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Luddite Hysteria: How Journalists in Enugu State Perceive Automated Journalism and Job (In)Security

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Abstract

Responses to the impacts of new technologies on journalism practice are at increase and controversial and have created fear that the application of AI-enhanced (automated/robot) journalism is creating job (in)security among practicing journalists, and could eventually see many out of their job. To (dis)approve this hysteria, this work employed analytical survey and oral in-depth interview designs to ascertain the perception of journalists in Enugu state, Nigeria on automated journalism and its impact on their job (in)security. Anchored on technological determinism theory, this work surveyed 312 registered journalists in Enugu state. Weighted mean statistical tool of 5-point Likert scale was employed in data presentation. From the findings, there is low rate of adoption of automated journalism tools among the respondents (2.25). It was also found that media houses in Enugu state, Nigeria do not accept the use of automated journalism (1.92), owing to issue of unprofessionalism, limitedness of AI-automation to cover basic data from developing countries and lack of human angle to AI-automated media contents. In spite of these findings, most of the respondents feared that AI-automation might cost them their job in the future (3.74); and the tendencies that future rewards, recruitment, and promotion might be based on knowledge of AI by media house managements (3.61). Again, there exists an overwhelming claim (3.22) that media reliance on freelancers for media contents has reduced due to journalists' knowledge of artificial intelligence. To this overwhelming hysteria, respondents (3.55) agreed that they are learning/ preparing to learn AI-automation to ensure their job security. The researchers therefore recommends that journalists should innovate in the line of artificial intelligence as future of journalism to enable them get equipped for technological demands on modern journalism and not as means of job security..

Keywords: ***Luddite Hysteria, Journalists' Perception, Automated Journalism, Job In/Security***

Introduction

In the 1810s during the noon of the Industrial Revolution in Europe, General Ned Ludd of Sherwood Forest organised series of industrial riots to protest against the use of industrial machines which, to the protesters, are causing job insecurity among industrial workers. The riot resulted into destruction of industrial machines or what was tagged 'machine breaking' all round towns in Yorkshire, Nottinghamshire, Leicestershire, Derbyshire and Lancashire. The intent then, was to return workforce from machine to men and invariably curb th excessive staff shed-off that was pioneered by high rate of adoption of industrial machines. At the era when works were done with hands, machines were almost replacing men. This created hysteria of unemployment among the workers. To combat this effect of technological inventions/ innovations, the industrial workers broke into protest called 'Ludd riot' which saw to the destroying of machines and even attacking the employers and magistrates. From protest, it incubated into war between the Luddites(the protesters named after their leader, Ned Ludd) and governments. Although most of the protesters were later prosecuted for destroying

industrial machine, the protests, came to be used to explain fear of technological innovations and their impact on job (in)security. From then, or even before, it could be noted that technological development has always altered the status quo and the hysteria following them quite distinctive.

Currently, the technological world is now sailing on the provisions of artificial intelligence. One of the provisions of this psycho-technological innovation of the 21st century is automated journalism. Lewis (2014) cited in Okiyi and Nsude (2019) argues that the intent to convert inanimate objects into active and intelligent beings has been on for centuries when the Greek, Chinese, and Egyptian engineers started the automation science and engineering inventions. As early as in the 1950s, an AI tool 'Expert Systems' had emerged and generously used in industries across Europe and Asia. Then, DENDRAL was utilized by pharmacists and chemists in the Labs for chemical structure analysis; XCON became a famous computer hardware configuration system; MYCIN for medical diagnostics system; and ACE for telecommunication maintenance. In 1972, PROLOG was created as an alternative to logic programming replacing human mathematical intuitions. PROLOG could handle linguistics logicism, and in most cases with minimal or no error. And today, more AI tools have been created. One thing is common among them- they create high job qualities capable of replacing humans. Artificial intelligence tools have the distinct advantage to create and save permanently knowledge expertise and in most cases, offer a consistent level of professionalism and consultation and mainly frame public issues and set agenda for public policies and programmes (Solbe & Kirchhoff, 2023). The rate at which Artificial intelligence is taking up functions in different industries, media inclusive, is creating fear of the technological effect on labour security among workers.

Contrary to this fear of impact of AI on journalism and journalists' functions, Udoh et al. (2022) stated that the application of artificial intelligence in journalism has created easiness in the profession, aiding journalists to attain higher journalism functions rather than denying them their jobs. UNESCO (2019) and Wilson and Jibrin (2019) pointed out that the relevance of AI in modern journalism is due to its role in large data management, cloud-computing, internet of things (IOT), virtual realities, and its role in establishing new realities for development such as E-commerce, finances, Logistics, survey, and in media where automated journalism abode for all aspect of media functions. According to Jamil (2020), modern technologies are now designed with algorithm that use automated processes to undertake press functions in beat selection, news gathering, media gatekeeping, and media content dissemination. The intelligence part of AI, according to Brennen et al. (2018), is the capability of computer innovations to handle functions that require human cognitive and social intelligence. Or, as Russell and Norvig (2020, 19) stated, machines that are able to "compute how to act effectively and safely in a wide variety of novel situations" Artificial intelligence is a procedural means of solving problems where machines are designed to reason and act like humans (de-Lima-Santos & Ceron, 2021).

Automated journalism (robot journalism) is the application of AI tools in creating and dissemination of media contents. The dependence on knowledge and intellectual skills of press men is beginning to wind off. News are now gathered faster, articles/features written by the AI tools, interviews/ press conferences now conducted by machines, editing of media contents as well (Okocha & Ola-Akuma, 2022). With robot journalism, opinionated media contents are no longer of journalists' opinions but that of machines and now "robots are trained through development of algorithms which they interpret and write faster than humans, and produce scores of news stories simultaneously within few seconds. They fast track journalists'

reporting, since robots can import data from various sources, recognize trends and patterns, and the use of Natural Language Processing (NLP) put them into context and help to construct sophisticated sentences" (Okiyi & Nsude, 2019, 144).

Currently, there is no sphere of journalism that AI automation have not impacted or cannot replace the media men. This reality has created fear built on the effect of the AI technological development. This hysteria is more pronounced on journalists' job security. Journalism has undergone a profound process of transformation in the 21st century, argued Deuze and Witschge (2020) and is increased by the introduction of digital technologies accelerated by the emergence and adoption of digital technologies. Media houses are now presented with opportunities and possibilities to use few hands to reach enormous areas and do multiple jobs. And have inherently created threats and challenges to journalists in sustaining the demands of their functions and securing their jobs. With ease, media houses can now utilize AI tools in reporting beats and possibly not need many hands of reporters to cover most beats; edit media contents/ generate images/graphs to accompany media contents and may no longer need graphic designers or editors to create advert copies that advert agencies and copy writers might soon be out of the job; and in delivering news to the audience that most media houses might soon wind-off (Guanah et al., 2020).

AI has created easiness in the 21st century media operations. And now, "journalists can create data sets and develop insights more quickly and simply than ever before, through the use of IoT sensors that remotely control objects and collect data through cloud technology infrastructures" (Onyebuchi et al., 2022).

The reaction to the role and impact of automated journalism are divergent. Some view it as a positive technological innovation that has enhanced development of journalism and media impact to the society while some has captured their fear that AI automation tools are creating job insecurity, lack of human angel to journalism functions (Crespo, 2018; Nwanyanwu & Nwanyanwu, 2021; Marjoribanks et al., 2022; Waleed & Mohamed, 2019), and have created new demands and realities in journalism practices (Bucher, 2018). AI-oriented journalism has altered journalism functions and media content management because it is disruptive to ideal journalistic information management, intelligence, and news gathering process (Nwanakwaugwu et al., 2023). Why some consider AI as technological development that aids media functions (Arets et al., 2023).

Although the empirical views to the role and impact of AI tools for automated journalism abode and quite divergent, there is dearth of literatures portraying the rate of AI adoption for journalistic functions in most third world countries. This work is built on (dis)approving the Luddite hysteria (fear of AI technological innovation) among journalists in Enugu state, Nigeria in line with their job security.

Objectives of the Research

1. To ascertain the rate of adoption of automated journalism tools by Enugu Journalists
2. To evaluate the perception of Enugu journalists on the impact of automated journalism and job (in)security
3. To investigate conditions that prompt the use of automated journalism by Enugu journalists.

Theoretical Framework

This work is built around the propositions of technological determinism theory by Thorstein Veblen (1857-1929). The theory attempts to justify how technologies permeate society. According to the proponent, the introduction of technologies create changes that in turn defile the potencies of the preceding institutions and society and hence introduces new realities that define priorities that permeate new era. Thus, forms and values of a society at a point in time are the products of the technologies in place at that time. Ukonu (2022) states that technologies are the prime movers in history and essentially the determinantss of society's forms and formula. The theory postulates that social realities and social changes are tied to the technology in play at each era. This is to say that not only do new media technologies give new definitions to old realities, but as well introduce new realities/society, enhance paradigm shift, and also render their predecessors irrelevant while the currents issues are planted and framed by them. The technological determinism theory is basically built on the proposition that technologies drive change and determine the operation of the society. This shows that transition from one era to another is the product of technological innovations/inventions. In area of journalism, automation/robotics as a technological development has determined the patterns of media operation and is currently creating new demands on the press men.

The theory is built on two major tenets: technological development itself follow traceable path which are beyond the influence of any force(political, cultural, political, etc) and technologies now turn its undeniable and inherent effects on the societies. At most cases, these effects are endemic to the preceding realities, institutions, and technologies and in most times see to their winding-off. It is worthy to state in line with the tenet of this theory that development/ changes of the society is a product of technological development.

Needs don't create technologies but technologies create needs for the societies and condition human history. And change in technology automatically means change in/ of society and change in technologies sometimes has unintended or unexpected results. These results in most cases cause conflicts that always alter the old societies/ influences and introduce new ones. To McQuail (2005), social institutions, social interactions, and individual are shaped by technology and not human factors or any social arrangements. This theory imperatively submits that humans and the society are invariably helpless to the effect of technologies; hence, there is still abode the passive audience and unlimited technological (media) effects on the society (Communication Theory, 2016). On the ground of this research, it is pertinent to submit that the advent of automated journalism has restructured journalism practice and create media role and functions that tries to push the role of journalists to machine, a change creating media realities and fear of the force of such technological effects on job security among journalists.

Methodology

Analytical survey design is primarily employed for this research. The aim of finding how journalists perceive AI-automation journalism and its relationship with assumed hysteria of job (in)security demands for empirical analysis. It interprets relationship between technological development and innovation and their impact to presumed industrial Luddite hysteria. In a complementary role, interviews were applied to ascertain in-depth views of media managers. 312 registered journalists from the registry of the Nigerian Union of Journalists, Enugu State Chapter formed the population of the study. Considering the number, census sampling technique was employed. Structured and close-ended questionnaire were used to collect data from the respondents. Interview questions were majorly follow-up questions that were necessitated by observed variables during the field work. A 5-point likert scale format was

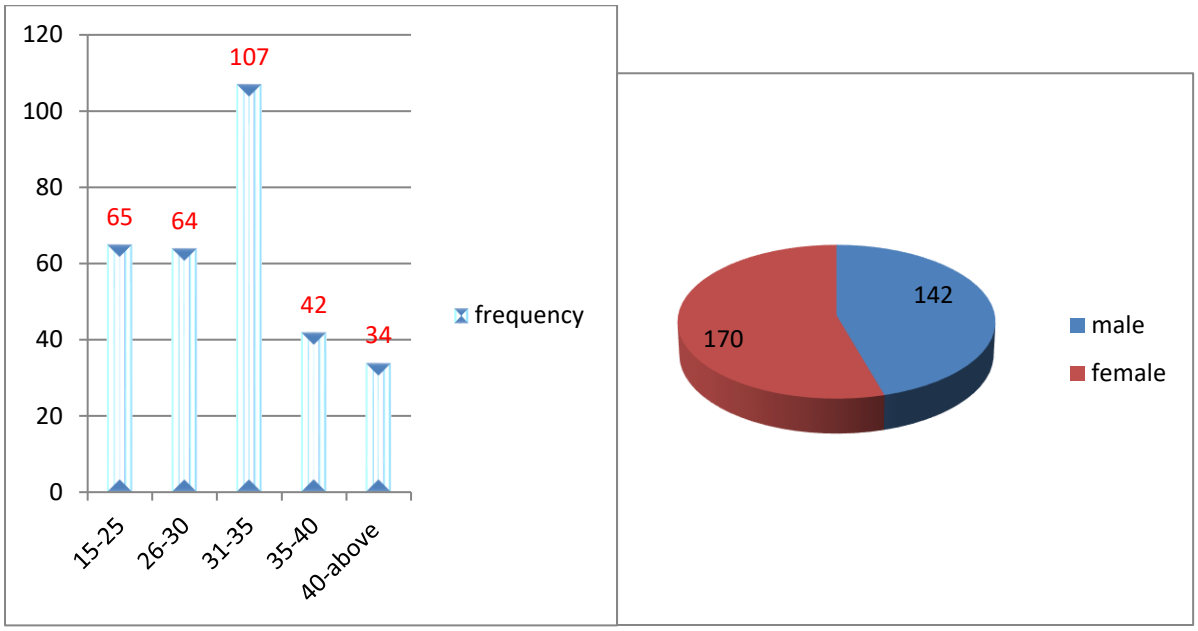
utilized mainly on the thematic issues of the research. Demographic data are presented in charts and graphs while mean table were used to present and analyze thematic data.

The mean frequency table decision rule stipulates that when the mean (x) value is equal to or greater than 3.00, the assumption/ hypothesis is accepted, but when the mean value is less than 3.00, reject. Thus: If X<3.00, reject, if X>=3.00 accept.

Data Presentation

Demographic Data:

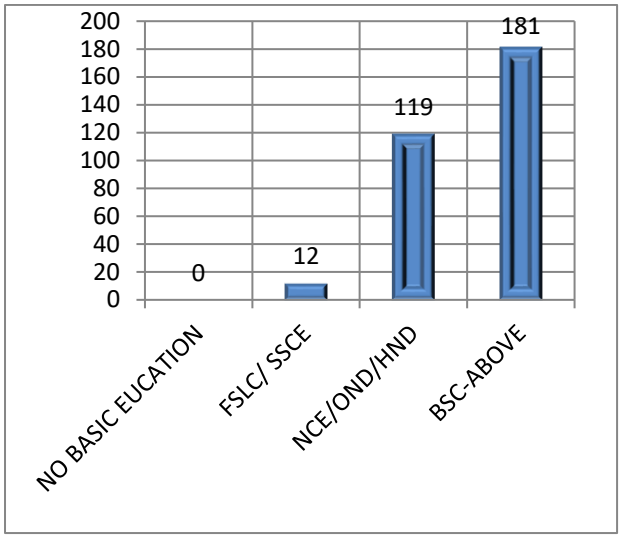
Figure 1: Age and gender distributions of the respondents

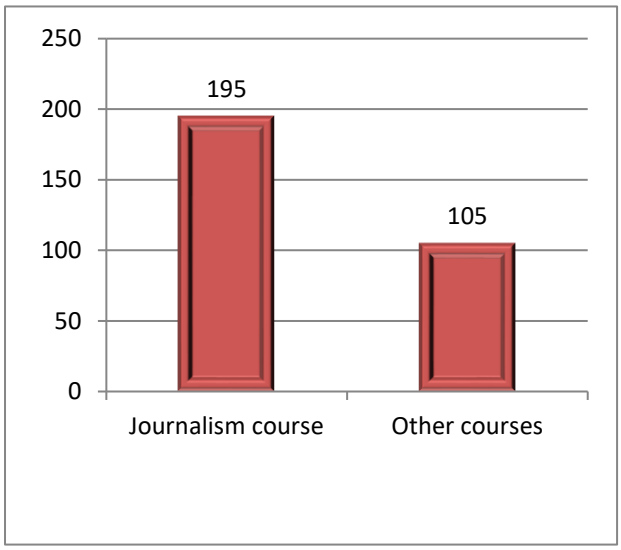


Source: Survey (2023)

Most of the respondents are young adults born in the internet era. The tendencies that most of them would embrace technological innovation are higher when compared to those who are of older generations. There still exists equitable gender distribution. This indicate that journalism practice is now growing across gender lines unlike years back that journalism was mainly considered a male collar job in developing countries.

Figure 2: Educational qualification of the respondents





Source: Survey (2023)

Most of the respondents are educated and are knowledgeable to understand technological demand on journalism practice. However, there is handful of the respondents who were trained in other courses other than journalism. Although there is no correlation between course of study and adoption of technological innovation, it could be hypnotized that lack of basic knowledge of journalism could prompt application of robots/ automation tools.

Thematic Analysis:

Table 1: What is the rate of adoption of automated journalism tools by Enugu Journalists?

Questions	Analysis						
	SA	A	N	D	SD	X	Remark
1) I use AI automation tools in covering my beats; generate interview questions, and the likes.	34	12	52	108	106	2.23	Reject
2) I use AI automation tools to write and/or edit my media contents.	45	44	11	142	63	2.59	Reject
3) I use AI automation tools in dissemination of media contents and relating with the audiences/ general publics	12	33	13	114	140	1.92	Reject
Grand Mean						2.25	

Source: Survey (2023)

As implicated in table 1, there is low adoption of AI- automation tools for journalistic functions among journalists in Enugu state. The application of AI is still low. However, there still exist numbers of journalists that agree to use AI automation in carrying out their duties. These figures implicate early adoption of technological innovation that always witness trial and test evaluations.

Table 2: Perception of Enugu journalists on the impact of automated journalism in their job (in)security

Questions	Analysis						
	SA	A	N	D	SD	X	Remark
1) Our media house approves the use of AI-automation tools for journalism.	31	21	53	181	44	2.61	Reject
2).Our media house base their recruitment of journalists on the knowledge of AI-automation	51	40	31	87	103	2.52	Reject
I fear that promotions and other rewards might soon be based on the knowledge and application of AI in journalism.	97	115	3	52	45	3.54	Accept
3). I fear that lack of knowledge of automated journalism could cost me my job in the future.	114	73	11	75	39	3.47	Accept
4) I am attending to AI automation skill acquisition or intend to do to ensure my job security.	88	121	19	43	41	3.55	Accept
5) Dependence on freelance journalists has reduced due to automated journalism	94	65	19	82	51	3.22	Accept
6) I fear that during staff shedding-off, those with knowledge of AI automation shall be in the advantaged	106	99	21	52	34	3.61	Accept
Grand mean						3.75	

Source: Survey (2023)

From the results presented in the above table 2, there is an overwhelming fear of the impact of AI automation on journalists' job security. Although media houses have not fully embraced the utility of AI in journalism, most of the journalists identify the possibility of AI saving (or costing) them their job in the future.

Table 3: Conditions that might prompt the use of automated journalism by Enugu journalists

Questions	Analysis						
	SA	A	N	D	SD	X	Remark
1) Lack of journalism skills	17	32	5	99	159	1.87	Reject
2) Cost and time of using other journalism tools/means	111	75	22	66	38	3.49	Accept
3) During special journalism issues	87	105	4	65	51	3.39	Accept
4) In covering inaccessible (or far) beat	127	82	15	32	56	3.62	Accept
5) Limited personal to cover beats/ heavy work load	74	72	17	82	67	3.01	Accept
Grand Mean						3.06	

Source: Survey (2023)

Although there is still low rate of adoption of automated journalism among journalists, the above table is an expression of possibilities that might prompt the use of AI automation. It indicates that where there is high rate of those conditions, AI automation rate tends to be on the rise.

Discussion of Findings

The rate of application of AI- automation in journalism is low (2.25) among journalist in Enugu State, Nigeria. Ideally, adoption of technological innovation has some factors that combat it. Such as indicated by this survey, most of the media houses when interviewed indicated number of factors as setback: first, most of the beats are not on the AI data base and cannot be automated by the AI tool. This implicates the limitation of AI in giving out accurate information about sub-Saharan countries. There still exist roles for the press men- operate the AI tools and vet results produced (Wu et al., 2019). The assumption that the precision of AI-automation of issues and events in developing countries is not guaranteed is built on the fact that most basic data in Sub-Saharan countries are not virtually stored. And AI- automation work algorithm of sourcing and interpreting only internet based data/ fact. Such limitation has prompted the delay in the adoption of automated journalism in most developing regions.

Secondly, media houses still consider the limitation of AI-automation tools in enshrining human angel to media contents. Some journalism functions like investigate and interpretative journalisms demand social responsibility and human angle from the press men in form of in-depth analysis and interpretation to social events, most of which are still foreign to AI algorithms. To some media houses, application of AI-automation tools is unprofessional and against the ethics of journalism. This is in line with submission made by Porlezza et al. (2022, 2) that **"**AI-driven tools, machine learning and Natural Language Processing have become pervasive in newsrooms, influencing almost every aspect of journalism from information

retrieval, to news production and distribution. However, while AI offers many opportunities, it also entails specific challenges particularly in the design of the relation between human judgment and automation."

However, although there abode the fact that media houses do not have great dependence on AI-automation for journalism practices there still abode great hysteria (fear) among the respondents over the future impact of the technological innovation in the future. Most of them (3.54), fear that promotion and reward might be based on the knowledge and application of AI tools in journalism; some hysteria was built on the assumption that during staff's shed-off, journalists that lack AI knowledge might be victims. Among other fears registered which is similar with the findings made by Lawal (2024) include fear of job insecurity among freelancers due to AI-automation.

To combat these fears, most of the journalists agreed to have enlisted with AI-automation education classes to ensure their security of their job. Whether these fears are genuine or not, the advent of AI is possibly going to alter the status quo in journalism. Considering the rate of impact on other countries, the fears among journalists in developing countries are justifiable (Solberg & Kirchhoff, 2023) considering the fastness, reach, and accuracy in AI-automation. The respondents agree that they would possibly use AI-automation tools during work overload, inaccessibly beats, and lack of staff and in some other special issues. In which way, rate of adoption would be at increase considering the kind of fears exhibited by the respondents.

Conclusion

The advent of artificial intelligence has introduced new realities that now affect all spheres of human endavours. Although the rate of adoptions vary from state to state, AI-automation has started defining journalism operations to a great extent. However, the inherent hysteria should be conceived with development mindset. Results show that most third world countries fear AI-automation due to the high rate of unemployment while developed countries have high rate of adoption. One thing stands out- the media cannot function outside technological development. From the time print to electronic. Now, the jet age is swiftly leaving the fingers of men to that of machines, a new dawn for efficiency in big data managements.

Recommendation

Based on the findings of this study, the researchers recommend that there is need to train journalists in line with demands of modern (AI) technologies to enhance job security and efficiency among journalists.

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