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INFLUENCE OF DIGITAL IMAGES ON THE PROPAGATION OF FAKE NEWS AMONG RESIDENTS OF SOUTH-EAST, NIGERIA

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CHAPTER SIX

INFLUENCE OF DIGITAL IMAGES ON THE PROPAGATION OF FAKE NEWS AMONG RESIDENTS OF SOUTH-EAST, NIGERIA

Titilayo R. OSUAGWU

Introduction

Fake news is one of the trending words not only in the field of journalism/communication, but across other professions. The *Washington Post* was said to have featured over 7, 600 articles that included fake news and images as at two years ago (Spectra, 2017). It represents a disturbing media dilemma in the 21st Century. President Donald Trump brought the term to global prominence through his tweets during his electioneering campaign and his administration has continued to increase its usage (Ejele, 2018; Osuagwu, in press). As observed by Hartnett (2017, p.2), Trump often used the term 'fake news' as a defensive phrase against his critics and other highly placed media conglomerates “while flooding our communication networks with evasions, slander, and misinformation.” She noted further that the popularisation of fake news by President Trump has led to a drastic decline in the credibility of America in the global scene.

Nigeria, like every other countries of the world is proliferated with fake news. This is evident in the increase in its prevalence in lexicon and in practice in society. Fake news does not exist in texts alone. Images often accompany fake news so as to enhance their believability. Also, fake news and hate speeches are not mutually exclusive. As noted by Madden (2017) the anonymity of online spaces, the attempt to create humour and the habit of internet trolling (hate speech) often contribute to fake news or hoaxes. Furthermore, Osuagwu (in press) citing Mohammed (2017) notes that both hate speech and fake news thrive on repetition and circulation on social media. Mohammed (2017) states that hate speech, disinformation and fake news have something in common. He describes them as “a looming danger” because “they are all capable of destabilising the system, inciting people to violence and weakening the people's confidence in their government.” Similarly, Ejele (2018) observes that the roles of these two (fake news and hate speech) in our national development are worrisome and it is important that our leaders and citizens need to be cautious in using hate speeches and giving fake news” (p.29).

A study conducted in 2007 showed that over 350 million photographs were available on Flickr with over 1 million increase daily, while Facebook recorded more than 50 million total upload of images in 2010 (Cheddar, 2010). Twitter is said to have over 500 million active users with over 340 million tweets being generated daily; Nigeria is one of the heaviest users in Africa, after South Africa and Kenya. Nigeria has 83% of its internet users being active social media users (Salau, 2013; Osuagwu, 2018). Anecdotal evidence buttresses the views that the use of images to propagate fake news is pervasive in Nigeria. For example, graphic pictures accompanied by inflammatory comments were circulated on social media to depict the volatile Fulani-farmers crisis in Benue, but the images were fake. Yet the image further inflamed tensions existing in the country. People on their social media platforms have been inundated with pictures of South Sudanese rebels often presented as herdsmen waging war on communities in Nigeria's middlebelt. A picture which went viral, used to depict the Metele attack on the Nigerian troops in Borno (North East Nigeria) when fact checked was found to have originated from a Hausa movie. After three days of violence left more than 200 people dead in the country, a gruesome image of a woman in a pool of blood, showing a shoulder wound which had purportedly been sustained from the attack, was later discovered to have first appeared on the internet in many years before. The original story was a case of domestic violence in Nigeria, yet this was only detected after the fake report had had hundreds of retweets on Twitter. Another fake image was used to portray the magnitude of a story which alleged that half a dozen people were killed in an attack. It was later discovered that the picture had not been taken in Nigeria; it was the scene from a traffic accident in the Dominican Republic (BBCnews.Com, 2018). A prominent example is the rumoured death of the Nigerian President Buhari and claims that he had been replaced by an impostor named Jubril from Sudan. The Buhari-Jubril imposter claim was backed up by images which when fact checked proved to be doctored (Lawal, 2018). This may be regarded as the height of the influence of fake digital images in Nigeria. During an electioneering campaign, a Presidential aide responsible for social media posted to Twitter, a photo of the presidential flag bearer of the major opposition party distributing cash and food at a campaign rally. The photo generated 143 retweets and 166 likes on that Twitter account. Another user shared the same picture on Facebook where it recorded over 1800 shares. Yet when subjected to an image reverse search, the photo was found to have originally appeared in an unrelated context - an outreach programme of a Lagos based organisation (Fowowe, 2018).

The examples given above constitute threats to the unity of a country and its democracy. The tendency is not restricted to the crisis prone areas in the Middle Belt and North-East regions. There have also been reprisal attacks in the South-East region; people had been incited to violence as through exposure to images of violent attacks on people from same ethnic or religious groups. The Indigenous People of Biafra (popularly known as IPOB), a sectarian group from the SouthEast region had been constantly openly hostile to the federal government and this was sometimes expressed in violent protests. It has been alleged that some of those violent protests and attacks in the South-East had been deliberately fuelled by images used in disseminating fake news. For instance, the Minister for Communication and Culture, Mr Lai Mohammed in a meeting with online publishers, raised an alarm that the IPOB had been manipulating images to mislead people about the activities of the military in the South-East, in order to escalate violence in the country and mislead the international community. In a statement published by the press, he said: "IPOB has harvested gory videos and pictures from other lands and the distant past which they are now circulating on social media to deceive the international community into believing that people of the South-East are being subjected to state sponsored ethno-religious violence" (Okakwu, 2017).

President Buhari in a nationwide broadcast on August 21 2017, just after his arrival from a medical trip abroad, complained about the escalation of fake news and fake images on social media which he said threatened the unity of the country. That speech was followed by a stern warning from the military that it had established mechanisms with which to monitor anti-government and anti-security expressions in the country. Consequent upon this, a bill proposed by the Nigerian Senate on hate speech has recommended the death penalty for violators. That decision generated much uproar for being antithetical to freedom of speech - an inalienable fundamental right - an attempt to gag Nigerians (Daudu, 2017). However, some welcomed the move, expecting that it would stem the tide of the abuse of the privilege of free speech which had become evident in the propagation of fake news. Despite all these, incidents of fake news enhanced by digital images persist. The persistence of this threat calls for both theoretical and practical attention from scholars and researchers. What exactly is the nature and potency of the threats? To what extent do visual images aid the propagation of fake news? How susceptible are audiences to such media texts? The need to ascertain such details, is the rationale for this study. It will explore this by focusing on a sample of residents of the South-East of Nigeria.

Statement of the Problem

Until recently, the most credible way of ascertaining the credibility of a piece of information is by scrutinising the accompanying images (Elkasrawi et al, 2016). This reflects the long held axioms that “seeing is believing” and “a picture is worth a thousand words”. However, since progression in digital imaging now permits the manipulation of photographs, videos and even audio recordings, there is no longer the guarantee of the authenticity of such texts which may have been altered or outright fake representation of the news stories that they should corroborate. This poses a huge challenge of credibility; trust in channels of communication relied on in every sector of society is undermined. Consequently, democratic ideals and national economies are threatened, since they rely on open, transparent and credible communication but these have been compromised. There are now means of creating “pseudo-facts and pseudo- reality” which become very difficult to debunk. They spread too fast and really wide, especially when disseminated via the internet given the enormity of its traffic and the evasion of strict controls. (McQuail, 2010; Salau 2013; Dencik, 2015; Hu, 2015; Farid, 2018). As Salau notes, “stories and photos are published all over the world; it is difficult to check their authenticity” (2013, p.199). Fry describes the phenomenon of fake news as “mind-boggling... and deserving many questions and concerns” (2017, p.8) and as Ejele (2018) observes fake news (as with hate speech) pose challenges to national development. These manifest through the broad impact on audience regard for media, and really reflect the use of language.

A study carried out by BBC in 2018 and entitled 'BBC Beyond Fake News' reported by Sanni (2018), found that a significant amount of fake stories being shared online were not written texts, but images and memes because people prefer images over words. Besides, some individuals do not even believe the concept of 'fake news'. Consequently, accurate and factual news has at times been misconstrued as fake, while fake and inaccurate news has been accepted as factual news especially when it is backed up by images that seem authentic (Sarma & Nandi, 2014; Hu, 2015; Dencil, 2015). In South-East Nigeria, there have been a plethora of reprisal attacks based on fake news accompanied by gory images purporting killings of Christians by herdsmen or Islamic fanatics. This is because internet users seem to be ignorant of the nature of social media in which paramount news values and ethical issues are non-existent. Despite the popularity of fake news as aided by digital images in Nigeria and elsewhere, there has been little known empirical effort directed at knowing the influence of digital images that often accompany texts messages in the propagation of fake news on the people in Nigeria. It is against this background that this study

explores the influence of digital images on the propagation of fake news among residents of South-East, Nigeria.

Objectives of the Study

The main purpose of this paper is to ascertain the influence of digital images on the propagation of fake news among residents of South-East, Nigeria. The specific objectives were as follows:

1. To ascertain the extent to which the residents of South-East have been exposed to digital images that often accompany news in social media.
2. To establish the extent to which residents of South-East are influenced with fake news with images.
3. To find out the factors that often lead to influence of fake news with digital images among social media users in South-East Nigeria.

Research Questions

The statement of the problem and the objectives inform the following research questions for this study:

1. To what extent have the residents of South-East Nigeria been exposed to digital images that often accompany news in social media?
2. To what extent have the residents of South-East Nigeria been influenced with fake news with images?
3. What are the factors that often lead to influence of fake news with digital images among social media users in South-East Nigeria?

Related Studies

Images have been used in the media to influence public perception of issues or situations. For instance, images have come to account for public perceptions of beauty through the portrayal of women and girls in the media. Studies had focused on how people are oblivious of the fact that such digitized images are used to alter the appearances of females, resulting in '*adultification*' of girls and '*youthification*' of women in advertising (Speno & Aubrey, 2018; Mills, 2018). Specifically, research into fake news and digital images often have two outcomes. One is that people are unaware of digital manipulations of images and cannot differentiate between real and fake digital images. For example, Skop et al.'s (2017) research suggest that people need more awareness through digital literacy because their research found that fake images were more prominent on web and social media than other media like television, print and radio. Yet, some other research point to the fact that people are aware of fake digital images. For instance, Cuihua et al, (2018) found that intermediary variables like social media experience and general internet skills determined the perception of image credibility. Their research found that people with greater levels of digital imaging experience and general Internet skills were more likely to perceive fake images as less credible than people with less experience or skills. However, in that study, credibility of the source and acceptance were not found to be significant. Similarly, Holander's (2018) research shows that partisanship, individual differences and news media exposure are accountable for misperceptions or conspiracy beliefs.

Another vein of research, which seems to be generating a lot of interest, is on digital image detection techniques which teaches people how to decipher fake digital images either via manual detection or electronic devices. For instance, Sarma & Nandi (2014) identified two broad approaches for detecting forged images to include active and passive (blind) approaches. Active approach relies on 'pre-registration or pre-embedded' information to establish the authenticity of

an image. It precedes forgery as the image is shielded from being manipulated or altered. It is also called digital watermarking. In contrast, the passive approach works on the assumption that even if altered images leave no visual traces of forgery, their embedded statistics may be altered. This method, therefore, uses forensic tools to detect the statistics of an image. The image forensic tools are deployed in five techniques that include Pixel-based technique which (detects abnormalities introduced at the pixel level), Format-based technique (glossy compression that prevents statistics correlation in pixel is detected), Camera based technique (detects artefact introduced by the camera lens) Physically-based technique (detects abnormalities in the interaction between object, light and camera) and Geometric-based techniques (measures relative distance between objects to camera) (Cheddad, 2010; Sarma & Nandi, 2014).

Being an evolving concept, there is no common parameter for measuring peoples' awareness of fake digital images. However, the measures of related concepts like image credibility perception have been used. Thus, awareness has been measured in terms of whether people access the credibility of news stories using the images that accompany them or making subjects to perform image credibility checks to authenticate certain images (Elkasrawi, et al, 2016). Some other researchers have used self-report of internet skills and knowledge of manipulation of software/tools (Cuihua, 2018). Still, people's dependence on credibility of online sources regarding where a news item is published and the number of likes and shares have aided the believability of digital images (Tseng & Fogg, 1999). In the same vein, Holander's (2018) research suggests that partisanship, individual differences and news media exposure were responsible for misperceptions or conspiracy beliefs.

Thematic Literature Review

Digital Images

Digital images are two-dimensional images represented in a binary form. They are made of picture elements known as pixel which is the short form of picture elements which are often organized in rectangular forms. They are also made up of vector/graphic images which are mathematically defined by computer software or programs that range from power point, logos, diagrams and other graphics images for promotional or illustrative purposes. It is a representation of a real image as a set of numbers that can be stored and handled by a digital computer. The properties of the pixel of an image are brightness and colour. Digital images have some advantages over traditional images because of their ability to convert and transfer images from one medium to another and the ability to change them according to ones needs using photo editing software like Photoshop, Photo paint and the Gimp. Users of these can change the colour, brightness, delete unwanted visible objects, move others and merge objects from several images and create new images (Computers Sciences encyclopedia.com, June, 2018).

Digital Images in News

The role of images in news handling has been viewed with mixed feelings. Some scholars are of the opinion that images enhance the credibility of news. As McQuail (2011) notes, besides access to information or access to the site of crisis, visual images are very important in handling crisis news. They have the power to shape the news and people's perception of it. This is because of “the assumption that pictures are more dependable than words” (McQuail 2011, p.509). Others like Sarma & Nandi (2014) have argued that the ability of images to convince and validate truth has withered, further hindering the trustworthiness of digital media. They note that:

Many sophisticated digital technologies and photo-editing software like Adobe Photoshop have made the manipulation of images a fair practice. As a result,

digital images are becoming prone to forgeries and hence trust in digital images has been eroded. Digital forgery is now a nightmare to individuals (e.g. fake images of celebrities and public figures), societies (fake images targeting religion or race), journalism, scientific publications . . . (P.878).

As Salau (2013) observes, news in social media is predisposed to false information about individuals and government. He notes thus: “In Nigeria, there has been rumours and false information about deaths and bomb threats circulated via Twitter, which eventually turned out to be hoaxes” (p.199). Fake images have been used to propagate certain stereotypes like racism, religious and ethnic bigotry, just to mention a few. Maddens (2017) corroborates the argument about the negative role of digital communication and notes that the prevalence accessibility to digital platforms has aided the dissemination of intentional hoaxes and misinformation. She notes that photos of people far away from the scenes of crisis are posted and even fake profiles of victims are often circulated in social media.

The Concepts of News and Fake News

Asemah (2011) defines news as “the account of a timely and unusual event in the society” (p.135). This definition seems limiting because as observed by Fry (2017) the current digital environment as characterised by proliferating social media has changed the traditional notion of news as an account of an unusual event. McQuail (2011) sees news as “the main form in which current information about public events are carried by media of all kinds” (p.564). Although, it is obvious through the definitions given here that one of the distinctive features of news is currency, the latter definition captures the fact that news is information conveyed on different kinds of media. Suffice to say then that news is information about events that are currently happening or that have happened recently. It is any information that helps the comprehension of important happenings in society. Fry (2017) suggests that the traditional notion of news is doomed going by the impositions of new media technologies on the news processes, for example the collapse of gatekeepers, the blurring lines of distinction between news, advertisement and entertainment. He surmises thus:

Given the constraints and biases of all media, and particularly those of the digital environment, what then is news today? News is rapidly a morphing genre. News is not just a set of message, a message system or a commodity; it is a process of participation and of relationships. News is multi-player participation in an environment of shared information, influence, access, and circulation (p.11).

Fry's definition captures the constantly evolving status of news in this digital age by embodying the concept of participation as a vital factor. News is, therefore, seen as a kind of sharing in a connected “digisphere” (digital space) where news is constructed in words, sounds and images not only on social media sites or blogs, but on government controlled/ influenced or non-profit sites. According to Fry, participants in this connected “digisphere” include “traditional news organisations, social networking sites, pro and amateur journalists and everyone and everything.” (p.11)

Fake news is the deliberate fabrication of information to deceive people with the aim of misleading others into believing falsehood and doubting confirmable actualities (White 2017). This definition seems plausible because even Donald Trump has given the term another definition by yelling “fake news” in order to denigrate serious journalistic efforts (White, 2017; Spectra, 2017). A lot of fictitious stories are masquerading as news and it is surprising that

people do not understand the phenomenon, its origin and the threat it poses to society. Nyhan & Jason, (2015) note the danger of fake news and state that fake news can continue to affect attitude after being debunked (Nyhan & Jason, 2015). Some scholars have derided the concept of fake news and have argued that if it is fake, then, it is not news (Spectra, 2017). Fry (2017) corroborates this and points out that the application of the term “fake” to news is inappropriate because news is a social construct which already has a lot of economic, social and political biases as well as medium constraints. However, one can only assess the world through instances of accurate accounts of events. Fry (2017) states that “A first step at getting at the complexity of news requires that we stop using the term “fake.” What is it that is fake? The concept is slippery and not applicable, if news is viewed as a social construction” (p.10). Still on this, Riley (2017) suggests that rather than call news fake, it should rather be called “lies and garbage” (p.16). On the other hand, other scholars like Fry (2017) affirms the existence of fake news and argues that it is an old phenomenon in news as exemplified by the Great Moon Hoax which was published in the *New York Sun*, in 1835 and the fake drawings of Spanish officials strip-searching American women as published by Hearst's *Morning Journal*, which precipitated the Spanish American War. Besides, the effect of false narratives as evident in the US presidential election and the Referendum in Britain are key events that should make people embrace the existence of fake news.

Rubin et al., (2015) note that there are three types of fake news which include serious fabrications, fraudulent reporting evident in both old and new media which use yellow journalism and sensationalism to increase traffic for profit. It thrives on falsification, fabrication and exaggeration. Next is hoaxes, which is large-scale deception being deliberately masqueraded as news in social media or mainstream media and often may be picked up and mistakenly validated by supposedly credible news outlets causing harm to the victim. The last one is humorous fakes, which are playful pieces of information meant for humour. The subtypes of humorous fake news include satire/news parody which rely on irony and humour to imitate genuine / credible news sources and news game show where unusual news pieces are read aloud for listeners to call in and guess which is real or fake. The awareness of the playful intents by the readers often makes them not to take such humour seriously. Anderson & Rainie (2012) cautioned that the social media spread inaccurate or false information which they called “distribution of harms” (p.25).

Reasons for Fake News

Reasons attributed for the proliferation of fake news are numerous. Some have attributed it to the preponderance of information which is accessible on social media (Rose & Kiss, 2007; Mukherjee, 2017; Carr 2017), For instance, Rose & Kiss (2007) observes the blurring of news, entertainment and politics and submits that “the problem is not that we need greater access to information but arguably that we have access to much information” (p.605). Others have said fake news is what takes place in the absence of genuine information. As Riley (2017) observes, the complacency of genuine communication professionals has led to the proliferation of “lies and garbage” (p.16), not genuine news. She puts it thus, “We, the media, let politicians and lobbyists and bullies and liars take over part of our jobs . . . we let political terrorists define us, redefine our industry, (sic) diminish our work.” Earlier, Kiss & Rose (2007) commented on the relationship between journalists and government and asked if “the watchdog” had become the “lap dog” (p.607). Besides, Carr (2017) attributes the proliferation of fake news to the outcome of the atmosphere of mistrust between media and modernity. As she observes further, the concept of fake news is not new, as it is prevalent in public relations and advertising.

Goldzwig (2017) asserts that deficit ignorance and deficit intellectualism are the consequences of fake news as people are presented with “random facts or alternative realities” (p, 25), which are all inimical to evidence based discourses and social change. A study used in-depth qualitative and ethnographic techniques, digital network analysis and big data technique to investigate why fake news is thriving in India, Kenya and Nigeria. The study found that people consume fake and legitimate news equally, they are more keen and quick in sharing images without prior consumption, fake news stories regarding terrorism and politics were prominent in the two African countries as they have lower levels of digital literacy and that fake news is thriving because people place premium on the sender of information and not the source (Sanni, 2018).

Theoretical Framework

Two theories were used to foreground this study. They are the technological determinist and the perceptual theories.

Technological Determinism Theory

The technological determinism theory was propounded by Marshal McLuhan in 1964. The theory modified Karl Marx's theory of economic determinism to explain the changes that media, as opposed to economic production, have made in human society. It argues that media technologies do not only change the environment, they also modify the messages they communicate. Because the medium determines the content of communication, it also holds the power to control people's perception of the world (Griffin, 1997; Asemah 2011, Osuagwu, 2018). Marshal McLuhan in his essay entitled *Understanding Media* in 1964 explains the challenges the media pose to people in the process of shaping their thoughts and perceptions. He clearly supported his claim by chronicling four stages of the advent of western civilization in tandem with the media communication accessible to include tribal age (the era of oral mode of communication); literate age (age of visual dependence); print age (wide spread of visual dependence and print) and finally, the electronic age (ICT era, age of cyberspace or superhighway) (Asemah, 2011; Asak & Ohiagu, 2013).

McQuail (2011) explains the theory thus, “Each communication technology has a bias to particular communication forms, contents, and uses” (p.103). Thus, there is a relationship between the commanding communication technology of an age and vital characteristics of society. Electronic age corresponds to the emergent information society with all its biases. These biases are judged against their effects on society or suitability on society. Asak & Ohiagu (2013) noted in the same vein that McLuhan “seems to see the electronic media as mechanistic and capable of eliciting uncontrollable influence on the people and society” (p.83).

This theory has been criticised for being a media-centred theory that posits single-factor explanation of social change and direct mechanistic effect from new media technology and then ignoring other social and cultural variables. The fact that new media do not exist in isolation is evident in their convergence with older media, therefore, it is inappropriate to speak of an overbearing medium (McQuail, 2011). The theory is also said to be self-opinionated as it lacks empirical backing (Asemah, 2011).

Despite the criticisms above, its applicability to this study is still valid. It is believed that new media technologies that have been made possible through the internet have certain distinguishing features from older media and such features have brought social, cultural and economic changes which in turn have culminated in a new kind of society. In other words, the interactive nature of communication in this age has brought a lot of changes to traditional mass

communication and fake news is one of the features embedded in the use of technology. In other words, the nature of social media often helps the dissemination of fake news. An exception to this as noted by, McQuail, (2011) is that “there is no longer monopoly on news publication and there is already evidence of changes in news as a result of the internet” (p.377).

Perception theory

The perception theory as propounded by Berelson and Steiner in 1964 explains the complex role of sense organs in people's behavioural responses to issues (Anaeto, Onabajo & Osifeso, 2008). They argue that humans are endowed with sense (perceptual) organs (eyes, ears and nose) to help them perceive and process information in the environment and such organs serve as inputs to the brain for information processing. The theorists define perception as "the complex process by which people select, organise, and interpret sensory stimulations into a meaningful and coherent picture of the world" (Anaeto, Onabajo & Osifeso, 2018 citing Berelson & Steiner, 1964, p.88). In the same vein, Larlry (1991) sees perception as the procedure in which humans interpret the sensory data which are generated from human's five senses. These definitions have most obviously shown that sensory organs are central to the process of perception.

Perception involves two types of influences, namely structural influence and functional influence. Structural influence is the direct influence on perception as derived from the physical exposure to certain stimuli. On the other hand, functional influence arises from indirect factors like belief system and other variables that influence exposure and introduce bias (Anaeto, Onabajo & Osifeso, 2008). This theory is significant to this study because the believability of fake digital images has to do with misperceptions that contradict factual beliefs. People see what they prefer to see in images.

Methodology

The study employed survey design. Residents of Owerri, Imo State and Aba, Abia State, made up the population of the study. According to the National Bureau for Statistics (2018) the population of Aba and Owerri is put at 1,112,598, with 897,560 for Aba and 215,038 for Owerri. The two cities were chosen because of their popularity in the South East. Aba is the commercial centre of the South-East, while Owerri is the capital city of Imo State. A sample size of 384 as derived from Krejcie & Morgan's sample size prediction table was drawn. The respondents were reached through the purposive non-probability sampling method. This method was used because of the need to meet the criteria that ranged from education and knowledge of news in social media. Thus, based on the population strength of each city, 260 and 124 respondents were reached in Aba and Owerri respectively. Questionnaire and interview guide were used to collect data from respondents. The questionnaire contained both close and open-ended questions and was administered with the aid of two research assistants. For the in-depth interview, 4 respondents were chosen from each of the two cities. Data gathered from both the questionnaire and the interview were analysed quantitatively and qualitatively. Frequency tables were used to present measurements using a 5-point scale of which the criterion mean/mean cut off point was 3.00.

Data Analysis and Results

A total of 384 copies of questionnaire were administered to respondents in Aba and Owerri metropolises. But only 375 copies which represents (98%) were retrieved and found usable for the study. The demographic information shows that the majority of the respondents were aged between twenty and fifty years old, single, males and had at least primary school certificate.

Research Question One: To what extent are South-East residents exposed to digital images that often accompany fake news in social media?

Table 1: Extent of Exposure of South-East Residents to Digital Images in social media.

Read news online every day								
Score					Total	NoR	Mean	Std
TVGE	TGE	TLE	TVE	TNE				
Aba (105) Oweri (57) Total 162	Aba (85) Oweri (35) Total 120	Aba (33) Oweri(17) Total 50	Aba (28) Oweri(1) Total 40	Aba(2) Oweri (1) Total 3	Total score 1523	375	4.0 Accepted	2
See images as part of news								
Aba (120) Oweri (50) Total 170	Aba (85) Oweri (30) Total 115	Aba (33) Oweri (17) Total 50	Aba (28) Oweri (9) Total 37	Aba(2) Oweri (1) Total 3	Total score 1537	375	4.0 Accepted	2
Prefer news accompanied by images								
Aba (130) Oweri (50) Total 180	Aba (85) Oweri (20) Total 105	Aba (33) Oweri (17) Total 50	Aba (28) Oweri (9) Total 37	Aba(2) Oweri (1) Total 3	Total score 1547	375	4.12 Accepted	202
Share and like news accompanied by digital images								
Aba (95) Oweri (55) Total 150	Aba (79) Oweri (40) Total 119	Aba (43) Oweri (17) Total 60	Aba (28) Oweri (15) Total 43	Aba(2) Oweri (1) Total 3	Total score 1495	375	3.9 Accepted	1.97

The data in Table 1 shows that South-East residents were exposed to digital images that often accompany news in social media to a very great extent. They read news online every day, see images as part of news, share and like news online and they prefer news that is accompanied by images. The mean and standard deviation of each item weighted above the mean score of 3 indicating acceptance. In the tables following terms apply: *TVGE (To a Very Great Extent)*, *TGE (To a Great Extent)*, *TLE (To a Little Extent)*, *TVE (To Very Little Extent)*, *TNE (To No Extent)*.

Research Question 2: To what extent are residents of South- East influenced with fake news with images?

Table 2: Extent to which Residents of South- East are Influenced by Fake News with Images.

Believe that pictures do not lie.								
Score					Total	NoR	Mean	Std
TVGE	TGE	TLE	TVE	TNE				
Aba (80) Oweri (52) Total 132	Aba (55) Oweri (31) Total 86	Aba (43) Oweri(21) Total 64	Aba (38) Oweri(12) Total 50	Aba(30) Oweri (10) Total 40	Total score 1336	372	3.5 Accepted	1.8
Check whether an image is convincing								
Aba (20) Oweri (15) Total 35	Aba (17) Oweri (8) Total 25	Aba (21) Oweri (9) Total 30	Aba (33) Oweri (20) Total 53	Aba(129) Oweri (90) Total 219	Total score 710	372	1.90 Rejected	1.3
Compare real pictures with fakes								
Aba (8) Oweri (5) Total 13	Aba (10) Oweri (10) Total 20	Aba (24) Oweri (11) Total 35	Aba (60) Oweri (9) Total 89	Aba(135) Oweri (70) Total 205	Total score 673	372	1.80 Rejected	1.34
Verify the sources of the image before sharing								
Aba (22) Oweri (14) Total 36	Aba (25) Oweri (16) Total 41	Aba (43) Oweri (27) Total 70	Aba (54) Oweri (37) Total 91	Aba(90) Oweri (44) Total 134	Total score 870	372	2.33 Rejected	1.5

The data in Table 2 indicates that South-East residents are often influenced by fake news as accompanied by images. The majority of the respondents still hold the belief that pictures do not lie, they do not check whether an image is convincing, they do not compare real images with fakes and they do not verify the sources of images before sharing. The mean of 3.5 shows this. Further, all the items used in testing awareness were rejected as they were found to be below the criterion mean. That is, the majority never and rarely check whether an image is convincing, they do not compare real pictures with fakes neither do they verify sources before sharing.

Research Question 3: What are the factors that often lead to influence of fake news with digital images among social media users in South-East Nigeria?

Table 3: Factors that often lead to Influence of Fake News with digital images among Social Media Users in South-East Nigeria.

Perception/instinct								
Score					Total	NoR	Mean	Std
TVGE	TGE	TLE	TVE	TNE				
Aba (90) Oweri (54) Total 144	Aba (55) Oweri (31) Total 86	Aba (43) Oweri(21) Total 64	Aba (38) Oweri(10) Total 48	Aba(19) Oweri (11) Total 30	Total score 1382	372	3.7 Accepted	1.92
Speed as a technological attribute/eagerness to be the First to share images								
Aba (129) Oweri (90) Total 219	Aba (43) Oweri (20) Total 63	Aba (21) Oweri (9) Total 30	Aba (20) Oweri (15) Total 35	Aba(17) Oweri (8) Total 25	Total score 1532	372	4.11 Accepted	2.02
Lack of knowledge about image verification tools								
Aba (75) Oweri (40) Total 115	Aba (60) Oweri (38) Total 98	Aba (34) Oweri (26) Total 60	Aba (30) Oweri (25) Total 55	Aba(28) Oweri (16) Total 44	Total score 1301	372	3.5 Accepted	1.87
Verify the sources of the image before sharing								
Aba (18) Oweri (10) Total 28/140	Aba (25) Oweri (16) Total 41/164	Aba (43) Oweri (27) Total 70/210	Aba (54) Oweri (37) Total 91/180	Aba(94) Oweri (48) Total 142	Total score 832	372	2.23 Rejected	1.49

The data in Table 3 show factors that often lead to influence of fake news with digital images among South-East social media users in Nigeria. All the factors listed were accepted as factors related to influence of fake news as accompanied by images. The factors are speed and eagerness to share, which has the highest criterion mean of 4.11, followed by speed and eagerness to be the first to share and lack of knowledge about image verification tools. However, source credibility/peer group was rejected as a factor that often lead to influence.

Results and Discussions

The study found that South-East residents were exposed to digital images that often accompany news in social media to a great extent. They read news online every day, see images as part of news, share and like news online and they prefer news that is accompanied by images. The responses of the interviewees also corroborates this as all but one of the respondents said they had been exposed to fake digital images. One of the respondents in Aba said: “I normally like news that has pictures and videos accompanying them. I have plenty of such news items because when I discuss such news with my friends, we also view/watch the pictures/videos. For instance, concerning news about herdsmen, we normally see pictures and videos of men in army uniform who are speaking Fulani. But some people have said those are not Nigerian herdsmen. How do you want me to believe that those pictures are not real?” This finding attests to the fact of the

prevalence of fake digital images that are often used to authenticate fake news. It demonstrates the influence of prevalent media technology thus attesting to technological determinism. The uncontrollable influence of digital technologies is too overwhelming to be ignored. Chedda (2010) notes that a study conducted as far back as 2007 has shown that over 350 million photographs were available on Flickr with over 1 million increase daily, while another one showed that Facebook recorded more than 50 million total upload of images.

The study further revealed that South-East residents were to a very great extent influenced by fake news with digital images. The majority of the respondents still holds the belief that pictures do not lie, they do not check whether an image is convincing, compare real images with fakes and do not verify the sources of images before sharing. There was support for this finding in the responses from an interviewee who said even when with friends and family they were unable to discern fake news that was accompanied by fake images. We found that the challenge was how to identify fake news. A respondent in Owerri explained this: “This whole concept of fake news is strange to me. If something has an image accompanying it, you still label it fake news? I think sey dem say pictures no dey lie.” Another respondent in Aba added that “If I see picture or video accompanying the news, I dey share because the picture or video is an evidence of the fact that the story is factual. He continued, “if the news is fake, can the picture be fake too?” This finding made us to arrive at the conclusion that fake news is proliferating because social media users are not aware of image manipulation devices that enable the propagation of fake images. Goldzwig's (2017) finding that people are fed with fake news in both texts and images because of ignorance supports this. The theory of perception also finds support in this finding in the sense that people are often influenced by what they see/perceive to be right or true.

The third research question sought to know factors that often lead to influence of fake news with images among South-East social media users. All the factors used to measure influence and believability in fake digital images were accepted. The factors are perception/instinct, speed and eagerness to be the first to share, lack of knowledge about image verification tools. However, source credibility/peer group influence was rejected as a factor that often lead to influence of fake news with digital images. The majority of the interviewees ranked the drive to be the first to share as the highest factor. A respondent said “I do not care if it is fake or real, I just want to be the first to share before others in my group chats.” I also share images when senses tell me they are real.” Another respondent said, “My eyes do not deceive me. Photos and videos are real.” This by implication means that the majority of news consumers/producers in social media are not used to the concept of media literacy which can empower and make them critical consumers/viewers them discern and differentiate between fake images and real images. This finding is in consonant with the finding of Vousoughi et al. (2018) which indicates that fake news spreads “faster, farther, deeper and more broadly than truth.” Further, Holander's (2018) research suggests that misperceptions often lead to misinformation or conspiracy beliefs.

Conclusion and Recommendations

This study on the influence of digital images on the propagation of fake news among residents of South-East Nigeria has shown that South-East residents were exposed to digital images that often accompanied news in social media to a very great extent. This is attributable to the deterministic nature of social media. Deterministic because of their distinguishing attribute of speed. This study further concludes that the South-East residents were to no extent aware of some of the negative influences of fake digital images and the propagation of fake news on them. We found that ignorance and the old belief that pictures do not lie were responsible for this.

As indicated in this study, South-East residents often are influenced by digital images because of their instincts/perception, speed as feature of online communication which brings about the drive to be the first person to share and lack of knowledge about image verification tools. This by implication means that the majority of news consumers/producers on social media are not used to the concept of media literacy which can empower and enable them discern and differentiate between fake and real images. This finding has to do with the sociological feature of fake news as seen in easy photo editing tools and the feature of speed which makes it spread faster, farther, deeper and more broadly than truth.

This study therefore recommends based on the very high extent of exposure to digital images on social media that governments at all levels intensify media literacy education so as to nurture peoples' media literacy skills, especially, visual literacy. Visual literacy skills will equip users with the knowledge of fact-checking websites like Africa Check, Dubawa.com, Google Images and several others. To create more awareness about the negative influence of fake visual images, there is an urgent need to design pedagogy to train people on types of image forgeries and how to discern them. People need to know that images could be taken out of contexts to propagate certain ideologies or stereotypes.

It would be a great idea to conduct an interdisciplinary research on a larger scale since fake news with digital images is not just a concept in communication studies/media. Scholars in cultural studies, political science, psychology and law among several others should come out with collaborative studies that may help in mitigating and ameliorating the trend of fake digital images and fake news. It is hoped that future research efforts would move beyond ascertaining the extent of influence of digital images to identifying specific fake digital images and matching them with the fact-checking sources that debunked them. It is also suggested that a survey of other zones in Nigeria would be good in showing the prevailing situation in Nigeria as a whole.

Contribution to Knowledge

This study may help in creating more awareness about fake news and most especially how fake images are circulated to aid their propagation. This study may serve as an empirical reference material to other researchers and the generality of academia. Government and policy makers may find this study useful in their quest to control the menace of hate speech and fake news. More so, mainstream media organisations may find this study useful as it may alert them to the pervasiveness of fake news and the need to be professional in their reportage as a way of countering fake news.

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