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**ARTIFICIAL INTELLIGENCE AND JOURNALISM PRACTICE
IN NIGERIA: PERCEPTION OF JOURNALISTS
IN BENIN CITY, EDO STATE**

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ABSTRACT

The emergence of Artificial Intelligence (AI) is gradually having effects on every facet of the society; the mass media, being an indispensable part of any society, are not exempted from this AI bug hence they must synergise with new technologies to remain relevant. This study looked at how AI can, or has been impacting journalism practice in Benin City, Edo State, Nigeria. The study was anchored on the mediamorphosis theory while Survey and In-depth oral interview were adopted as the research methods for obtaining data. The 254 registered journalists under the Nigerian Union of Journalists (NUJ), Benin City Chapter, formed the population, and the sample size of 152 was determined using Cozby`s Precision of Estimate table. Among other findings, the study revealed the agreement of journalists in Benin City that automated journalism (usage of AI-driven media applications) is an improvement over the current reporting practices which are still done “manually.” It concluded that automation is the future, and Nigerian journalists cannot afford to be left out in the ultimate move to a world of automation, hence they have to prepare themselves, and embrace AI. Its recommendation included that Journalism schools should have curricula that embrace technology that will effectively prepare potential journalists for the future use of AI for their work.

KEYWORDS: Artificial Intelligence, Journalism, Media, Perception, Practice.

INTRODUCTION

The situation whereby machines (robots) perform the duties hitherto done by humans, and even do them better and faster is the age we are fast approaching. This era would be dominated by Artificial Intelligence (AI), also known as machine intelligence, and humans would be relegated to the background while machines take the lead in almost every field of human endeavour. Already, we are in a period where AI aid human skills to bring about the successful realisation and achievements of various tasks. According to Okunola (2018), since the 1950s when MIT computer scientist John McCarthy first coined the term “Artificial Intelligence”, the technology has grown in leaps and bounds across the globe.

Hosanagar (2017) argues that it is hard to discuss technology innovation these days without running into the words Artificial Intelligence (AI), and that the media are telling everyone that robots are going to take over people`s jobs. Hosanagar (2017) cites entrepreneur and tech visionary, Elon Musk, as warning that AI might cause the end of humanity. Sherman (2018) posits that in the year 2025, robots and machines driven by artificial intelligence (AI) are predicted to perform half of all productive functions in the workplace. Hence McKay (2017) warns that AI, being a new scientific infrastructure for research and learning, has to be embraced by all, especially universities, otherwise universities will become increasingly irrelevant and eventually redundant.

Just as the advent of AI has impact on various sectors of the society, it also affects journalism practice in numerous ways, especially now that journalists can use AI-generated smart templates to gather and disseminate news reports easily on various issues. Galily (2018) affirms that the use of AI technologies has become an indispensable part of the field of media that has to lead to radical transformations in the field of journalism. Loosen (2018) points out that the technology facilitated by advances in the field of automated content production affects the production of news. He considers Data journalism, Algorithm Journalism, Automated Journalism, and Metrics-Driven Journalism as transformation process journalism faces today, that do not only affect the level of the basic stages of news production and consumption but also journalism at its core.

The use of AI in journalism practice, whereby news articles are generated by computer programs, are generally referred to as automated journalism, algorithmic journalism or robot journalism (Graefe, 2016; Dörr, 2016; Cohen, 2015). Already, the New York Times uses “Editor”, an AI-based technology that sits alongside journalists and identifies key phrases, headlines and text details. Schmelzer (2018), notes that, “Editor” can provide on-the-spot research, content suggestions, links, fact-checking, and supporting quotes or facts to help improve the overall quality of the piece.

According to Kobie (2018), the Washington Post has to its credit hundreds of machine-written short snippets using its in-house robot reporter known as “Heliograf”. Heliograf first debuted at the 2016 Summer Olympics in Rio de Janeiro where it automatically put together stories by interpreting sports data and structuring the narrative based on patterns it learned from analysing historical Washington Post articles. According to Schmelzer (2018), the use of the system allowed

continuous reporting and accurate medal counts even for contests that were thinly covered by reporting staff. The Washington Post reported that in 2017 Heliograf published 850 stories entirely autonomously, primarily reporting on sports and the outcomes of regional political races.

Meanwhile, the Press Association is working with Urbs Media for natural-language generation for local news with a project called RADAR (Reporters and Data and Robots), and Yahoo turned to automated writing tool Wordsmith for everything from fantasy football snippets to Game of Thrones recaps. Also, Phillips (2018) reports that Sweden's leading local media company, known as MittMedia, also has a robot journalist code named "Homeowners Bot". Homeowners Bot writes a short text on every house that is sold in their local markets, identifying an interesting angle (such as the most expensive house sold in the year) and adding an image from Google Streetview. Phillips (2018) submits further that in the first four months, this Bot became the most productive "journalist", producing more than 10,000 articles. It has also helped to convert hundreds of users into digital subscribers, as its stories are number one in terms of behind-paywall page views.

The breathtaking innovation of AIs is changing the narratives on how news are gathered, edited, and reported by journalists generally. This is so because, with AI, robots can write real news, and AI algorithms can convert papers that maybe considered complicated to simple news stories that the public can understand. That is why we have an artificial intelligence (AI) programme called WordSmith that can convert structured data into compelling texts that cannot be differentiated from news stories written by a human journalist. Without doubt, AI helps to greatly reduce the workload of journalists and make their work faster and better.

Journalism has already adopted AI into its creation process. According to Ali and Hassoun (2019), this development raises questions about potential implications about the future of journalists, and more profoundly, the fact that human presence in the newsroom is shrinking, because human reporters will no longer be the definitive sources of news. Therefore, this study zeroed its investigations on knowing how the emergence of AI can, or has been impacting journalism practice in Benin City, Edo State, Nigeria. This is taking into cognizance the fact that, no matter how capable a machine may be, its activities can never be compared with the human brain that designed it because it cannot think on its own, and it has no sense of morals, but controlled by man.

It is interesting to note also that machines cannot display must attributes of human journalists, like adding humor while writing or casting news, or building relations. The journalist is endowed with the ability to interact with sources of news, to give comprehensive analysis on issues, to input his standpoint while writing for the media, to determine what translates to be news, and to display emotions where necessary, but AI cannot do these. It is for these reasons Marr (2017) declares that humans are still needed to make the initial decision on which sets of data will be analysed for stories.

STATEMENT OF THE PROBLEM

The emergence of AI is like a two-edged sword mix bag that has both advantages and disadvantages. Apart from the ease of doing things associated with it, its misapplication can have damning consequences on most existing structures in the society, cutting across gender, economic, political, social, and media issues, among others. Some people have argued that AI presents the biggest existential risk to human civilization since the invention of the nuclear weapons (Chakhoyan, 2017).

Though AI can enhance the growth of the media as per technology introduction into journalism practice by making large data collection, collation and dissemination cheaper and faster, yet it can lead to disruption across multiple industries. The increase in the sophisticated uses of AI may result into a high volume of job loss, laziness, and redundancy, among other negative effects in the media industry. This has made Shafik (2018) to declare that technology and automation are destroying and creating jobs faster than some workers can adapt.

OBJECTIVES OF THE STUDY

The aims of this study were to find out if journalists in Benin City think automated journalism (usage of AI-driven media applications) is an improvement over the current reporting practices, to determine the likely impacts of AI taking over journalism practice in Benin City, to ascertain if journalists in Benin City are afraid of their job security with the advent of AI-driven media applications.

SCOPE OF THE STUDY

This study is about the evolution and revolution AI has brought into every sphere of human endeavor, with focus on how it specifically impugns on the mass media and journalism practice. The perception of journalists in Benin City, Edo State, Nigeria, was sought. Benin City is a cosmopolitan city, and it is the Edo State capital where most of the media houses in Nigeria have their branch offices. Major media outlets in Edo State also have their headquarters in Benin City.

THEORETICAL FRAMEWORK

This study is hinged on the mediamorphosis theory of mass communication, more commonly known as the “digital metamorphosis”, as postulated in 1997 by Roger Fidler. The theory explains and estimates the changes of the digital world and its culture. The term *mediamorphosis* is coined by Roger Fidler in 1990, but was made feasible in his book in 1997 when he referred to it as the transformation of communication media, usually brought about by the complex interplay of perceived needs, competitive and political pressures, and social and technological innovations (Blogspot, 2012).

Fidler (1997) asserts that mediamorphosis is a unified way of thinking about the technology evolution of communication media. He derived his mediamorphosis principles from the concept of co-evolution, convergence and complexity. According to Ekele and Enobakhare (2013), the thrust of Fidler's position is that as new media forms evolve, and develop, they influence overtime and to varying degrees, the development of other existing media such that the emergent media displacing the existing ones, the existing ones converge with them to enhance their operations. The essence of mediamorphosis is the idea that the media are complex adaptive systems. In other words, the media, as other systems, respond to external pressures with a spontaneous process of self-reorganization (Anaeto, Onabajo, & Osifeso, 2008).

Roger Fidler opines that Mediamorphosis is a unified way of thinking about the technological evolution of communication media, and by studying the communications system as a whole, "we will see that new media do not arise spontaneously and independently, they emerge gradually from the metamorphosis" (Wordpress.com, 2007, p.2). This theory is chosen as the best for this study because it talks about the changes that take place in the ways through which information is transmitted at present, and how the introduction of AI into journalism practice will further affect information dissemination.

REVIEW OF RELATED LITERATURE

AI and Journalism Practice

The primitive man was communicating with his neighbours naturally, without any deliberate attempt to devise extraneous means of doing so. However, as time went on, various modes of traditional communication means like dance, music, drama, art, etcetera, were adopted in communication. These were the major means of communication among the primitive people before civilization brought about the printing press. When we thought we have seen it all in communication transmission there emerged new media forms due to the improvements in technologies. This further aided communication process, and now we are fast approaching the era of Artificial Intelligence (AI) where machines (robots) are taking over by doing what man did hitherto.

With AI software, news stories are produced automatically through computer programs that interpret, organise, and present data in human-readable ways. According to Cohen (2015), the process involves an algorithm that scans large amounts of provided data, selects from an assortment of pre-programmed article structures, orders key points, and inserts details such as names, places, amounts, rankings, statistics, and other figures. Hall (2018) argues that elsewhere in the industry, the co-founder of Narrative Science predicts up to 90% of articles will be written by AI within 15 years. Also, similar technology is available to summarise long articles into bite-sized content for social media.

The use of AI in journalism has tremendously helped to rapidly expand coverage. Through AI, media organisations can now, more easily, gather, process, and disseminate information on

local and global issues thereby expanding the scope of civic duty beyond a specific community or nation. AI has changed the way we communicate and the procedure for news reporting. This has become achievable because when journalists combine the use of AI alongside their manual ability, the process of news gathering and reporting will be sped up, and the journalists will have more time for higher-level tasks to deliver content faster, with less cost.

Using AI saves time and cost development for the media industry as a whole, and news delivery is done faster and more efficiently; especially now that artificial intelligence (AI) is being used in journalism practice. For instance, China's state news agency (Xinhua News Agency) plan to rebuild its newsroom based on information technology and featuring human-machine collaboration. According to Xinhua News Agency president, Cai Mingzhao, the agency has also introduced the "Media Brain" platform to integrate cloud computing, the Internet of Things, AI and more into news production, with potential applications "from finding leads, to news gathering, editing, distribution and finally feedback analysis" (Schmidt, 2018, p.1).

Handley (2018) reports about the "world's first" artificial intelligence (AI) news anchor, a robot version of a presenter China's state Xinhua News Agency debuted. It (He) has the ability to broadcast 24 hours a day; the presenter (AI) said he would "work tirelessly to keep you informed." The anchor was developed by Xinhua and Chinese search engine Sogou.com and launched at the World Internet Conference in November 2018. Nwabueze (2019), citing *Interesting Engineering*, also reports that the Chinese Government-controlled Xinhua News Agency has announced that they were set to roll out their latest female Artificial Intelligence (AI) news presenter, named Xin Xiaomeng.

It was reported that the new female AI is the first in the world. In November 2018, the state news agency introduced Qiu Hao- a male-gendered AI presenter modeled on an actual Xinhua news anchor- during China's World Internet Conference. According to the *Interesting Engineering* report, Xinhua and Sogou have also announced that they have built an improved male-gendered AI system named Xin Xiaohao, who is able to gesture, stand, and move more naturally than Xin Xiaomeng or Qiu Hao. After only about 5 months of service, "Qiu Hao has already presented 3,400 reports and has racked up 10,000 minutes of screen time. Such systems also make it possible for one presenter to present two different stories at the same time to different TVs or displays," (p.1).

Still, news agencies such as the Associated Press use automated news writing services. These AIs carry out basic reports on finance and sports by pasting the data into pre-written templates. *Emerging Technology from the arXiv* (2017) mentions a new system called *Reuters Tracer* that uses Twitter as a kind of global sensor that records news events as they are happening before they are distributed around the company's global news wire. The system is said to use various kinds of data mining and machine learning to pick out the most relevant events, determine their topic, rank their priority, and write a headline and a summary. The Tracer is said to cover about 70 percent of news stories with 2 percent of Twitter data. Richardson (2018) observes that the Associated Press is also at the forefront of exploring automation and AI to surface political data to enable better, faster election reporting.

In the usage of AI for journalism practice, Kobie (2018) reports that Reuters is building an AI tool called “Lynx Insight”. This AI will serve as a digital data scientist-cum-copywriting assistant to journalists. It will help them to analyze data, suggest story ideas, and even write some sentences by churning through massive datasets, looking for anything interesting. In other words, the AI does what it is good at, and then present journalists with raw materials to work with. Reuters has also partnered with Graphiq; it uses AI to build and update data visualizations.

The tool enables faster access to data, and, once they are embedded in a news story, the visualizations are updated in real time. Schmelzer (2018) concurs by giving the example of Reuters` use of AI to scour twitter feeds to find breaking news before it becomes headlines. In this way, valuable information is transmitted as soon as it is available. However, no matter the utilization of AI in journalism practice, Amaechi (2018) is of the opinion that the print media, for instance, can never go into extinction. He aligns himself with Alan Rusbridger, a British journalist, and former editor-in-chief of *The Guardian*, who asserts that “The newspaper of the future may or may not look like a newspaper – it could be printed on paper, on a screen or exist in electronic ink on a sheet of plastic. But it will behave like a newspaper” (p.2).

Effects of the Use of AI on Society

Although AI tends to have come with a lot of advantages, but it has on its wings some demerits that the society has to cope with in various fields. Giardina (2017) mentions the case of AI-trained computers and robots having the tendency to rebel. He also cites the futurist-entrepreneur, Elon Musk, as voicing his fears that a fleet of artificial intelligence-enhanced robots are capable of destroying mankind. For instance, the Facebook has been using AI for editing news feeds and targeted ads, and it reportedly shut down an experiment in which a pair of AI-driven robots ended up creating their own language that defied human comprehension.

That is to say that AI can decide to disobey commands as imputed by man, and when this happens, it will be dangerous for mankind. AI is sweeping across all human endeavours that made Regelous to predict that "It's all over by 2045- we are no longer running the show," (in Giardina, 2017, p.1).

By the same token, Hughes (2017) mentions the possibility of AI causing a digital arms race. There is the situation where the security industry and the cyber criminals are engaged in an escalating arms race. He posits that “so-called black hats are developing AI to break into systems and cause havoc; while the white hats are researching ways in which an AI can defend networks against its own kind,” (p. 2).

With the way the technology of AI is going, in no distant time, AI will not only usurp human employment, but may displace humans from their places of work. Hendricks (2018) buttresses this fact by pointing out that in Latin America, it has been estimated that between 36 and 43 per cent of jobs could be lost due to AI. Already, about 50 journalists working with Microsoft, performing functions such as selection of stories, headlines, pictures and other contents from news organisations for the MSN site, are set to lose their jobs to robots (AI) in what Microsoft

calls “evaluation of its business” (Vanguard, 2020).

Omotayo (2018) refers to Jack Ma, the owner of Alibaba, as saying that the technology of automation will make the next few decades very painful for those whose survival rely on manual way of working. Ma said that AI will outperform human knowledge in the next 30 years as many jobs will be taken away, declaring that, “The new wave is coming. Jobs will be taken away. Some people, who catch up [with] the wave, will be rich, will be more successful” (p.2). Partovi (2018) notes that, in an analysis of 750 occupations by the McKinsey Global Institute, 51% of job activities are highly susceptible to automation, and that’s through adapting currently demonstrated technology alone, and this “rise of robots will hit the women the hardest” (Cliff, 2018, p. 2). According to Taylor (2018), research carried out by the World Economic Forum in collaboration with LinkedIn shows women account for just 22 per cent of the AI workforce, and men are much more likely to work in the area of artificial intelligence (AI) than women. A new report finds the gender talent gap in the AI sector three times larger than in other industries.

Also, many online media outfits regularly receive various forms of feedbacks, contributions and comments from their readers. However, some of these comments could be negative sometimes; but media houses like *New York Times* do have some AI systems they use to automatically assess readers` comments to ensure they are devoid of offensive language and wrong information, but most media houses do not. Schmelzer (2018) submits that Google's Jigsaw group developed the Perspective API tool that categorises comments into levels of toxicity. Automated or human moderators then take over by filtering through the materials to extricate unwanted ones.

Finally, Hall (2018) identifies seven key challenges that need to be addressed as AI begins to penetrate deeper into journalism and other creative activities. In summary, the challenges are that, while human beings can base their decisions on past experiences and perception, AI would need large quantity of data to identify what the correct response ought to be. In other words, AI cannot function without data. Also, AI has difficulty with unstructured data which make up most of the data available today.

Added to the above, AI does not have self-awareness because it cannot explain its own output. Hall (2018) argues that AI does not have the ability to explain why it wrote what it did, or how it got there. AI cannot also determine maybe the input it receives is authentic or not. This implies that if AI receives inaccurate input, automatically the result will be false. This heightens the doubt about the perceived credibility of automated news. No wonder some critics have misgiving about algorithms being "fair and accurate, free from subjectivity, error, or attempted influence," (Montal & Reich, 2016).

AI can make the infringement of peoples` copyright to be encouraged whereby copyrighted materials like a data set of articles, paintings or music, are used to produce new and ‘transformative’ contents without the express permission of the original owners of the copyright, or payment of royalties to them. Unfortunately too, AI cannot be held legally accountable, as it has the potentials of exacerbating asymmetrical power. For instance, the big newsrooms are building their own AI, while smaller media organizations’ lack the fund and technical expertise to do the same. When this happens, they would be forced to license proprietary content. According

to Hall (2018), “the fear is that choosing to ‘buy’ rather than ‘build’ fuels an ‘arms race for AI’ that consolidates power amongst a handful of companies.” (p.3). He opines that situation can take place in the creative economy as AI becomes dominant in all spheres of life.

METHODOLOGY

The study used Questionnaire and In-depth oral interviews to obtain data. These tools were chosen because they were effective means of addressing the objectives of the study. The population of the study was made up of all the registered journalists under the Nigerian Union of Journalists (NUJ), Benin City Chapter, scattered among the following chapters: Independent Television (ITV), Edo Broadcasting Service (EBS), Nigeria Television Authority (NTA), Africa Independent Television (AIT), Channels Television, Independent Radio (92.3 FM), Kukuruku FM (KU FM 92.7), Vibes FM (97.3 FM), Radio Nigeria (Bronze FM 101.5), Speed FM (96.9 FM) and Nigerian Observer. According to the Nigerian Union of Journalists (NUJ), Edo State Secretariat, there are 254 registered journalists in Benin City.

The sample size of 152 was determined using Cozby`s (2004) Precision of Estimate table which was calculated using conservative assumptions about the nature of the true population value; it states that $\pm 5\%$, a population between 250 and 259 shall have a sample size of 152. Copies of the questionnaire were administered to 143 respondents, 13 from each of the eleven media houses while for the in-depth oral interviews; these authors selected three (3) journalists each from the Television, Radio, and Newspaper sectors, making nine (9). The Research Instruments used were the Questionnaire and the Interview guide. The questionnaire comprised both open-ended and closed-ended questions.

Data for this study were collected personally by the authors who went to the media houses to administer the copies of the questionnaire and to conduct in-depth oral interviews. Administering copies of the questionnaire and retrieving them personally by the authors served the purposes of saving time and cost of recruiting personnel; and it ensured that they were properly administered to appropriate subjects of the study. Where clarifications were sought, the authors took time to explain to the respondents. Out of the 143 copies of questionnaire distributed, only 120 (83.92%) of the retrieved copies were found to be useable.

The data gathered through questionnaire were subjected to quantitative analysis, while responses of the journalists selected for in-depth oral interview were analysed qualitatively by employing emerging themes building analysis. The analysed quantitative data were presented in tables, while salient findings were discussed.

DATA PRESENTATION AND ANALYSIS

Table 1:

Perception of journalists in Benin City on automated journalism (usage of AI-driven media applications) being an improvement over the current reporting practices.

Responses	Frequency	%
Strongly Agree	68	56.67
Agree	22	18.33
Undecided	2	1.67
Strongly Disagree	18	15
Disagree	10	8.33
Total	120	100

Source: Field Survey, 2020.

The implication of this table is that majority (75%) of the journalists think automated journalism is an improvement over the current reporting practices. With this knowledge they are capable to discuss how it can affect journalism practice in Benin City.

Table 2:

Likely impact of AI taking over journalism practice in Benin City.

Impacts	Frequency	%
News accuracy	19	15.83
Timely news	15	18
Time saving	18	15
Extrication of bias	16	13.33
Job loss	13	10.83
Creation of new jobs	10	8.33
All of the above	29	24.17
Total	120	100

*Source:*Field Survey, 2020.

Table 2 shows that the adoption of AI-driven applications can go a long to impact journalism practice because of the advantages and disadvantages associated with it.

Table 3:

Level of fear journalists in Benin City display about their job security with the advent of AI-driven media applications.

Level of fear	Frequency	%
Very high	74	61.66
High	34	28.33
Undecided	2	1.67
Low	8	6.67
Very low	2	1.67
Total	120	100

Source: Field Survey, 2020.

Table 3 clearly indicates that the journalists see the advent of AI-driven media applications as a threat to their jobs, and this implies that it can result in job loss.

DISCUSSION OF FINDINGS

The data gathered in table 1 affirm journalists in Benin City think automated journalism is an improvement over the current reporting practices. This view is supported by Ball (2018) who believes that the use of AI has brought about high-quality reporting. He opines that AI writes “simple day-to-day articles such as companies’ quarterly earnings updates, and also monitor and track masses of data for outliers, flagging these to human reporters to investigate” (p.1). Moreno (2018) also cites Lisa Webb as saying that technology will allow journalists to do a better and richer job in newsrooms because there is a direct connection between automating some news coverage and also being able to improve on the investigative journalism happening in newsrooms; “I am confident that, as innovations scale, journalists will be able to do more journalism” (p.3).

Put succinctly, during an in-depth oral interview, Dorothy Amaze, a journalist with Independent Television (ITV), observes that though her news organisation has not fully deployed AI in its operations, but that with the capabilities that AI displays in journalism practice, it is really an improvement over the current reporting. She reiterated that “there is no way you can compare the current system of news reporting with when you use AI, using AI would certainly transform the world of journalism for the better.” She adds that even though there is no known media house in Nigeria that uses AI fully at present for journalism practice, AI would save journalists` time, and give them more time to conduct interviews with real people. Dorothy Amaze gives an instance of AI solving the problem of cueing, whereby presenters on TV or Radio sets do not need signals to take directive from Directors of program on when to go on commercial break or so, for the AI knows what to do on its own.

On the objective of the likely impacts if AI-driven media applications taking over

journalism practice in Benin City, it was discovered that the impacts include news accuracy, timely news, time saving, extrication of bias, and both job loss and job creation, among others. These agree with Ubabukoh's (2017) view that most machine learning apps have the capability of, not only analysing huge amounts of data in record time, but also reducing errors to the barest minimum; this is a factor that makes them logically preferable to high-cost and error-prone human accounting or consultancy teams.

Likewise, Dalen (2012) notes that automated journalism is cheaper because more content can be produced within less time; news organizations also now lower labor and running costs. To a great extent, automation serves as a cost-cutting tool for news outlets struggling with tight budgets but still wish to maintain the scope and quality of their coverage (Montal & Reich, 2016). Automated journalism has also freed journalists from routine reporting, providing them with more time for complex tasks. Through the use of AI, journalists now have more time for complex jobs such as investigative reporting and in-depth analysis of events (Dörr, 2016; Montal & Reich, 2016).

In an in-depth oral interview with Daniel Obasogie of the *Nigerian Observer* newspaper, he said journalism is a forward-looking profession that has been impacted by AI, advising that journalists must adjust to automation as new technologies emerge periodically. According to him, "AI will make our jobs as journalists to be more effective because they will be available to cover beats that were not covered before now due to shortage of staff. AI has immensely rejigged the performances of journalists, and journalism practice worldwide has been impacted."

Thirdly, data gathered and analysed in table 3 established that most of the journalists (61.66%) feel threatened that the utilization of AI-driven media applications can lead to their job loss. This result tallies with the assertion of Bernard (2013), that robot innovation, along with the availability of large data, is a powerful combination that can pose a real challenge to most jobs, including journalists. It also agrees with Ferro (2018) who warns that the robots will come for all of human's jobs one day, whether they are factory workers or surgeons. He cites the instance of Japan where a humanoid robot named Erica is set to cause employment disruptions in broadcast organizations by taking over the jobs of television news anchors

Spektor (2018) points out that Erica can recite scripted writing, and she is capable of holding conversations with humans, due to a combination of speech-generation algorithms, facial-recognition technology and infrared sensors that allow her to track faces across a room. Erica can move her facial features, neck, shoulders and waist independently, thus, "allowing her to respond to human speech with uncanny autonomy" (p.2). Crespo (2018), referring to numerous sources, gives figures like 8.25 per cent in Belgium (ING, 2015), 32 per cent for the whole information and communication sector in Wallonia (IWEPS, 2017), and 17 per cent for the whole creative sector in Germany (McKinsey 2017), that are expected to lose their jobs as a result of AI. He also cites the studies carried out by the International Data Corporation in 2016 and Ericsson in 2017, which indicate that more journalists are likely to be affected. Smith and Anderson (2014) found that robotics and AI will permeate wide segments of daily life including journalism by 2025.

Also, lamenting the negative impacts of AI-driven media applications on journalists` jobs in an in-depth oral interview, a news editor with *Speed FM* (96.9 FM), Godwin Osaigbovo, said with the way AI is usurping the duties of journalists there is no way it won` t lead to job loss. He explains that “By the time AI takes over media activities, journalists will start losing their jobs because they won` t be able to compete with computerised news writers and presenters for those jobs; AI would perform the same functions far more efficiently and even cheaper.” Hendricks (2018) reveals that a study predicted that with the advent of AI, some jobs will become redundant, and this includes journalism. According to the study, other people to be affected include accountants, editors, customer service representatives, retail managers, and administrative assistants.

Also aligning himself with the fear of journalists in Benin City, Health (2019) declares that blue-collar jobs are not the only ones subject to AI takeover, but that some jobs that require the most advanced education are more likely to become obsolete. He refers to Entrepreneur Andrew Yang in *The War on Normal People* as having said that “Doctors, lawyers, accountants, wealth advisers, traders, journalists, and even artists and psychologists who perform routine activities will be threatened by automation technologies” (p.3).

CONCLUSION

There is no doubt that AI may handle news reporting better than human beings because they don` t get tired like human beings. With AI, news gathering will be cheaper, and news can be of better quality because it will eliminate human errors and editing challenges. Automation is the future, and we cannot afford to be left out in the ultimate move to a world of automation, hence we have to prepare ourselves to embrace it so as to compete favourably with the world.

Though the utilisation of AI-driven media applications can lead to job loss and the eventual take-over of Nigeria media houses, but the fact is that, for now, they may not be a threat because of the myriad problems that the utilization of the AI may face. Some of these challenges include the fact that they cannot be natural; they also lack the psychology flow that exists between news casters and viewers/listeners. With the AI there is no room for negotiation with human beings. Other challenges are that of electricity to effectively power the AI applications; lack of adequate infrastructure; finance to purchase and maintain these equipment. Cultural and socio-economic barriers to adoption, cost of Internet, and the training of AI handlers also pose a problem. Furthermore, Nigeria is slow in adopting technological innovations as evident in her inability to successfully have a digital switch over system introduced for many years now. Findings show that it will take Nigeria a minimum of Eleven years to level up on AI globally (Olanrewaju. 2018; Ndiomewese, 2017).

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