

ARTICLE

# Fake News on Social Media: Predicting Which Media Format Influences Fake News Most on Facebook

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**Received:** 5 May 2022; **Revised:** 29 May 2022; **Accepted:** 6 June 2022; **Published:** 8 June 2022

**Abstract:** Video and audio fake news formats distributed on Facebook in the form of dis/misinformation have caused so much fear, and panic, and received unpleasant reactions among users. This study adopted a comparative experimental design to test the hypotheses by varying the valence, thus types of formats or modalities, the educational levels, credibility, and sharing intentions of the participants, thus, 2 (video vs audio formats) × 2 (credibility vs sharing intentions) × 2 (literate vs. illiterate) to predict the specific media format(s) that influence the spread of fake news on Facebook among users in Ghana. The participants (N = 340) for this study were recruited from the three municipalities in Accra the national capital of Ghana. The research design regarding data sources was carried out in the form of a street intercept survey method. The findings show that users of Facebook believed and shared video formatted fake news than audio formatted. Further analyses indicate that the educational levels (literacy and illiteracy) variables that influence the spread of fake news on Facebook were not consistent. Besides, an in-depth theoretical explanation for modality effects when viewed from the perspective of mobile media, the study has proposed some theoretical and practical implications.

**Keywords:** Fake news, Facebook, Video formats, Audio format, Misinformation, Disinformation

## 1. Introduction

Before the introduction of the internet and social media, most rumors were mostly word-of-mouth and text-based <sup>[1]</sup>. However, social media has introduced new modalities such as videos, pictures, and voice or audio which invariably have hard-reaching impacts on users <sup>[2]</sup>. The heights of fake news and misinformation are reported to have reached unprecedented levels when the production

of COVID-19 vaccines started and during the inoculations of the COVID-19 vaccines, which eventually compelled the World health organization to issue a red alert on social media “infodemic” <sup>[3,4]</sup>. A joint statement by WHO et al. (2020) <sup>[5]</sup>, regarding the management of COVID-19, defined “infodemic”, as the overabundance of information, which entailed a deliberate attempt to distribute wrong information <sup>[3]</sup>.

The recent high spate of fake news on social media,

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DOI: <https://doi.org/10.54963/jic.v2i1.56>

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especially in this trying period of the world's history due to the COVID-19 pandemic has been associated with doctored videos, and audio formats distributed on Facebook, one of the most used social media texts, audio, and video sharing platforms <sup>[2,6]</sup>. Though there has been misinformation before the introduction of social media, the rate of misinformation in this internet age and social media era is unprecedented. This period of unprecedented misinformation is characterized by the different modalities of false news <sup>[7]</sup>.

Though the people who create fake news are spending more resources to come up with both audio and video stories, it is deemed irrelevant especially when the modalities do not play the role, they are meant to play but deceive. Possible modality effects that are attached to the psychological processing of news that is false can be well explained based on two theoretical frameworks. They include Modality-Agency-Interactivity-Navigability (MAIN) Model, as explained by Vilaro et al. <sup>[8]</sup>, and the Limited Capacity Model is well explained by Huskey et al. <sup>[9-11]</sup>. According to the two models, the textual content can easily be processed compared to the video. The reason(s) behind this is that video is fond of overburdening the processing capacity of the human brain together with stimuli that are associated with it. This can lead to relying on superficial contextual cues of the message receivers during the assessment of the content. The realism heuristic is among the heuristic that is related to modality of presentation, which is also known as the rule of thumb "if something looks like real, then most likely it is credible" <sup>[12]</sup>. Furthermore, Fake news formatted in video modalities has caused great fear and panic due to the representation of such stories in reality mode. The stories are told in live video formats, and they catch the attention of most new consumers on Facebook. In this study, the researchers examined this heuristic by relating the effects of both video and audio formats on the credibility assessment as well as sharing intentions of fake news stories on Facebook and how the educational levels mediate the spread of fake news content, and these factors influence the spread of fake news on Facebook.

## 2. Review of Related Literature

From the visual modalities perspective, for instance, videos and photos, the realism heuristic conveyed the idea that seeing is trusting. For instance, as noted by Vilaro et al. <sup>[8]</sup>, audio-visual testaments were ranked more positively by participants as compared to textual testaments on a given website owing to the vivid nature of audio-visual modalities. According to Vilaro et al. <sup>[8]</sup>, the MAIN model contends that enhancing the presentation mode or style,

for instance from text to video, generates a more lifelike approximation of the communicated message as well as mediated events, thus enhancing their credibility directly. This implies that the users can do without the usual cognitive filters when evaluating not only the source's trustworthiness but also the reliability of any given content <sup>[13]</sup>. Chaiken et al. <sup>[14]</sup> argued that the Heuristic Systematic Model (HSM) persuasion, happens since humans possess an inherent liking for heuristic information processing that demands not only a lesser amount of cognitive effort but also less cognitive resources as compared to systematic processing <sup>[15]</sup>.

Systematic processing is a more comprehensive and analytic orientation in terms of information processing. When information is being processed heuristically, people tend to make judgments or conclusions based on simple decision rules. A majority of them, for instance, consider long messages to be strong messages, while messages from trustworthy sources are deemed as credible. Whereas the utilization of the heuristic versus the systematic processing relies on numerous factors, including users' motivation, users' ability as well as other external such as time, Vilaro et al. <sup>[8]</sup> argue that the information overload issue witnessed with the present virtual media environment causes the systematic processing of most messages to be difficult, with users being forced to heuristically process them by depending on the cognitive heuristics, for instance, realism heuristic, especially when reviewing content.

Cognitive overload is worsened when one processes a video as compared to when one is processing a text <sup>[16]</sup>. Indeed, as Takada et al. <sup>[17]</sup>, and Chung, & Sparks <sup>[18]</sup> highlight, the exacerbation of cognitive overload is attributed since the information originates from numerous modalities, including audio, graphics as well as videos, in addition to containing materials that are appropriate to the conveyed message as well as structural features like lighting, which are insignificant to the video content. This implies that many cognitive resources are often assigned to encoding to the detriment of several other memory sub-processes, including storage. Given this, any media message conveyed utilizing a richer modality, for instance, a video can be decoded relatively speedily, but it cannot be processed systematically the way a text-only message can be processed since it requires the interpretation of the scripted or written word.

Indeed, Castro-Alonso, & Sweller <sup>[19]</sup> discovered an important biological basis applied with modality-biased processing where they demonstrated that higher consumption of the perpetual as well as the cognitive resources employing video modality appears to be significantly damaging for

systematic processing when likened to the learner modalities such as audio or even text. According to Wieland, & Kleinen-von Königsłow <sup>[20]</sup>, this important variance in terms of cognitive processing seen between modalities may, consequently, influence not just the memory and contents' perceptions, but also influence the news itself.

As highlighted by Sherman, Michikyan, & Greenfield <sup>[21]</sup> and Vaccari, C., & Chadwick, A. <sup>[22]</sup>, studies have revealed that watching video-related news clips reduces the processing depth as compared to text-based articles. Deane <sup>[23]</sup> notes that text format signifies a significantly abstract statement, compelling users to not only interpret, but also envision whatever the communicator is conveying, and is often linked with an advanced recollection of news. On the contrary, video modality appears to be not only more concrete, but also easily grabs one's visual senses, hence providing a heightened sensory depiction of a mediated occurrence, which calls for less interpretation. Hall <sup>[24]</sup> noted that concrete statements tend to be viewed as true as they make a particular described situations appear more imaginable. As noted by Hall <sup>[24]</sup>, imaginability enhances the believability of the conveyed message, a factor that justifies why videos are linked with not only enhanced engagement but also increased perceived realism.

According to Chen et al. <sup>[25]</sup> and Xian et al. <sup>[26]</sup>, trust in misinformation may be greatly influenced by numerous content characteristics, for instance, misinformation related to a given public figure versus no one, a message having a general assertion versus a message concentrating on particular events, which may be proved as untrue upon inquiry, but the modality effects are greatly sinister. Recent advancements in technology have, however, made the manipulation of images as well as videos to be significantly easy in such a manner that they are distinctive in the eyes of humans.

Vilaro et al. <sup>[8]</sup> highlight that the realism heuristic caused by video modality may be challenging, especially in the example of deep fakes, which are generally fabricated videos that are made using a machine designed to deceive. As noted by Chen et al. <sup>[25]</sup>, enhanced believability or acceptability of this kind of content may be dangerous not only for users, but the society in general. According to Dubois et al. <sup>[27]</sup> and Winter & Neubaum <sup>[28]</sup>, when this particular information is validated by other individuals within their network of friends or relatives, consumers tend to consider it trustworthy. Indeed, fake news consumers are often relatively smaller in terms of number but may exert significant influence on not only the views but also other news audiences' beliefs, especially when supported by opinion leadership and social ties <sup>[29]</sup>.

As stated by Peeters <sup>[30]</sup> and Young et al. <sup>[31]</sup>, this is espe-

cially true with the example of Facebook where its group architecture, peer-to-peer communication, and encrypted technology make it easier for the users of this social site to share information by facilitating both mass as well as interpersonal communication. According to Buchanan <sup>[32]</sup>, research investigating the various reasons why online sharing of false information has found that receivers of this kind of information consider it trustworthy, with the main goal of promoting social cohesion, especially due to its associated emotional effect, alleged relevance, in addition to the ability to raise awareness or offer warnings. However, an under-researched issue is whether indeed the information presentation modality generates any significant difference in terms of their content sharing. Nonetheless, considering that information sharing is often based on the alleged credibility as highlighted above, the various information presented by way of video modality appears more liable to be greatly shared with other individuals since the alleged actuality of content, along with the absence of scrutiny makes the information more trustworthy <sup>[13]</sup>. Based on this particular rationale, the following hypotheses were proposed:

**H1:** *Video formats news will influence the spread of fake news on Facebook more than Audio formatted news, and vice versa;*

**H2:** *Video formats news is credible and believe to have higher sharing intentions than Audio formatted news and vice versa.*

### **Education as a Moderator of the Spread of Video and Audio Formatted Fake News on Facebook**

Pop & Ene <sup>[33]</sup> suggests that people who are highly educated turn not to trust fake news on social media either video or audio formats compared to those who are illiterates. Higher educational qualifications people tend to positively influence the spread of fake news on Facebook and other social media platforms, as opposed to people who are less educated or illiterate. Education is a strong predictor of the support of an individual and attitude towards the spread of video and audio formatted fake news compared to other demographic factors like age and the type of gender <sup>[33]</sup>. It is also essential to note that educated and well-informed individuals are most likely to be imperious to video and audio formatted news on Facebook <sup>[34]</sup>. Among the reasons that are given is that these kinds of citizens are fond of using their knowledge to assess news or information they get from social media. In addition to that, they can use their knowledge on credibility and sharing intentions <sup>[35]</sup>. It is also evident that education can moderate the effects of video and audio fake news spread, as well as the sharing intentions and credibility <sup>[35]</sup>. Against this backdrop, it is expected that educated people

will be affected to a smaller extent by the audio and video formatted news on social media<sup>[36]</sup>. The researchers based on the arguments advanced **H3a** and **H3b**.

**H3a:** Video formats news can influence the spread of fake news among illiterates than literates;

**H3b:** Audio formatted news can influence the spread of fake news among illiterates than literates.

### 3. Materials and Methods

To test the stated hypotheses the researchers were able to engage a comparative experimental design. In this experimental design, the study varied the frame's valence, the video and audio formats, and the credibility and sharing intentions of the Ghanaians (literate and illiterate). Random 2 indicates the specific experiment (video vs audio formats)  $\times$  2 (literate vs. illiterate)  $\times$  2 credibility vs. sharing intentions), which are indicated by the subjects' design and a control state. Extracts are provided in Tables 1, 2 & 3. The experimental design gave the researchers a chance to assess the effects of the given video and audio format news on the spread of fake news on Facebook, therefore providing a better understanding of how video and audio formats play a bigger role in influencing the spread of fake news. When the participants are exposed to the same experimental stimulus, the research avoids the problem brought about by the effects of media such as comparing different media outlets in Ghana, the context, and the media content. The researchers aimed to create variations based on contextual factors to create an impact on the levels of education (literate vs. illiterate), credibility, and sharing intentions toward the spread of fake news on Facebook.

#### 3.1 Study Context, Participants, and Procedure

For this study, the researchers resolved to disseminate fake news through Facebook in Ghana for three of the following reasons: To start with, as stated before, the social consequences of disseminating false news compared to real news<sup>[32]</sup>. Secondly, Facebook is the most popular messaging application in the entire world with over 3.9 billion users second<sup>[37]</sup>, and Ghana is one of the largest users in West Africa. Finally, the affordances of Facebook are considered the main source of sharing and receiving fake news<sup>[32,38,39]</sup>. Participants for this study were recruited from the three municipalities (Ga west, Ga east, and Ga south) in the national capital of Ghana, Accra ( $N = 340$ ), to enable around 15 participants for every cell of manip-

ulated condition. The sample was made up of 52.1% females and 48.9% males aged 21 and 50 years. Their level of education varied, with 49.4% educated and, 50.6% uneducated (illiterates). Income levels ranged from Ghc1000 (\$165) to Ghc 2,500 (\$414.33) per month.

The recruitment procedure was carried out in a street intercept survey method. During the process, two research assistants were given three locations of the municipalities in Accra. The assistants found their way to various addresses as well as other possible participants in public places such as lorry stations. They managed to obtain informed consent and thereafter, the research assistants gave out a pre-questionnaire asking demographic as well as individual-difference questions. Respondents were shown a Facebook which was found on the research assistant's phone and had two stories in one of the three modalities. The researchers asked for images that they may have come across in one of the Facebook. This strategy was applied by the researchers instead of sharing the stimulus with the participant's phone because there was the need to avoid disseminating false news further to the network of the users and playing a role in its virility. The researchers ensured that the questions are in both English language and "Twi". Participation was carried out voluntarily and there was no form of remuneration.

#### 3.2 Measures

##### 3.2.1 The Credibility of News Content

The respondents were required to rate the data acquired through false news. The answers were to be based on the following four adjectives (false, believable, truthful, reliable, and dependable, each on a 5-point scale; from 1=strongly disagree, to 5=strongly agree). For example, 1 vs. 5 for "false" was meant to represent the users who strongly disagreed (vs. agreed) together with the information that was acquired through the news. The ratings were averaged based on the four adjectives for the computing credibility measure (.90).

##### 3.2.2 Sharing Intentions

Users were also required to rate how they were ready to share the information (news story) (1 = not willing, 5= very willing) with three different groups on Facebook: Friends with Mean(M) and Standard Deviations (SD) ( $3.32 \pm .87$ ), workmates ( $2.24 \pm .23$ ), and Family and love ones ( $4.81 \pm 1.35$ ), and others ( $3.66 \pm 1.57$ ). Although the topic of sharing is varied because of high correlation, (see

Table 1 for correlations between measured variables) and reliability ( $3.27 \pm 1.79$  a .96).

### 3.2.3 Educational Levels

The researchers used the Ministry of Education of Ghana (MoE) and the National Council for Tertiary Education’s (NCTE) standards in Ghana to measure literacy and illiteracy. A correspondence table given by UNESCO was used to match different codes from different correspondence MoE and (NCTE) levels <sup>[40]</sup>.

## 4. Results

Table 1, Model 1, indicates that the participants who are exposed to some form of negative audio formatted news stories did not regard it as fake news compared to those that are exposed to video formatted news stories on

Facebook regarded it as fake news. To add to that, Model 1 in Table 1 indicates that both the participants who were exposed to original video and audio formatted news and those that were exposed to fake news differed from those who were in the control condition. This, therefore, is a clear indication that **H1** is not supported.

In **H2**, where it was recommended that video format news is credible and believe to have higher sharing intentions than audio formatted news and vice versa and that a would-be realized from news credibility than news sharing intentions, the outcome was unexpected. As indicated in Table 2, both credibility and sharing intentions were similar.

According to the results in Table 3 (Model 2), no interaction effect was identified with citizens’ education and exposure to the spread of fake news on Facebook. Hence, **H3a** and **H3b** are not supported.

**Table 1.** Effects of Video and Audio formats on the spread of fake news on Facebook.

DV: the spread of fake news on Facebook	Model 1	Model 2
Video format (vs. Audio format)	-.032 (.012)	
Video format (vs. control)		.014 (.031)
Audio format (vs. control)		.022 (.011)
Adjusted R-square	.221	.021
N	340	340

Note: Standard errors in parentheses. The scale (1=negative attitudes to 5=positive) was used for the dependent variable spread of fake news on Facebook. OLS = ordinary least squares; DV = dependent variable.

\*p < .05. \*\*p < .01. \*\*\*p < .001.

**Table 2.** Video Vs Audio format effects on the spread of fake news on Facebook.

DV: the spread of fake news on Facebook	Model 1	Model 2
Video format (vs. Audio format)	-.021 (.013)	.018 (.014)
Audio format (vs. Video format)		
Adjusted R-square	.111	.103
N	340	340

Note: Standard errors in parentheses. The scale (1=negative attitudes to 5=positive) was used for the dependent variable spread of fake news on Facebook. Ordinary Least Squares=OLS; Dependent variable=DV.

\*p < .05. \*\*p < .01. \*\*\*p < .001.

**Table 3.** Interaction effect of video and audio format on credibility and sharing intentions.

DV: the spread of fake news on Facebook	Model 1	Model 2
Video format and Audio format (vs. control)	.012 (.010)	.013 (.012)
<b>Education</b>		
Video and Audio format × Education	.115 (.023) ***	.239 (.012) *
<b>Credibility</b>		
Video and Audio format × Credibility	.112(.011)	.012(.010)
<b>Sharing Intentions</b>		
Video format and Audio format × Sharing Intentions	.113(.013)	.012(.010)
Adjusted R-square	.211	.111
N	340	340

Note: Standard errors in parentheses. The scale (1=negative attitudes to 5=positive) was used for the dependent variable spread of fake news on Facebook. Ordinary Least Squares=OLS; Dependent Variable=DV.

\*p < .05. \*\*p < .01. \*\*\*p < .001.

## 5. Discussion

Proof for randomization made by the researchers to be discovered that there is no substantial difference between the participants in different groups in terms of credibility ( $p = .211$ ;  $f=1.21$ ), ( $p = .121$ ;  $f = 2.12$ ) for sharing intentions, ( $p = .411$ ;  $f = 0.80$ ) for education, while ( $p = .711$ / $f=.41$ ) is for video and audio formats. Comparing how the participants responded to the questions regarding a news story (audio or video) they had just watched or listen to: (1) If the audio or video news story was genuine or fake, and (2) If the news story (audio or video) focused on the news on Facebook guaranteed manipulation check demand of this study. The outcome for all questions revealed that there was a remarkable difference within the groups ( $p < .001$ ). Thereafter, a credibility check was done. In general, it was found that the participants perceived all audio or video news stories to be worthwhile and interesting. They were also convincing and credible enough. It is important to note that the respondent who received genuine news stories perceived them as highly authentic and credible. The pattern was the same when the answers were compared on different credibility questions as well as when an index through the use of varied credibility questions. Tables 1, 2 & 3 illustrate the effects of video and audio formats on the spread of fake news on Facebook.

The sinister effect of the use of the video modality in advancing the credibility as well as the spreading of the fake news is significantly worrying bearing the rise of manipulated videos (deep fakes). The videos are usually manipulated by employing the use of machine learning, which not only replaces people in various scenes but also superimposes one video scene over the other. Indeed, deep fakes form one of the several opportunities for developing falsehood as well as false accounts that may not be easily

noticed by normal human eyes and caused great fear and panic. The realism heuristic shown within this particular study (see Tables 1, 2 & 3) forms the major mechanism through which various video stories can create a significantly powerful impact, which may not only be useful in encouraging the dissemination of misinformation but also enhance consumer belief in the validity of the false content. These findings are in line with Ryan, G., & Sfar-Gandoura, H. [41] who suggested that the general virality of video-related fake news or misleading information is especially dangerous when spread through the encrypted platforms supporting messaging, including WhatsApp, which tend to be less exposed to not only public scrutiny but also corrective measures employing takedowns relating to offending posts. Moreover, Ryan, G., & Sfar-Gandoura, H. [41] note that what makes the Facebook social site distinctive is the fact that it is made up of high-level connections that go beyond local borders, and where the spread of content is not determined by newsfeed algorithms, hence cannot be curtailed by the Facebook platform.

The established findings generate numerous theoretical implications. Firstly, Quinn, K. [42] and Lee, B., & McLeod, D. M. [43] observe that, in keeping with research within the cognitive media psychology field, the outcomes of this study clarify the differential information processing presented within the different modalities. Besides, Luttrell, A. [44] notes that the moderation impact of involvement in addition to the mediation of the alleged realism shows the applicability of not just the dual-process persuasion models, but also that of the MAIN model, which, according to [6,38], are seen as important frameworks that can be utilized to examine the information processing of the fake news or misleading information in particular. According to Li et al. [45], past studies indicating visual stimuli's positive

effects on credibility have linked it to the drop in systematic processing. Indeed, this particular study expands the existing literature by explaining the various mechanism and essential effects, especially the realism heuristic that Li et al. [45] argue can be very critical from the fake news perspective.

Moreover, the open-ended or unrestricted feedback is a clear indication that realism was important even for individuals with adequate knowledge of the topic relating to the story. This offers significant support to the idea that the realism heuristic can be of great help during the systematic processing, especially during the decision-making process, which is following the additivity hypothesis of the Heuristic-Systemic Model (HSM). According to Connor Desai, S., & Reimers [46], the unrestricted responses also often facilitate confirmation bias by establishing that the portrayals of the news story are often aligned with an individual's prior associations, for instance, one is more likely to believe how a terrorist is perceived or how a political figure sounds like since they often bolster existing views. An obvious effect is that stronger modalities such as video may easily cause such associations, hence not only enabling confirmation bias but also heightening vulnerability to misleading information. Importantly and per the past research, Buchanan, T. [32] argues that users stated cautioning others regarding the possible dangers as among the major reasons behind misinformation sharing. The realism heuristic operation could help bolster this motivation. This is more likely, especially in Ghana, which is a nation that is popular for its long-established communal orientation.

### **5.1 Practical and Theoretical Implications of the Study**

The findings arising from this particular study also generate important practical implications, especially within the field of design since the social media firms experience criticism owing to the rapid dissemination of misinformation within their platforms. The key questions are how interfaces can be built aimed at dissuading as well as countering the spread of misleading information? How do quickly as well as efficiently detect fake news? And how to help users through their process of making decisions to establish falsified news promptly?

Firstly, the findings from this particular study propose modality-based content flagging as a major measure of defense. Indeed, when Facebook as well as other social media platforms examine traffic for manipulated videos during the peak seasons, categorizing them in accordance to the modality in addition to prioritizing the video deep fakes for better scrutiny as well as further action may

act as more responsible utilization of resources. Modality-based flagging can be harmonized along with location-sensitive sorting to ensure that the incoming reports to the potential flakes are well taken care of. Based on the high number of reports that are received, the possibility of detecting flakes amongst various video-related stories is usually higher. However, educational level users as well as those having less knowledge as regards the topic being featured in a given story might not report the deep fakes during the initial instance. Given this, both modality and the user's educational levels would require to be well-thought-out when reacting to the reports.

The industry may also concentrate on developing in-time alerts (for instance instantaneous automatic notifications, which are preprogrammed under the content modality, educational level of the users, media consumption trends, as well as other contextual factors), in addition to other shared interface cues aimed at making consumers more careful of the content that they consume. For example, Vilaro et al. [8] suggests the "Investigative Later", which is an essential option that may spontaneously alert consumers if one of their posts on social media is exposed by a given fact-checking social site. Additionally, Dunbar et al. [47] and Fransen et al. [48] state that enhanced message interactivity, which entails offering users alternatives to mutually interact with the system may help improve message elaboration, hence negating heuristically-driven video modality effects. This particular study also recommends the incorporation of modality within the users' literacy materials. This will act as an essential element to observe, especially when receiving as well as disseminating news through Facebook or any new media platform [49]. Present efforts may become more effective if users are informed that videos generate inherent trust since human beings have a deep-rooted psychological inclination to trust what they observe, and may therefore be highly damaging as compared to audio stories.

According to Wang et al. [50], focusing on and personalizing alerts, in addition to literacy materials relating to various users in accordance to their profile settings may also aid in establishing not only the most vulnerable but also help control the virality relating to fake video stories, especially because the Facebook flow of information distortion is not only deeper but also wider. These design implications relate to proposal [25] (from the public health misinformation context) to not only increase literacy programs but also public campaigns aimed at improving critical content assessment skills across diverse generations, in addition to applying technological solutions, for instance, browser extensions, which flag untrustworthy websites, instantaneous information dissemination appli-

cations within rural communities to identify falsified news quickly as well as across various locations.

## 5.2 Limitations, Directions for Future Research

It is important to highlight numerous limitations of this study. Firstly, the procedure for recruitment was based on the spot visit type of approach, which may have generated a selection bias as it only considered the target population who were present at that particular time, resulting in issues of generalizing the findings. Secondly, the various research assistants revealed to the respondents the stimulus within their phones rather than sharing it through the respondents' devices to avoid the continuous dissemination of the fake news. The utilization of the assistants' phone gadgets, as well as their presence while the respondents responded to the various questions, may have led to social desirability impacts. Nonetheless, if the issue of social desirability resulted in the respondents scrutinizing information a lot, it implies that the consequent effect witnessed with the realism heuristic may only be effective in a significant natural environment where users experience falsified stories amongst numerous messages within their feed. Additionally, as highlighted earlier, the literate, as well as the illiterate difference, is mainly brought about by the practical considerations, with the education variable reflecting the diverse socio-demographic aspects, including digital literacy.

The study also revealed that the literate population had a better digital literacy, and hence less likely to consider fake stories as credible. Another important limitation is that the study only explored the realism heuristic. Indeed, assessing additional heuristics may have allowed the researchers to find more explanations relating to the outcomes. These particular limitations propose numerous areas that deserve future research. Firstly, as observed earlier, it is very clear that other heuristics may be acting parallel with the realism heuristic, therefore worth exploring. Further research ought to explore this particular possibility by integrating measures aimed at differentiating between systematic as well as heuristic processing. Also worth noting is the fact that there exist other forms of visual modalities apart from video, including memos and photos, which may also initiate a realism heuristic.

## 6. Conclusions

It is very clear from this particular study's finding that the use of video is making people consider fake news or misleading information as more trustworthy when compared to audio, hence enhancing the probability of the individuals spreading it. The spreading of this misleading

information is usually stronger when the consumers are not interested or deeply involved with the issue relating to the news story. Indeed, the individuals with little knowledge of the issue (compared to the individuals who are strongly concerned with the key issue) tend to be easier to convince that the misleading or fake news is real, especially when shared via a video modality as compared to the text or the audio modality. This particular perceived realism seems to be positively linked with not just the supposed credibility relating to the content of the news, but also the users' intentions to have the articles shared with other users of Facebook. It is important to note that the greater realism, as well as the subsequent persuasive allure of the video modality over the audio warrant, increased attention from not only scholars but also designers who are interested in stopping misinformation flow through social media.

## Author Contributions

*John Demuyakor* conceived the study idea, developed the conceptual framework, collected the data, analyzed it, and wrote the article, *Edward Martey Opata* gave the technical advice concerning the write-up and advised on relevant corrections to be made before final submission, *John Demuyakor & Edward Martey Opata* did the proof-reading of the article as well as language editing. All authors read and approved the final manuscript.

## Conflict of Interest

The author has no conflict of interest to disclose.

## Funding

This article received no funding from any individual(s) or institution(s).

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