

## Media Ethics and AI-driven: Robot Journalism as a Model



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### **Abstract:**

*This study aims to learn about robot journalism and its working mechanisms, the most important areas covered by robot journalism, and, in addition to reviewing their negatives, the most important ethical challenges associated with them.*

*In order to achieve the objectives of the study, the researchers followed the descriptive method, and the study reached a set of results, the most important of which is That there are many professional challenges that distinguish this new type of media work from a legal and ethical standpoint. The most important is the inability to question artificial intelligence from legal and ethical accountability, and there is a near absence of legal texts regulating this type of journalism.*

**Keywords:** media ethics; artificial intelligence; robot journalism; ethical challenges.

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**Introduction:**

Media legislation, in accordance with liberal principles, necessarily tends towards establishing binding legal rules that inherently contradict the simplest principles of freedom of information exchange. When discussing media legislation in relation to the freedom of information exchange, the restrictions that public authorities work to create in the form of laws immediately come to mind. These laws are legitimate actions that do not restrict the freedom of the press and media. This issue arose as a cumulative result of the conflictual relationship between the press and authority, a conflict that has characterized the history of journalism since the invention of printing letters by Gutenberg in the fifteenth century, leading to the binary system in electronic word processing, which was created by the system from visual letters. This issue has led to and defined most media-legal studies that have persisted in criminalizing the press and media outlets, and consequently legitimizing the intervention of authority with deterrence and punishment, or conversely, criminalizing authority and accusing it of violating the freedom of the press and media.

The concept of professional ethics has received significant attention from researchers in various fields such as psychology, politics, sociology, and others. With the increasing interest in media ethics in recent years, it has become a subject of academic and scientific debate and discussion. This has sparked controversy among academics, legal scholars, and media professionals regarding the boundaries of media ethics, its foundations, and its controls, as well as its red lines. This has taken on new dimensions due to the diversity and proliferation of media outlets and the variety of their content, intellectual, political, and doctrinal orientations, in addition to the dominance of commercial, partisan, and financial interests that control media performance.

Today, the importance of artificial intelligence emerges in light of the accelerating technological pace towards automating various aspects of human life and reducing human intervention in productive processes across different fields, including media and communication. The third generation of the internet has brought with it many changes in media work, leading to the emergence of new journalistic patterns in different forms and contents, among which is what is called robot journalism.

Artificial intelligence tools have imposed a new reality on media in general, and digital journalism in particular. Media institutions have sought to apply these tools to keep pace with technological developments and enhance their informational role in competition with social media sites, to which a large percentage of the audience has turned, relying on them to obtain news. Consequently, traffic rates for journalistic websites have declined during the recent period. This is in addition to the world's experience with the COVID-19 pandemic and what it necessitated in terms of social distancing and working remotely, which pushed those in charge of journalistic work to think about using modern

technological techniques more seriously and in a way that achieves maximum benefit for all elements of the informational process (Badawi, 2021).

Therefore, robot journalism has now become a reality that cannot be ignored or underestimated, despite the fact that it is still in its early stages of development and growth. It is difficult to make absolute judgments about the opportunities it will offer and the challenges it will impose. Robot journalism is considered one of the artificial intelligence technologies. Thus, artificial intelligence has become a reality with applications that often simulate human intelligence and sometimes surpass it. The robot journalism industry thus represents a real challenge to most jobs in various media institutions, whether related to collecting, editing, and drafting data and responding to electronic mail and social media, and the roles related to the process of monitoring and publishing. This compels journalists to work on developing their skills to adapt to the new environment, not only at the formal level but also in content (Brake, 2020).

Many media studies have indicated the necessity of moving towards achieving the maximum possible benefit from the tremendous technological developments in the field of communication and media in developing journalistic work with all its elements, and emphasizing the role that artificial intelligence tools can play in this. This is what journalistic institutions have been keen on, and it has clearly appeared in their adoption of these tools and their orientation towards smart editing rooms and integrated newsrooms since years.

While the discussion about media ethics is still ongoing, and digital and electronic journalism is evolving, robot journalism has emerged as a new media form that opens wide horizons for media work. At the same time, it has raised fears among media professionals about the negative effects and repercussions of this new media development, despite the fact that it is still in its early stages of development and growth.

This study's importance lies in its attempt to identify robot journalism and its working mechanisms, to identify the most important areas covered by robot journalism, in addition to reviewing its negatives, and the most important ethical challenges associated with it.

### **1. Media Ethics: A Conceptual Introduction:**

As we mentioned earlier, every profession has its ethics, regardless of its diverse forms and types. Specialists in mass communication gather its specific values and ethics, expressing in their content behaviors and ethics that exist in society for every profession. These include the relationships between practitioners and their clients from one perspective, and between them and the society they belong to from another. These ethics, behaviors, and customs may be commonly accepted or may be principles and standards set by the professional organization for the profession.

**a. Definition of Professional Ethics: Media Ethics:**

Linguistically, ethics (Akhlaq) is derived from the word "Khuluq" (character), its plural being "Akhlaq." The word "Khuluq" appeared in the Holy Quran in His Almighty's saying: "And indeed, you are of a great moral character" (Al-Qalam: 4), and His Almighty's saying: "This is nothing but the custom of the ancients" (Al-Shu'ara: 137). In *Lisan al-Arab* by Ibn Manzur (1997, p. 78), "Khuluq" means character, nature, and religion. Khuluq, with the silent lam, refers to the inner image of a human being, which is the self with its specific meanings and descriptions. Reward and punishment are related to the descriptions of the outer image. In the noble Hadith, "I was sent to perfect noble morals," narrated by Al-Tirmidhi.

In foreign languages, the word "Ethic" is derived from the Greek word "Ethikos," which originates from "ethos." Its first meaning is "the place where humans and animals live," i.e., "the homeland." Its second meaning is "custom and tradition." In the plural form, it means "good manners and customs." The third meaning, however, refers to "a specific behavior from a specific person" (Ibn Mursali, 2013).

In some cases, this term is used to denote a point of view, and in this context, the word "ethos" carries the meaning of custom or tradition. From what has been mentioned, ethics refers to a set of systems and values established in a given society, becoming a comprehensive reference for what is permissible and what is not.

As for its technical definition, "Ethics is a science that investigates what is good and what is evil, and outlines what a human being should do and what they should avoid. It studies the motives that drive them to perform a specific action under specific circumstances and tries to guide them towards the good intentions they should strive for" (Makawi, 1994). The word ethics in this context refers to the precise philosophical meaning of systematic thinking in the standards of human action.

Professional ethics, or *déontologie* in its practical sense, is a set of practices and instructions collected in rules or legislations set by the profession itself. It is ethically binding, but rarely has a legal or administrative apparatus, and is not accompanied by penalties.

As for media ethics, it is a term that refers to the clear rules of professional conduct in communication institutions, as well as the effective trends and claims related to what is appropriate in the method of achievement and work. Examples include: the ideal idea, which is represented in adherence to objectivity in news preparation, and claims related to technological forms suitable for achieving specific types of communication tasks, and claims specific to determining the standards of good television series (Jaber, 1984).

Makawi (1994) confirms that ethics are a set of objective rules that express the professional behavior required from those working in mass communication. These ethics remain useless unless they are translated into practical reality, tangible through the performance of duties entrusted to them or through the professional practice of journalists, such as conducting journalistic interviews or covering press conferences, and preparing news messages.

Based on the foregoing, the ethics of the journalism profession refers to a set of ethical rules and behaviors that journalists should adhere to, taking into account their professional and human principles for the benefit of society, in a manner consistent with their job within the media institution in which they operate.

#### **b. The Emergence of Media Professional Ethics:**

The ethics of media practice in many countries are more related to customs and traditions than to laws. Therefore, many countries in the world have been keen to issue codes of honor that contain ethical standards that journalists and media professionals must follow in their general approach to achieve the greatest degree of honesty and integrity in conveying information. The emergence of codes of honor on the international level dates back to 1913, with the aim of improving media performance and directing it for the benefit of the audience, where many attempts were made to establish rules of professional conduct for media professionals.

Journalists have sought to establish ethical methods as a right, and from here came the idea of the law of *déontologique*, which distinguishes journalism from other professions. The first French attempt was in 1918, when France worked to establish a charter of ethics for the journalistic profession after the First World War, given the effective role played by media outlets during that period. There were also other attempts in various parts of the world, such as the establishment of the "Law of Literature" in 1926, which underwent many amendments to be more representative of journalists in the United States. The latter gained wide acceptance among journalists, and it included three chapters: objectivity, accuracy, and literature (Abdel Majid, 2005).

In the early fifties of the twentieth century, the issue of issuing a professional ethical charter for media and journalism professionals was discussed for the first time at the United Nations. In 1953, the Subcommittee on Freedom of the Press and Information approved a draft international ethical charter for media workers, which emphasized the importance of presenting facts and integrity in media work. This charter was considered a basis for the professional work of all those involved in collecting, broadcasting, and publishing news, information, and commentary, to achieve the credibility of the word with the recipient and gain their trust (Al-Hindi, 2012).

The "Bordeaux Declaration" is considered one of the important international documents that dealt with media ethics. It was issued in 1954 in the French city of Bordeaux. It emphasized the necessity of preserving the secrets of the profession regarding information sources and making every effort to correct any inaccurate information, whether published or prepared for publication. These effective attempts were followed by other attempts in Western countries and developing countries, which imposed changes and raised significant importance in the subject of the media message, such as the constitution of India in 1958, Egypt in 1958-1960, and also the General Union of Arab Journalists regarding the Arab society in 1964 (Al-Hindi, 2012).

In November 1971, a meeting of six European countries was held in Munich, Germany, which concluded with the "Munich Declaration," which emphasized respect for truth, defense of freedom of information, criticism, and commentary, and seeking honesty in obtaining news, images, and documents. In the 1990s, more than one declaration on media practice ethics were signed, including the "Dondu Declaration" on May 3, 1991, the "Amman Declaration" on October 19, 1992, the "Santiago Declaration" on May 6, 1994, and the "Sana'a Declaration" on January 11, 1996 (Mohamed, 2017).

### **c. The Most Important Media Professional Ethics:**

The ethical duties related to journalists in codes and legislations state a set of commitments and duties entrusted to media professionals in the media environment, including duties and commitments related to the process of collecting and publishing news, and other personal and professional commitments related to sources, the public's right to knowledge and privacy protection, and advertisers, as follows (Salah, 2004):

- Ethics related to the media professional's responsibility towards their information: Media outlets work to ensure the public's right to knowledge by ensuring their right to information. Given the media professional's constant interaction with information sources, they must observe many controls related to this, including preserving the confidentiality of information sources, not using illegitimate means to access and obtain information, attributing information to its sources, respecting their promises, not disclosing sources that request non-disclosure of their identity, not publishing information that the source requests not to publish, not impersonating journalists, not presenting themselves in other capacities, adhering to honesty, and not falsifying or distorting information to serve specific purposes.

- Ethics related to the media professional's interaction with the public: The most important principle that media professionals must respect is the right to privacy and its preservation, and not violating it by not publishing information related to individuals' private lives, not placing individuals under false light, not using illegitimate listening devices, in addition to respecting human dignity and reputation, distinguishing between public figures and ordinary citizens, preserving

the secrets of private life, avoiding slander and libel, avoiding anything that may lead to harming individuals morally or materially, respecting human dignity for the individual, and the right to correction and reply.

- Ethics related to the media professional's interaction with society: Through adherence to respecting the values of society, its customs, and traditions, and not publishing anything that may harm it, or encourage the commission of obscenity or rumors, and deviating from public morals and public decency, and defending public freedoms such as freedom of thought, opinion, and expression, and the right to knowledge and access to information, and respecting all opinions despite their differences, and respecting cultural diversity (intellectual, political, ethnic, and religious).

- Ethics related to the media professional's relationship with advertising: The journalist must adhere to a set of principles, including: the necessity of distinguishing advertising material from editorial material with a clear distinction, prohibiting advertisers from interfering in editorial affairs and media policy and its direction, with the necessity of determining the percentage of advertising material, and setting specific guiding lines for the content of advertisements and what may encourage behaviors and values that may not be consistent with the prevailing ethical values in society, in addition to reducing advertisements so as not to affect the credibility of the medium.

- Ethics related to media responsibilities towards the state: Through working to protect national security and not publishing information that may lead to harming public interest, respecting democratic institutions and the constitution, and laws.

## **2. Robot Journalism: Nature and Challenges:**

### **a. Definition of Robot Journalism:**

In light of the tendency of some journalistic institutions to use or plan to utilize artificial intelligence technologies, whether through launching smart editing rooms and integrated newsrooms, or other forms of using this modern technology, a new journalistic type has emerged, which is called robot journalism.

Literature indicates that the past two decades have witnessed a significant surge in the use of "robots" and automation activities, whether in research activities or attracting people's attention to what appears to be a diverse activity with no end to possibilities. This period has been accompanied by a clear maturity in robot technology, starting with simple robots to the most complex ones, including robots that incorporate integrated circuit chips on printed circuit boards. The use of the word "robot" dates back to 1921, when it appeared in the play *Rossum's Universal Robots* by the Czech writer Karel Čapek, which depicts robots as human-like machines that work tirelessly and without complaint, but ultimately turn against creativity and work to exterminate the human race (Al-Tamouh & Al-Sarairah, 2018).

Isaac Asimov, a science fiction writer and a chemistry professor at Boston University, is considered the first to use the term "robotics" in his short story *Liar!* in 1942. He was also credited with establishing the three laws that govern the robot manufacturing process: robots must not harm humans, robots must obey human orders unless they conflict with the first law, and robots must protect themselves as long as it does not conflict with what was mentioned earlier. Modern robots have evolved, where Heinrich Ernst developed a sensory force robot in 1962 that enables it to stack blocks. This system is considered the first of its kind in its ability to interact with an unstructured environment (human and computer), and this was done at MIT in the United States (Al-Tamouh & Al-Sarairah, 2018).

There are many terms used to describe the use of artificial intelligence technologies in journalism, such as Automated Journalism, Algorithmic Journalism, Robot Journalism, and Artificial Intelligence Journalism, which clearly refer to the use of artificial intelligence (such as algorithms or software) to automatically create news stories without any human input, except for the programmers who developed these algorithms for use in journalism (Brake, 2020, p. 462).

Robot journalism can be defined as "the process of combining algorithms, data, and knowledge derived from social sciences to complete the accountability function in journalistic work, relying primarily on two approaches: the first is related to writing news reports with the help of computers, and the second is related to using social science tools in journalism to achieve the accuracy factor."

Abdel Hamid (2020) defines robot journalism as "the process of employing artificial intelligence technologies and innovations brought by the Fourth Industrial Revolution, such as: high-definition 3D imaging technologies, super-fast internet, the Internet of Things, and robots, to produce media content specific to it, and perform certain tasks in news manufacturing."

Robot journalism, which is created by computer programs, is linked to the process of automating news in media institutions. This has raised major fears, including the replacement of journalists and their dismissal by artificial intelligence technologies. However, the technology of automated journalism is still in its early stages. Literature indicates that the first news story prepared with the help of algorithms was written more than forty years ago at Yale University in the United States. Over the past decade, with the use of algorithms, the journalism profession has continued to change significantly. The media industry has begun to use algorithms to produce news from structured data without human intervention. For example, the Associated Press began using Wordsmith during 2015, which is a software tool developed by Automated Insights, to produce news reports about companies' profits (Aljazairi, 2016).

In another approach, robot journalism can also be defined as "the process of collecting information, classifying it, and writing it in the form of news and complete news reports in an automated way, in which human intervention known during the process of collecting and editing news is dispensed with." Robot

journalism works on the principle of analyzing large quantities of data, from which texts, animated graphics, and visuals are generated through algorithms (Al-Fadawi, 2021).

In general, the term robot journalism refers to the contents, techniques, and means that use artificial intelligence to create news, articles, images, or videos, or newsletters based on predefined templates, and the massive data that is provided to programs to be analyzed and automatically learned from, using them to produce reports, articles, and news at a record speed without relying on the human factor.

#### **b. The Emergence of Robot Journalism:**

During the last week of July 2009, the Center for Advanced Study in the Behavioral Sciences (CASBS) at Stanford University hosted a workshop to discuss the development of algorithmic journalism, which included journalists, researchers, and participants from non-governmental organizations. The workshop was led by James Hamilton from Duke University and Fred Turner from Stanford University. The discussions among the participants in the workshop identified at least four distinct areas for innovation in algorithmic journalism, including: data transformation techniques and pattern discovery, investigative reports, "digital information boards" for journalists, and new technical and social structures for interaction between correspondents and readers, in addition to achieving progress in other disciplines (Al-Tamouh & Al-Sairah, 2018).

In 2015, the scope of robot journalism use began to expand, as the Swedish company MittMedia, which owns 19 Swedish newspapers, launched the first robot journalist, whose tasks were defined in producing news reports about sports and weather. As a result of this step, a debate and discussions arose among Swedish journalists that did not differ in essence from what is happening in other parts of the world, focusing on what this new development represents and whether robot journalists will replace human journalists, in addition to addressing other questions about the effects and consequences it will cause, and what about the quality of the news reports it will write? And why go behind a technology that harms the human journalist by losing his job? (Al-Fadawi, 2021).

In 2016, the Washington Post began its first uses of algorithmic journalism experimentally during the primary elections in the United States. This was an internal attempt to provide news stories automatically through a direct flow of information. A robot was used to achieve three goals: 1- Interacting with triggers based on changes in data and time. 2- Producing different news stories. 3- Outputs that go to multiple distribution channels. Accordingly, the robot journalist works on updating data whenever races are recalled in these elections, or closing the latest polls in a certain situation, or if a certain period has passed without changes occurring. The robot also automatically tweets continuously in one direction to Twitter. The prominent experience for using algorithms in journalistic work at the Arab level is represented in the experience of a group of websites, such as

"Sarmady" in Egypt, which is an entertainment and artistic portal, which used algorithms to respond to the audience's questions via social media channels or its website. It relies on a robot that allows the user to know the dates of more than 100 programs and follows about 30 channels in the Arab region (Aljazairi, 2016).

It has strongly entered many international news organizations. For example, the Associated Press produces automated news reports about profits, covering approximately 3700 companies compared to 400 companies previously. In addition, the agency has worked on using algorithms in producing some of its stories in the field of sports news coverage (Al-Tamouh & Al-Sarairah, 2018).

Competition has become clear among international news agencies in this field, as Reuters, Associated Press, and Agence France-Presse have begun using algorithms to produce thousands of news stories annually using robot technology.

### **c. The Most Important Media Professional Ethics:**

The most important advantages of robot journalism are represented in the following points:

- Automating routine reporting: The use of artificial intelligence in journalism helps expand the scope of coverage quickly. For example, the Associated Press was able to increase the number of companies it reported on their profits using artificial intelligence technology from 300 to 4000 (Abdel Hamid, 2020).
- Providing Summary Tools: Robots can be used to summarize long articles into content with the size of posts/snippets for social media. In addition, there is the possibility of saving journalists' time and technology for conducting interviews with real people. For example, Reuters, one of the largest news providers, partnered with Graphic, a service that uses artificial intelligence to build and update data visualizations. This tool allows faster access to data, and visuals are updated in real-time when included in news.
- Providing faster insight: Artificial intelligence has the ability to interact instantly with data in real-time with broad outlines. In the time that some quarterly reports used to take weeks of effort by a small team to draft, such as performance and attribution reports issued by large mutual investment funds, these reports can now be prepared by artificial intelligence technologies in a matter of seconds (Al-Fadawi, 2021).
- Lowering barriers to entry: Artificial intelligence technologies can reduce the human element in the content creation process. Artificial intelligence technologies enable journalists today to create short video clips in seconds, or collect information from sources on the ground. However, this does not negate the need for journalists, as the quality of artificial intelligence journalism depends on the data it uses, and it is generally not able to present new issues. It is also

currently unable to develop a critical analysis and in-depth understanding of the described phenomena.

### 3. Ethical Challenges for Robot Journalism:

The importance of media work ethics in light of the changes brought about by the new electronic journalistic environment is evident. The electronic journalistic environment needs a new system of rights and ethical duties to help media professionals in their performance of their profession. This system must be compatible with the challenges imposed by the information and communication revolution. The communication revolution has made most journalistic ethics and standards developed during the twentieth century unsuitable, as this revolution creates a new media and communication environment that needs new ethics and standards. Also, the ethics of media work in the electronic journalistic environment differ from those in the traditional journalistic environment.

This environment presents a new system of media work. If the media professionals have not yet framed it, they are striving to discover ways to confront the ethical situations and dilemmas they face. Therefore, there is a need for an ethical charter that helps these media professionals adhere to the ethical duties and controls that are commonly accepted and those that this environment presents. Also, to discover the nature of the difference between the traditional and electronic environments, for example, many of the ethical commitments and duties prevalent in the traditional media environment, such as the necessity of separating advertising from editorial material, take another direction in the electronic journalistic environment. Therefore, demanding media professionals in the electronic journalistic environment to adhere to the same controls followed by media professionals in the traditional environment is an exaggeration from one side, and a lack of understanding of the nature and climate of media work in the electronic journalistic environment from another side, as this relationship raises different dimensions and a new context (Bin Masoud, 2019).

In general, there are some ethical challenges that robot journalism faces, the most prominent of which are (Al-Fadawi, 2021):

- **Data availability:** The use of artificial intelligence technologies can be better when sufficient data is available to capture patterns and learn from them and improve the system accordingly. While humans can compare experiments and infer optimal responses from a small number of similar experiments, artificial intelligence requires large amounts of data to know what the correct response should be. Without data, the ability of artificial intelligence will be limited.
- **Understanding unstructured data:** The use of artificial intelligence technologies also faces difficulty when data is unstructured. For example, profit data or tabulated results for sports games can be easily translated into articles using standardized templates. However, if artificial intelligence is desired to be

more widespread in the creative economy, it will need to process and deal with unstructured data, which constitutes most of the data available today.

- **Lack of self-awareness:** Artificial intelligence technologies cannot explain their outputs: "What did I write? What did I do? Or how did I get there?" To understand how data is translated into a specific story, the design of artificial intelligence must be transparent. One way to achieve this is by allowing consumers to precisely adjust algorithmic parameters to see how results change.
- **Verifying authenticity:** Artificial intelligence cannot distinguish whether the inputs it receives are authentic or not, and this can lead to problems regarding authenticity. If artificial intelligence receives a suspicious input, the resulting output may be incorrect. The solution lies in developing artificial intelligence technologies that can verify authenticity.
- **Redefining copyright and publishing rights and fair use:** Modern technologies have always challenged copyright laws in creative industries. Artificial intelligence technologies are likely to represent a new conflict, as they involve artificial intelligence learning from "expressive" works—which are a collection of articles, paintings, or music created by humans. It is likely that this will test the legal interpretation of "fair use," where copyrighted materials are used to produce journalistic content without payment or permission.
- **Ensuring corporate accountability:** Since artificial intelligence technologies cannot be held accountable legally, human accountability must be included in all stages of the content production chain that relies on artificial intelligence. Content distributors such as Google and Facebook enjoy unparalleled power in shaping public opinion and media because artificial intelligence algorithms are used to determine the relative value of the content that appears to users. Therefore, platforms, as owners of production means, bear the responsibility of preventing the promotion and dissemination of harmful information by the algorithms they develop. There is a need for better measures to ensure the cessation of intentionally misleading content (Neil Thurman, 2017).
- **Unequal power dynamics:** The largest newsrooms are building their own artificial intelligence, but smaller newspapers may not have the technical expertise or financial capacity to do so, and will be forced to license content. This raises fears that these smaller institutions will choose to "buy" instead of "build," which fuels an arms race that reinforces power among a specific group of companies that benefit from artificial intelligence.

### **Conclusion:**

From what has been mentioned, we can say that robot journalism has become a reality that must be dealt with. It is a phenomenon that cannot be ignored or underestimated, just as the challenges it poses cannot be ignored, nor the opportunities it offers, as it is still in its early stages of development and growth.

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