using artificial intelligence and have faced legal challenges. For example, the European Parliament's approach to mandating insurance for compensating damages caused by AI systems, alongside establishing a dedicated compensation fund, appears to be a sound solution. However, it should require every beneficiary of these systems to finance such funds, with the state as the primary beneficiary leading this effort.
- **Training National Competencies:** Universities, colleges, and institutes must focus on scientifically, professionally, and practically qualifying their personnel. This training should target modern programs and fields, particularly smart security work based on AI technologies and algorithms.

Conclusion: It can be said that media and artificial intelligence in the digital environment have become essential for improving journalism services. They also reduce much of the burden placed on journalists. Thus, integrating artificial intelligence into media institutions is now indispensable. We must highlight the following important points:

- Artificial intelligence is a relatively new field for Algerian and Arab journalism in general. It requires more specialized studies on the use of AI technologies and applications in media and communication.
- To date, the adoption of artificial intelligence in Algerian journalism remains weak and requires greater attention.
- It is necessary to introduce AI-related courses for university students in media and communication faculties.
- Specialized training courses in artificial intelligence must be provided.

Closing Remarks:

The relationship between artificial intelligence and law presents a significant challenge in this new era of advanced technology. AI demands clear and comprehensive legislation that defines the rules and standards for its responsible and appropriate use. Laws must focus on protecting individual and societal rights while providing mechanisms for accountability when harm or violations occur due to AI use.

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Countries should cooperate and coordinate efforts to develop international standards and unified legislation that regulate the use of smart technologies while ensuring legal and ethical protections.

Furthermore, countries like Algeria, and the global community in general, must recognize the importance of smart technologies and work on developing laws and regulations that respond to these advancements. Laws should be capable of addressing the new challenges posed by AI and balancing technological progress with the protection of human and social rights.

In summary, proper and balanced management of AI requires a robust and suitable legal framework. Laws must address challenges, protect individual rights, and assign responsibility in case of damages. Regulating artificial intelligence is a global challenge that demands international cooperation and coordination to serve public interests and ensure sustainable and responsible technological development.

Conflict of Interest

The author declares no conflict of interest related to the publication of this article.

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