



Article Is AI Stirring Innovation or Chaos? Psychological Determinants of AI Fake News Exposure (AI-FNE) and Its Effects on Young Adults

Abdulgaffar Olawale Arikewuyo 🗈

Department of Journalism, School of Computing and Digital Media, London Metropolitan University, London N7 8DB, UK; arikewuyoa@gmail.com

Abstract: The rapid rise of fake news has become a growing concern in recent years; moreover, advancements in technology, particularly artificial intelligence (AI), have further exacerbated this issue by making it increasingly difficult to detect and verify fake news content. Also, the advent of AI, especially in auto-generated texts and deepfakes, has made identifying such misinformation significantly more challenging, as this may be associated with many predetermined factors. This study, therefore, investigated the psychological factors that influence media consumers' belief in deepfakes and other AI-generated content, particularly focusing on how this type of news exposure impacts young adults. Using quantitative methodology, the study randomly sampled a total of (N = 381) young adults to explore the relationship between factors like low critical thinking, emotional attachment to news, and susceptibility to AI-generated fake news. The study found a critical linkage in the prediction that low critical thinking exacerbates exposure to AI-generated fake news content. This study validated the assumption that AI fake news exposure significantly predicts low media trust and antisocial behaviours. In addition, the study affirmed that emotional attachment to news will be positively associated with AI-FNE. This study ultimately concludes that factors such as low critical thinking and emotional attachment to news are predeterminants to AI-FNE, while AI-FNE further exacerbates antisocial behaviours and an individual's belief in news platforms.

check for **updates**

Academic Editors: Mathias Felipe de Lima Santos and Adeola Abdulateef Elega

Received: 9 December 2024 Revised: 14 March 2025 Accepted: 3 April 2025 Published: 7 April 2025

Citation: Arikewuyo, A. O. (2025). Is AI Stirring Innovation or Chaos? Psychological Determinants of AI Fake News Exposure (AI-FNE) and Its Effects on Young Adults. *Journalism and Media*, 6(2), 53. https://doi.org/ 10.3390/journalmedia6020053

Copyright: © 2025 by the author. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https://creativecommons.org/ licenses/by/4.0/). **Keywords:** artificial intelligence; fake news; media psychology; technological innovation; deepfakes

1. Introduction

Since its invention, artificial intelligence (AI) has transformed the way humans do things. It has enhanced productivity and efficiency in different areas of human interaction, thereby resulting in a performance-driven society (Tavakoli et al., 2023). Now that the world has virtually turned digital, AI has further strengthened the way we interact and communicate, making the processes fast, easy, and seamless. Since its creation, AI has been a user-centric development, providing high user value and satisfaction to its users (Gregory et al., 2021). For instance, organisations (including the media) and individuals can provide quality and efficient services to their clients through different AI-driven technological advancements. Due to the unwavering competition in businesses and the global market, adopting AI has transcended beyond a necessity for organisations and businesses like the media to stay on top of their game and remain relevant (Bazrkar et al., 2024). Individuals have also remained up-to-date on how to efficiently and effectively use AI in their day-to-day activities, thereby preventing them from being rendered redundant (Wijayati, 2022).

Furthermore, depending on how it is used, AI has over time proven to pose greater challenges and benefits to the human system and society at large (Garg & Sharma, 2022). Consequently, AI has become an important tool in ensuring efficiency in different fields such as engineering (Cardoso et al., 2023), fashion (Karadayi-Usta, 2024), and human resource management (Palos-Sánchez et al., 2022), among others; even so, it has posed a serious threat to other forms of human sustainability. AI has enhanced connectivity, communication, interaction, and overall practices. Up until now, AI has remained one of the most innovative technological developments that has helped transform the way humans do things, including the ways that aspects of journalism such as news sourcing, gathering, and consumption are practiced (Túñez-López et al., 2021). The invention and development of social media platforms like Facebook, X (formally known as Twitter), and Instagram, along with blogs and vlogs, has redesigned the way we receive and process news (Ozbay, 2020). Before now, the modus operandi for journalism such as virtually the same process, and people collected information from traditional platforms like radio, TV, and

The term "fake news" was made popular by the former president of the United States during the campaigns preceding the 2016 US general election and was one of the top beneficiaries of the term (Ross & Rivers, 2018). Due to the large number of news items published daily on social media and other digital platforms, exposure to fake news has been increasing, thereby necessitating the importance of fake news detection systems (Zhang et al., 2023). Fake news has become a highly efficient tool among the political class, as it is commonly used to appeal to the psychological and emotional stability of news consumers, and thereby becoming an efficient tool for propagandists (Ali & Zain-ul-abdin, 2021). Also, online platforms, being a "free market space" where individuals generate information and express themselves freely, have in recent times provided a platform for fake news to thrive (Jahng, 2021). This poses a continuous threat to the quality and integrity of information accessed online. For example, during the COVID-19 pandemic, fake news spread quite fast due to the inability of individuals to verify messages and, most importantly, to individuals' low fact-check literacy (Elías, 2020).

newspapers without questioning the source or sometimes seeking validation.

There is no doubt that AI technologies such as deepfakes and AI-generated texts have proven to be the easiest and most seamless platforms for automating fake news (Lim, 2023); in the same vein, it has also influenced how we detect fake news through different news fact-checking platforms such as PolitiFact, Snopes, FactCheck Africa, BBC reality check, and Google fact-checking tools, amongst others. Deepfakes are digital video and audio content generated through AI and machine learning (ML) technologies to disguise or manipulate the audience or digital media consumers (Kietzmann et al., 2020), while AI-generated texts are auto-generated texts through AI platforms and in specific languages to deceive, misinform, or mislead people (Sardinha, 2024). While it is important to emphasise the need for continuous investigation into detecting and combating how fake news influences news reliability and accuracy, most especially on digital platforms (Berrondo-Otermin & Sarasa-Cabezuelo, 2023), questions such as to what extent an ordinary news consumer will go to fact-check news items are left unanswered. Several factors such as media literacy (Usman et al., 2022), polarisation (Gonzalez, 2019), peer pressure (Pérez-Escoda et al., 2021), and algorithms (Islam et al., 2021) have been predicted to influence fake news consumption and influence. However, none of these studies have investigated what psychological factors will most likely influence fake news exposure, which means establishing a novel area for study. In addition, this study conceptualises AI fake news exposure as accessing and consuming fake news content generated through AI online. This research therefore advances the existing literature concerning AI, journalism, and news studies by investigating the psychological factors that influence exposure to AI-generated fake news content

(i.e., auto-generated texts and deepfakes) on digital platforms and its aftermath effects on young adults.

2. Literature Review

2.1. Artificial Intelligence and Fake News Exposure

AI has greatly transformed in recent years the way journalism is globally practiced. Technological innovation has made news production and access become more promising, thereby creating a more media-friendly environment. This is substantiated by Túñez-López et al.'s (2021) assertion that AI has simplified the way news is transformed from text to audio or audio to text, thereby creating unobstructed access to news. With the series of impactful and transformational changes AI has brought to bear, there are growing concerns about how AI has continually increased fake news exposure (FNE). Islas-Carmona (2024) examined how AI is increasing fake news and disinformation in society and asserted that the use of AI and its aftermath effect on exposing individuals to fake news pose an unimaginable concern to the stability of the society. At the inception of the COVID-19 pandemic, for instance, much fake news content (autogenerated texts, videos, and images) trended on the origin of the virus; moreover, the damage resulting from AI-generated fake news continued to prevail as the information was not adequately corrected. These fake news contents were used to exploit unsuspecting citizens who were unable to identify and process adequately the online content they were exposed to (Raman et al., 2024).

With the advent of artificial intelligence, the dynamics of the interpretation of news content, especially online, have now become more complicated (McDougall, 2019; Mohammed et al., 2024). This is based on the fact that the process of meaning-making has now become more complicated globally, and individuals can attach preferred meanings to online content and make sense of these in ways that suits the purpose for which they desire. Additionally, Kim et al. (2024) asserted that ensuring the news is anchored on the blockchain platform, where journalists can ensure the news consumed by the audience is authentic, verified, and devoid of compromise, will go far in limiting AI-generated news content by the citizens. The inability to easily verify the truthfulness or reliability of online news content, especially online, has continued to erode consumer trust. AI-generated fake news content has also affected small and large organisations, as it has affected their credibility, thereby making them less reputable and eventually affecting their client base (Akhtar et al., 2023).

AI has continued to thrive online because social platforms such as Facebook, Twitter (now X), and Instagram, amongst others, enable users to generate content on their own, thereby limiting the restrictions and gatekeeping process that will ensure the accuracy and validity of posted news content (Setiawan et al., 2022). This has also increased the sprawl of fake news content online and made the online community porous to fake news. It is quite important to note the alarming rate at which developments continue to occur in the technology sector, which has increased the ability of online platforms to continue in dispensing sensational fake news championed by AI (Akhtar et al., 2023). With artificial intelligence, the transmission of messages has generally been greatly expanded; this may be due to the overdependence on online platforms for news consumption. On the one hand, this may be perceived to be a positive development, while on the other hand, this has increased the risks associated with fake news exposure and posed a significant danger to the well-being of society (Mukherjee, 2023). Deepfake, for instance, is a product of AI-generated fake news that has increased the level of deception in fake news manipulation by its consumers as well as making deception in communication become more popular.

AI has created a platform where fake news content like deepfake has continued to thrive; beyond that, deepfakes' proliferation has increased due to the inability to iden-

tify and examine online content, thereby increasing consumers' level of exposure to AIgenerated fake news. AI-generated videos have over time continued to interfere with the truth, fueling extremism, aggression, and violence in some quarters (Landon-Murray & Mujkic, 2019). Accordingly, AI has enabled fake news peddlers to create false impressions of citizens' input in governance, thereby stimulating tension in the society. In 2003, for instance, an image of a building near the Pentagon in Washington DC engulfed in flames trended in the US, and also images of a former US president being arrested and dressed in a white robe, they were later discovered to be AI fake images, though these images had trended and generated the desired tension and controversies intended by the authors. Thus, AI has made it easy to reproduce an individual's image, voice, and even motion picture, making it challenging to identify reality from virtuality and in turn exposing consumers to fake news. This is further compounded by the availability of AI to the general public, which has been a major determinant in its beating down human detection, thereby leaving the society to grapple with fake news content (Nazar, 2020). For instance, a platform like Faceswap, with its ability to manipulate images at different levels, makes it quite easy for deepfakes to thrive.

One of the most important aspects in recent years has been the development of factchecking platforms; hence, it translates to using AI to check news disseminated online. Wecel et al. (2003) explain that platforms like ChatGPT-4o can be used as a means of fact-checking, though not without its limitations. This may be due to the algorithm and design of ChatGPT thereby not being able to verify claims directly and also not being able to provide detailed or adequate information on local news stories. Akhtar et al. (2023) also argue that AI should be largely used to counter the spread of fake news to mitigate the negative effects of fake news. This could include disruption of social peace, thereby affecting the day-to-day activities of other citizens. AI fake news exposure has been largely predominant in the political scene, thereby drifting attention away from other areas of AI-FNE and concentrating on the political scene.

2.2. Psychological Determinants of AI Fake News

According to Akhtar et al. (2023), fake news may be classified as disinformation and misinformation. Fake news seeks to intentionally misinform or mislead news consumers to believe untrue or unreal information. Fake news has been ascribed to be a major cause of mal-activities, thereby causing regrets among those who have been exposed to such content. For instance, Lida et al. (2024) asserted that individuals who were independent thinkers and were firm with their decisions were not easily misguided by fake news content online, while those who lacked capacities such as political efficacy and critical thinking regretted the decisions they had taken, based on the news they accessed. Not all news is fake news (Veinberg, 2018). Also, critical thinking, which is a logical thinking process required of an individual before making a judgment or making a decision, is an important part of being exposed to fake news content generated through AI (Divya, 2024; Sonni et al., 2024). The ability to process information and news consumed with a deep sense of critical thinking is therefore an important element in distinguishing between real news and news generated through AI platforms (McDougall, 2019). For instance, Orhan (2023) conducted a study among a sample of 157 university students and investigated how critical thinking dispositions and media literacy influence their ability to detect fake news; the study found a positive and moderate relationship between students' critical thinking dispositions and fake news detection. On these grounds, critical thinking dispositions are likely to predict the level of media literacy of an individual, thereby increasing the ability to distinguish between news stories online.

According to Weiss et al. (2020), fake news is an important area of study, and with the advent of AI, it becomes more pertinent, although, the need to instil critical thinking in the minds of news consumers makes the problem less challenging. Critical thinking is an important element in enhancing an individual's ability to access, select, and process information as well as aiding decision-making on news exposure through different platforms (Horn & Veermans, 2019). This is exemplified in the likelihood of an individual's level of critical thinking influencing the decision taken after being exposed to ideologically opposing information, the need for verification, and the reactions thereafter. Critical thinking aids an individual's ability to carefully examine, evaluate, and process information, thereby protecting an individual from being exposed to fake news (Liu, 2023). Hence, when such individual is exposed to fake news, they can carefully distinguish between what to accept or otherwise. This places critical thinking as an important element to be considered when discussing fake news exposure. Also, critical thinking is an important factor to consider when evaluating online news, as it helps an individual accurately predict fake news (Lutzke et al., 2019). Ciortea-Neamțiu (2020) asserted that for critical thinking to be a part of an individual's daily activity, it has to be built into the educational curriculum while emphasising that when individuals grow with the subconsciousness of applying critical thinking in their daily activities, it will also influence their news exposure and secession.

In another dimension, Escolà-Gascón (2021) posited that critical thinking is a significant predictor of reduction in stress levels, which has thereafter been found to be associated with the ability of medical practitioners to detect fake news. Critical thinking has been associated with making good choices in news consumption (Ciortea-Neamţiu, 2020). As a result, with critical thinking, an individual can promptly consider factors like source availability, the platform on which the news is made available, and other self-made factors before considering being exposed to particular news content. When such an individual is exposed to the news, they will have the ability to filter the news during the exposure process. Although fact-checking platforms have continued to spring up to reduce the news consumers' exposure to fake news, such platforms have impaired consumers' ability to identify fake news, thereby encouraging low-level critical thinking among media consumers. This is validated in the study conducted by Gaozhao (2021), which concluded that the existence of fact-checking flags has taken over the critical thinking process and news judgment amongst consumers, thereby making them dependent and placing their beliefs in such fact-checking flags whether accurate or not.

Emotions are another significant determinant that play a significant role in how we select, process, and frame news about different issues affecting us (Mills, 2020). This is evident in Lecheler and Bos's (2015) assertion that emotions are usually more popular in fake news associated with political issues because this cuts around all sectors. This may also be related to several fake news reports that were present during the COVID-19 pandemic, as they were largely political and associated with many personal and emotional attachments to the authors. While fake news is highly influential on our opinions and beliefs, emotions as a psychological factor explain why it is highly popular in recent times, and further made easier with the invention of artificial intelligence. Furthermore, Kumari et al. (2024) validated the assertion that AI news content has stronger emotional appeal and, hence, receives more emotional attention and attachment, and thereafter more likes and shares by consumers. Negative news and headlines are more appealing to the emotions of consumers, thereby accounting for the motivation behind using AI to generate more emotionally negative fake news content (Commisso, 2017). This may be the reason behind AI fake news stories exacerbating anger and distrust, and promoting a negative atmosphere among citizens.

Fake news triggers emotional reactions in different ways; as such, the emotional appeal fake news carries aids in the detection of fake news or real news. (Wan et al., 2023). This is due to fake news being more emotional to attract the attention of consumers. Paschen (2020) affirmed that AI-generated fake news is more emotionally counterbalancing on its consumers. AI-FNE may have a significantly negative effect as opposed to authentic news. This may be because AI-FNE is usually tilted to influence and transmit negative information that will elicit anger, hatred, distrust, and lower levels of positive emotions (Mukherjee, 2023). Therefore, one of the most distinguishable ways of identifying AI fake news is based on its high emotional appeal. Iqbal et al. (2023) highlighted a positive correlation between AI fake news exposure and emotional instability among news consumers, stating that this influenced individuals to consume online news without any form of verification, validation, or confirmation. Also, an individual's emotion became a determining factor to the level at which they are exposed to AI-FNE, thereby making their inner feelings a significant factor in the exposure and thereafter sharing of such news.

2.3. AI Fake News, Media Trust, and Antisocial Behaviour

Media trust has been an important factor to consider when discussing issues surrounding fake news (Aoun Barakat & Dabbous, 2021). Media trust has been a strong predictor of fake news exposure. Therefore, due to the escalating distrust in society, the need to understand the importance exposure to fake news plays in media trust becomes indisputable. This may also predict how media trust predicts the behavioural pattern of individuals seeking information; in turn, low trust in the media increases the scepticism of media messages and the media platform itself (Chen & Cheng, 2020). Research concerning the factors that aid the detection of fake news content in the media has continued to progress in recent years; as such, level of education, ability to verify, and information-seeking behaviour are important factors that have predicted fake news detection (Verma & Fleischmann, 2017). For example, an individual's level of education is not a determinant of the level of trust in media, although trust in the media is an important factor in detecting fake news online (Dabbous & Aoun Barakat, 2022). While exploring how media literacy mediates the role of media exposure to harmful content online like fake news among the youth, Tayie and Calvo (2023) asserted that the media has been perceived with a negative perception, which has thereafter affected the level of trust by the citizens, hence, seeing the media as a platform to spread fake news and misinformation rather than a means to access reliable information.

One important factor to be considered in media trust is the ownership and structure of the media organisation generally (N. Verma et al., 2018), although arguments have arisen that the online platform is a free space, there are counterarguments that the online platform also has a series of direct and indirect control by various governments. Obada (2022) argues that the non-ownership structure attached to the online platform may be described as the major factor enhancing fake news sharing. It is important to state that fake news has largely undermined society's trust in the media (Ahmed, 2018). In addition, fake news has not only diminished the credibility of the media, but has further affected information-seeking behaviours, attention to the news, and confidence in sharing information with other people (P. K. Verma et al., 2023). Also, Lutzke et al. (2019) stated that individuals who have been exposed to fake news multiple times and therefore become familiar with the stylistics used in fake news composure are more likely to quickly spot fake news stories, thereby flagging certain news sources which increase their consciousness and distrust in the media. With the rise in fake news generated by AI, the interest in news consumption has generally dropped as people rarely trust that what they read, hear, or watch on different platforms is real and true. This has affected social stability, as losing interest in news due to media trust poses a significant threat to the democratic stability of any nation.

Antisocial behaviours have generally proven to have a great impact on how society is sensed, and its people, as well as formed a significant part of how the norms and values of a society identify (Nazari & Oruji, 2022). Balakrishnan et al. (2023) reported that fake news has had many negative impacts on the way individuals behave. Fake news exposure has exacerbated low affection and trust in government and its policies, thereby creating an atmosphere of low motivation and patriotism among citizens. For example, during the COVID-19 pandemic, the exposure to fake news content was high, thereby decreasing the level at which people believed in government efforts as well. Fake news has also imparted several antisocial behaviours amongst its users, as individuals engage in online antisocial behaviours through posting and sharing offensive content, as well as offline to gain attention or relevance in the society (Stupavský & Dakić, 2023). Furthermore, there is a higher correlation that individuals who engage in different forms of antisocial behaviours in schools, communities, and organisation are more likely to be influenced by what they consume online.

2.4. The Present Study

A significant number of studies have investigated how AI designs can be used to reduce the spread of fake news; therefore, this study is one of the few that seeks to investigate how AI fake news exposure may be enhanced by certain psychological determinants, and how it thereafter affects the youth in establishing or maintaining media trust or their behavioural lifestyle. Critical thinking is an important element in everyday activities especially among online users (Escolà-Gascón, 2021). This may be because of the nature of the online public sphere, which is characterised by user-generated content with no gatekeeping process for accuracy. This is further exacerbated with the invention of AI, which many youth now rely on to carry out their tasks, thereby leaving them at its mercy. Therefore, due to the low critical thinking skills among the youth, this study seeks to investigate if a low critical thinking level is crucial to determining the level of exposure to fake news among youth. In many cases, the emotional attachment to an issue, political party, individual, or policy will likely influence how frequently an individual will be exposed to fake news. This has been seen in the case of the last US election where several fake news stories were on different online platforms, and many individuals who were supporters of Donald Trump easily believed they were genuine pro-Trump videos, even though they were deepfakes. Fake news has penetrated deeply into all areas of society; hence, it is important to study how exposure to fake news stories such as autogenerated texts and deepfakes has further influenced certain behavioural characteristics, most especially antisocial activities among youths. Furthermore, fake news may have a significant relationship with trust and believability decline at many levels. This is because exposure to fake news has influenced the need for online users to verify and validate the news they consume, hence, reducing trust at all levels. Antisocial behaviours have impacted significantly the community and society at large. However, there are several factors that may have influenced or propelled antisocial behaviours at different levels. These issues could be online or offline. Therefore, this study presents the following hypotheses:

H1: Low critical thinking will be significantly associated with (*a*) low media trust and (*b*) AI fake news exposure (AI-FNE).

H2: *Emotional attachment to news will be significantly associated with (a) AI fake news exposure (AI-FNE) and (b) antisocial behaviour.*

H3: *AI fake news exposure (AI-FNE) will be significantly associated with (a) low media trust and (b) antisocial behaviour.*

H4: AI fake news exposure (AI-FNE) will mediate the relationship between low critical thinking and low media trust.

H5: *AI fake news exposure (AI-FNE) will mediate the relationship between emotional attachment and antisocial behaviour.*

Figure 1 illustrates the proposed research model:



Proposed research model

Figure 1. Proposed research model.

3. Methods

The proposed hypotheses in this study were tested using data gathered through the survey method. The survey method helps conduct a systematic data collection approach from a specified sample while enhancing the understanding of relationships between attitudes (Thakkar, 2020). Questionnaires were distributed online within a three-month period; thus, the data collection period lasted for 63 days. The survey method was most appropriate for this study as it helps understand the strength of the relationship between AIgenerated fake news stories and the other variables measured (De Leeuw, 2012; Schlemitz & Mezhuyev, 2024). Participation was voluntary and participants were selected through a random distribution of questionnaires on social networking platforms including through e-mails. The link to the questionnaire was sent to personal contacts who thereafter helped with further distributions. Links were also posted on profile pages and feeds of the author's social networking sites. Other contacts who assisted in distributing the questionnaires also posted it on their news feeds and social media statuses, in addition to sharing it with direct contacts. At the start of the survey, all participants were presented with a brief introduction to help understand the ultimate aim of the study. Data were collected from young Nigerians who were between the ages of 18 and 40. The questionnaire was divided into 6 sections, starting with the demographics and thereafter the other five constructs: AI fake news exposure (AI-FNE), low critical thinking, emotional attachment to news, low media trust, and antisocial behaviour. All the constructs were adapted from previous studies with slight adjustments to make them fit the current research. A total of

392 questionnaires were collected; after checking for normality and outliers, 11 samples were excluded; therefore, N = 381 (97%) were used for the final study computation. Results of demographic data show that most respondents were females (63.3%) and fewer were males (36.7%), while a significant number of the respondents fall within ages 18–29 (75.5%) (see Table 1 for demographics details). In addition, data show that a significant number of the respondents access their news on social media platforms like Facebook, X, Instagram, and other platforms (n = 293; 76.9%). While the majority were aware that some of the news stories they access online may be generated through AI platforms (n = 362; 95%), a minority were unaware (n = 19; 5%).

Table 1. Demographics of the sample.

Characteristics	Ν	%
Gender		
Female	140	63.3
Male	241	36.7
Age		
18–23	184	43%
24–29	124	32.5
30–35	61	16.0
36–40	32	8.4
Level of Education		
Living School Certificate	38	10.0
Diploma/OND	36	9.4
Undergraduate	229	60.1
Masters	67	17.6
PhD	11	2.9
Main Sources of News		
TV	12	3.1
Radio	8	2.1
Internet Newspaper	59	15.5
Social Media	293	76.9
Online Radio/TV	9	2.4
Time Spent on News		
Less than 30 min	162	42.5
30 min to 2 h	167	43.8
2 h–4 h	52	13.7
News activities		
Share and discuss	184	48.3
Read and Share	82	21.5
Read and Discuss	115	30.2

 \overline{N} = 381. Table source: author.

3.1. Measurement

3.1.1. Exposure to Fake News

The study adopted the fake news exposure scale proposed by Chan (2024): AI fake news exposure (AI-FNE) scale. Respondents answered the frequency at which they are exposed to AI-generated fake news content. Questions ranged from "frequency of being exposed to AI fake news online" to "How often did you come across posts containing false or misleading information generated through AI? Items were measured on a 5-point Likert Scale and ranged from (1 = "Never" to 5 = "Always") with a Cronbach alpha of (α = 0.75).

3.1.2. Low Critical Thinking

The 11-item critical thinking dispositions scale (CTDS) was adopted to measure the level of critical thinking among youth in this study. The items were originally divided into

two subdimensions, namely critical openness (7 items) and reflective scepticism (4 items). All items were measured in reverse forms and on a 5-point Likert scale, which ranged from (1 = "Never" to 5 = "Always"). Items included "I use more than one source to find out information for myself", "It is important to justify the decisions I make", and "I usually think about the wider implications of a decision before taking action". The Cronbach alpha recorded was ($\alpha = 0.89$).

3.1.3. Media Trust

To measure media trust, we adopted a four (4) item scale developed by Strömbäck et al. (2020). Respondents answered questions ranging from "the news media are fair when covering the news" to "the news media are accurate when covering the news". Items were measured on a 5-point Likert scale and ranged from (1 = "Strongly Disagree" to 5 ="Strongly Agree") with a Cronbach alpha of ($\alpha = 0.75$).

3.1.4. Emotional Attachment to News

To operationalise emotional attachment, we adapted the 7-item emotional brand attachment that was developed by Thomson et al. (2005) and Malär et al. (2011). Respondents answered questions ranging from "I feel I like the news I consume online", "My feelings towards the news I consume online can be characterised by a sense of personal connection", to "I am passionate about the news I consume online". Items were measured on a 5-point Likert scale and ranged from (1 = "Strongly Disagree" to 5 = "Strongly Agree") with a Cronbach alpha of (α = 0.85).

3.1.5. Antisocial Behaviour

To measure antisocial behaviour, we adapted the 17-item antisocial dimensional scale that was initially developed by Olweus (1989) and further validated by Bendixen and Olweus (1999) and Bendixen et al. (2003). Respondents answered questions ranging from "I take things from the store without paying" to "purposely destroyed or broken things due to frustration". Items were measured on a 5-point Likert scale and ranged from (1 = "Strongly Disagree" to 5 = "Strongly Agree") with a Cronbach alpha of (α = 0.86).

4. Results

4.1. Statistical Analysis and Results

IBM SPSS (28) and AMOS (28) were utilised to analyse the data in the study. These statistical packages have been generally accepted in many research disciplines and are evident across the board (A. Arikewuyo et al., 2019; A. O. Arikewuyo et al., 2022). The level of significance among the variables was also affirmed by determining the appropriateness of the study model (Byrne, 2013). Also, to evaluate the elements of reliability and validity, the confirmatory factor analysis (CFA) was adopted, while structural equation modelling was used to test the proposed hypotheses/model (see Table 2). Using exploratory factor analysis, the study further checked for common method variance; the suggested result showed a minute chance of common method bias, as 25% was accounted for as the explanatory power of a single factor.

(α

(α

(α

(α

(α

Construct	Item	SE	CR	AVE
			0.87	0.739
AI-FNE	AI-FNE_1	0.73		
= 0.75, M = 3.62;	AI-FNE 2	0.71		
SD = 0.83)			0.02	0 740
LCI = 0.80 M = 2.61			0.93	0.748
= 0.69, W = 2.61; SD $= 1.10)$	LCT_1	0.79		
5D = 1.10)	LCT 2	0.89		
	LCT_3	0.76		
	LCT 4	0.85		
	LCT_{-}	0.05		
	LCT_6	0.70		
	LCT_0	0.72		
ΕΛ	LCI_/	0.00	0.88	0 777
EA = 0.95 M = 2.11.			0.00	0.777
SD = 0.74	EA_1	0.71		
	EA_2	0.84		
	EA_3	0.77		
	EA_4	0.79		
	EA_5	0.75		
	EA 6	0.88		
	EA 7	0.78		
LMT				0.734
= 0.75, M = 3.02;		0.00		
SD = 0.78)	LM1_1	0.88		
,	LMT_2	0.85		
	LMT 3	0.78		
	LMT 4	0.70		
AsB	—			0.865
= 0.86, M = 2.76;	NIDI 1	0.00		
SD = 1.12)	INBI_1	0.83		
	NBI_2	0.74		
	NBI_3	0.86		
	NBI_4	0.75		
	NBI_5	0.84		
	NBI_6	0.73		
	NBI_7	0.77		
	NBI_8	0.84		
	NBI_9	0.88		
	NBI 10	0.89		
	NBI 11	0.87		
	NBI 12	0.72		
	NBI 13	0.79		
	NBI 14	0.84		
	NBI 15	0.77		
	NBI 16	0.73		

Table 2. Instrument measurement, indicator loading, and construct reliability.

Note: *SD* = standard deviation; *M* = mean; AI-FNE = artificial intelligence fake news exposure; LCT = low critical thinking; EA = emotional attachment to news content; LMT = low media trust; AsB = antisocial behaviour; SE = standardised estimates; CR = composite reliability; AVE = average variance extracted; and α = Cronbach's alpha.

0.71

NBI_17

Table 3 shows the means, SDs, and intercorrelations amongst constructs in the study. Also, internal consistency reliability, discriminant validity, and convergent validity of the constructs in the model were measured. Furthermore, the study used confirmatory factor analysis (CFA) to carry out data assessment. A good fit was confirmed in the measurement model test ($\chi^2 = 319.582$; df = 161; NFI = 0.865; TLI = 0.901; CFI = 0.912; and RMSEA = 0.066). Therefore, the convergent validity was accepted; this is based on the assertion by Anderson and Gerbing (1988) and by Bagozzi and Yi (1988), that the average variance extracted exceeded the value of 0.50, which is the acceptable threshold, and the covariance validity was accepted, based on the AVE (from 0.739 to 0.865) exceeding all squared correlations for each pair of the constructs (from 0.506 to 0.632). Results from the study also revealed that Cronbach's alpha (α) ranged from 0.75 to 0.89. Therefore, internal consistency of reliability is satisfactory (Fornell & Larcker, 1981). Correlation analysis, as seen in Table 3, showed a positive correlation between the variables, thereby confirming the consistencies in the hypotheses and direction of the study.

		1	2	3	4	5	6	7
1	News Activities	1	0.422 *	0.277	0.145 *	0.208 *	0.192	0.152 *
2	News Seeking Motivations		1	0.385 *	0.140	0.198 *	0.226 *	0.159 *
3	AI Fake News Exposure			1	0.493 *	0.501 *	0.592 *	0.411 *
4	Low Critical Thinking				1	0.393 *	0.503 *	0.427 *
5	Emotional Attachment to News Content					1	0.543 *	0.398 *
6	Low Media Trust						1	0.523 *
7	Antisocial behaviour							1
M				3.62	2.61	3.11	3.02	2.76
SD				0.83	1.10	0.74	0.78	1.12

Table 3. Means, SDs, and intercorrelations amongst constructs.

Note: * p < 0.01; SD = standard deviation; M = mean.

4.2. Structural Equation Modelling

The study used structural equation modelling in analyzing the proposed model. A model is the representation of the researcher's idea to test the relationship between variables, while structural equation modelling is the process of analysing and describing the relationships between observable variables and simplifying their connection (Bielby & Hauser, 1977; Kline, 2023). Hence, the study was appropriate. Based on the structural equation modelling, the results show an acceptable fit between the model hypothesised and data, ($\chi^2 = 345.310$; df = 172; $\chi^2/df = 2.178$; NFI = 0.844; TLI = 0.906; CFI = 0.904; RMSEA = 0.070; **p < 0.001). This conclusion was reached using the model proposed by (Gallagher et al., 2008), which is generally accepted.

Based on the low critical thinking significantly associated with (a) low media trust ($\beta = 0.287$; p < 0.001) and (b) AI fake news exposure (AI-FNE) ($\beta = 0.369$; p < 0.001), H1 was therefore accepted. Emotional attachment to news was also significantly associated with (a) AI fake news exposure (AI-FNE) ($\beta = 0.382$; p < 0.001) and (b) antisocial behaviour ($\beta = 0.258$; p < 0.001); thus, H2 was also accepted. In addition, AI fake news exposure (AI-FNE) was significantly associated with (a) low media trust ($\beta = 0.444$; p < 0.001) and (b) antisocial behaviour ($\beta = 0.237$; p < 0.001); given these results, H3 was accepted.

Furthermore, AI fake news exposure (AI-FNE) mediated the relationship between low critical thinking and low media trust ($\beta = 0.155$; p < 0.001), thereby affirming H4, and AI fake news exposure (AI-FNE) also mediated the relationship between emotional attachment and antisocial behaviour ($\beta = 0.099$; p < 0.001), also confirming H5.

5. Discussion

This study sought to investigate how psychological factors such as critical thinking and emotional attachment influence an individual's exposure to artificial intelligence-generated fake news online (AI-FNE) (i.e., auto-generated texts and deepfakes), as well as how AI-FNE influences media trust and behavioural attitudes amongst youth. It is interesting to note that the study found pivotal interactions between the variables, thereby helping to uphold the predictions. These interactions are corroborated by the fact that exposure to AI fake news may be driven by several intrinsic and extrinsic factors that are psychological in nature, while AI fake news exposure is also a precursor to how much individuals trust their news sources and thereafter their general behavioural attitudes.

Firstly, this study found a critical linkage in the prediction that low critical thinking exacerbates exposure to AI-generated fake news content (i.e., auto-generated texts and deepfakes). This is an interesting finding as it further explains that once individuals cannot engage in critical thinking activities by dissecting information they access and providing valid and cogent arguments, they are likely to fall for AI fake news content such as deepfakes and auto-generated texts. This diverges from the findings of Krstić et al. (2022) that indicate AI enhances personalized feedback and improves problem-solving skills through adaptive learning platforms and intelligent tutoring systems. Critical thinking involves deep thinking, evaluating messages in many different ways with speed and spontaneity, providing a platform for objectivity in thinking, and identifying biases including exploring possibilities; therefore, when an individual does not possess a reasonable amount of these intrinsic features, there is the probability to believe everything and anything that is consumed online (Machete & Turpin, 2020). In addition, low critical thinking increases an individual's susceptibility to inaccurate or misleading data and information online. One interesting reason is that humans program AI; hence, the contents that it generates are also human-generated through machine learning. Therefore, the assertion of this study aligns with the studies of Larraz et al. (2024) and Puig et al. (2021), stating that an individual with low critical thinking will not see reasons behind scrutinising the media content they access, such as extending their effort to fact-check or validate the news being consumed online, thereby increasing the level of exposure to AI fake news. Also, low critical thinking will increase the level at which an individual trusts AI content over human judgements (blind trusting); this may be due to many factors, including interest in the story and biases, amongst others (Shephard et al., 2023).

Furthermore, the study validated the assertion that low critical thinking predicts low trust in the media. This is another interesting finding as one can understand that low critical thinking enhances polarised perceptions, non-acceptance of information, and high-level scepticism. This finding aligns with Schulz et al. (2024), who highlight that individuals with low critical thinking skills struggle to distinguish between authentic and fake news, thereby underscoring the importance of media literacy in fostering media trust. Many media consumers no longer trust the platforms they access for news based on their scepticism and fear that any content online could be a product of AI; therefore, such attitudes may result in missing important, vital, and beneficial information. Also, without critical thinking, which prompts an individual to verify its source, there will most likely be an increase in the exposure to fake news. The inability to recognise platforms and their interests/biases towards certain ideologies will result in difficulty finding credibility, believability, and trust in the media. Individuals with low critical thinking are more likely to misinterpret information shared on such media platforms. This finding is in tandem with the study of Puig et al., (2021), affirming the importance and need for continuous media education as a means to enhancing critical thinking. Interestingly, low critical thinking also leads to trust in certain media outlets over others, based on sentiments, and with inability to put critical thinking to use, an individual will believe an ideologically preferred media platform over others. This affects credibility. These findings are consistent with those in the literature, which highlights that individuals with low critical thinking skills are more likely to trust information they encounter on any platform, increasing their tendency to share misinformation (Roozenbeek & van der Linden, 2022; Weiner, 2011). Also, this study validated the assumption that AI fake news exposure will significantly predict low media trust (Mihailidis & Viotty, 2021). This is because trust will be lost when an individual is consistently exposed to AI fake news on certain platforms, thereby predisposing such individuals to believe that everything from the platform is fake. Although absolute belief in media content has been proven by this study to be a result of low critical thinking, as supported by (Lutzke et al., 2019), it consequently indicates the need for verification of news before accepting and sharing with others. Due to exposure to AI-generated fake news, individuals are also more likely to believe that certain media platforms are not fair in their news coverage or editorial style, thereby depreciating the trust in such platforms.

Similarly, the study affirms that emotions play a significant role in influencing our choice of news exposure and consumption. Based on our emotions, we can select what news we accord attention to, retain, and disseminate. Therefore, this study affirms that emotional attachment to news is positively associated with AI-FNE. This is because emotions have the capabilities to influence our perceptions and choices; therefore, if individuals are emotionally attached to a genre of news or more specifically have an emotional affiliation to certain contents, they are more likely to be at risk of being exposed to AI fake news. Berger and Milkman (2012) affirmed that people are more likely to share content online when it sparks strong emotions, especially feelings like anger or awe. This plays a big role in the spread of fake news since emotionally charged content tends to go viral, making it easier for misleading information to gain traction. In addition, emotional attachment to news will reduce or eliminate an individual's ability to think critically, thereby increasing the possibility of being exposed to and thereafter influenced by AI fake news. This is because such an individual will not likely see any reasons to scrutinise news being consumed, and they will swiftly believe any news in tandem with their emotions based on attachment to such content. Also, because of its ability to evoke an emotional connection with the consumer, fake news spreads faster than true news (Vosoughi et al., 2018). Individuals who are emotionally attached to a news story are also more likely to share the news to lure more people and find acquaintances who will concur with their emotional ideologies. Quite importantly, emotional attachment to news increases the level of vulnerability to AI-FNE. Therefore, this study validates the assertion supported by Pennycook et al. (2018) and Martel et al. (2020), that emotion is a highly influential psychological determinant in predicting the persistent generation of AI fake news, thereby increasing the exposure of citizens.

Again, according to the findings, emotional attachment to news is a significant predictor of antisocial behaviours amongst individuals. This finding is consistent with the studies of Nabi and Sullivan (2001), Slater and Rouner (2002), and Bushman and Anderson (2009). Quite interestingly, emotional attachment to news reduces the level of empathy individuals have for social issues and thereby results in antisocial behaviours. For instance, when individuals have a high emotional attachment to news, they are likely going to react based on the news angle. When news affects their emotions negatively, it will elicit negative reactions. This is quite common in the political circle as when individuals do not agree with government policies on certain issues that directly affect their emotions; they will react negatively through antisocial behaviours such as not caring about the stability of the society, lacking care for government or collective facilities, and occasionally trying to cut corners (Greene & Murphy, 2021). Individuals whose emotions are also negatively affected will most likely not accord any form of regard to social norms, thereby reducing or eroding their participation in civic responsibilities. Findings also affirm that mistrust and exposure to extremist narratives may become the order of the day based on the effect of the news they consume and its impact on their emotions, thereby aligning with the study of Wan et al. (2023).

Similarly, this study affirms that AI-FNE will also predict antisocial behaviours. This implies that the more individuals are exposed to AI fake news, the more likely their level of distrust in the social systems increases. AI-FNE's effect on antisocial behaviour also predisposes individuals to a higher level of polarisation. Therefore, this makes citizens see themselves as competition to the newsmakers, thereby encouraging intolerance as well as escalation of tribal, religious, and political behaviours. Affirmatively, when individuals are exposed to AI fake news content, it further triggers hostile emotions amongst individuals, thereby increasing the level of impulsive actions as well as encouraging discriminatory behaviours. Finally, this study ascertains that AI fake news exposure (AI-FNE) is a partial mediator between low critical thinking and low media trust. Therefore, the indirect (mediated) effect of low critical thinking on low media trust is present. That is, due to the indirect (mediated) effect of low critical thinking on low media trust. As such, when low critical thinking increases there is also an influence on low media trust. There is also an indirect effect of emotional attachment to news on antisocial behaviour. That is, due to the indirect (mediated) effect of emotional attachment on antisocial behaviour; when emotional attachment increases, antisocial behaviour also increases. These results generally indicate the fact that AI-FNE has a valuable bond with the variables.

6. Conclusions and Recommendations

This study makes interesting and significant findings concerning the relationship between critical thinking, emotional attachment to news, AI-generated fake news exposure (AI-FNE), media trust, and antisocial behaviour. All the proposed hypotheses were confirmed, thereby providing evidence on the psychological factors that influence AI-driven misinformation and thereafter its implications on media trust and antisocial behaviours. Quite significantly, the study affirms that low critical thinking is a crucial predictor of both low media trust and increased AI-FNE. This indicates that individuals with lower critical thinking skills may lack the cognitive tools necessary to distinguish between credible news sources and AI fake news. This increases their chances of being exposed to AI fake news and in turn reduces their trust in the media.

Furthermore the study found emotional attachment to news to be a significant predictor of AI-FNE and antisocial behaviour. This indicates individuals with high emotional attachment to news are more likely to be exposed to AI fake news. The emotional intensity associated with news consumption can lead to impulsive reactions, which may manifest as increased hostility or other forms of antisocial behaviour. This finding is particularly relevant in today's digital news landscape, where emotionally charged content is often amplified by social media algorithms, potentially increasing exposure to misinformation and its negative social consequences. The direct relationship between AI-FNE, low media trust and antisocial behaviour indicates the strength of fake news on society. The reduction in society's trust in media platforms, owing to frequent exposure to AI fake news, may lead to mistrust of authentic news when it is encountered. This finding aligns with growing concerns that fake news, especially when designed to provoke emotional reactions, will lead to real-world consequences, such as hostility in online discussions or even offline confrontations.

Generally, this study sheds light on the importance in addressing the consistent and disturbing effects of AI fake news and its effects on media trust and antisocial behaviour. The findings in the study also underscore the importance of critical thinking skills and media literacy, which will help in preventing constant AI-FNE. There is a need for continuous citizens' education on media literacy, to build critical thinking consciousness in the

minds of youths globally. There is also the need for more critical and balanced emotional engagements that will encourage the proper use of media content. As there is the need to increase the advocacies in this study, the study can make assertive conclusions that AI-FNE is an issue that will likely generate continuous debates and arguments in the future, because this area of research continues to evolve and will likely generate more interesting and robust discussions and research findings in the coming years.

This study is limited by several factors. Data were collected through self-reporting measures, which may be subject to social desirability bias or inaccuracies in self-perception. Future studies could incorporate behavioural measures or experimental methods. Also, additional variables such as political ideology, media literacy, and personality traits may also play a role in AI-FNE and its consequences. Future research should explore these moderating or mediating influences. Future studies could examine more specific areas, as AI is also beginning to take over the audio industry. Future research may explore the dangers associated with AI voice-changing platforms and how we can use research findings to limit its negative effects. Also, an investigation into the cognitive mechanisms underlying AI-FNE and emotional responses to news will further provide deeper understanding into why certain individuals are more vulnerable than others. This study ultimately concludes that there are factors that have to be considered as predictors and effects of AI. These factors, if not present, will not enable AI or indeed AI-FNE to function effectively, thereby showing that AI is not stirring chaos, but instead creating innovation.

Funding: This research received no external funding.

Institutional Review Board Statement: The study was conducted in accordance with the Declaration of London Metropolitan University, and approved by the SCDM Research Ethics Review Panel Approval Code: SCDM-JAN-2025-AA. Approval Date: 1 January 2025.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: The raw data supporting the conclusions of this article will be made available by the author on request.

Conflicts of Interest: The author declares no conflicts of interest.

References

Ahmed, K. A. (2018). In Bangladesh: Direct control of media trumps fake news. The Journal of Asian Studies, 77(4), 909–922. [CrossRef]

- Akhtar, P., Ghouri, A., Khan, H., Amin ul Haq, M., Awan, U., Zahoor, N., & Ashraf, A. (2023). Detecting fake news and disinformation using artificial intelligence and machine learning to avoid supply chain disruptions. *Annals of Operations Research*, 327(2), 633–657. [CrossRef] [PubMed]
- Ali, K., & Zain-ul-abdin, K. (2021). Post-truth propaganda: Heuristic processing of political fake news on Facebook during the 2016 US presidential election. *Journal of Applied Communication Research*, 49(1), 109–128. [CrossRef]
- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103(3), 411. [CrossRef]
- Aoun Barakat, K., & Dabbous, A. (2021). An empirical approach to understanding users' fake news identification on social media. Online Information Review, 45(6), 1080–1096. [CrossRef]
- Arikewuyo, A., Ozad, B., & Lasisi, T. T. (2019). Erotic use of social media pornography in gratifying romantic relationship desires. *The Spanish Journal of Psychology*, 22, E61. [CrossRef]
- Arikewuyo, A. O., Lasisi, T. T., Abdulbaqi, S. S., Omoloso, A. I., & Arikewuyo, H. O. (2022). Evaluating the use of social media in escalating conflicts in romantic relationships. *Journal of Public Affairs*, 22(1), e2331. [CrossRef]
- Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*, 16(1), 74–94. [CrossRef]
- Balakrishnan, V., Abdul Rahman, L. H., Tan, J. K., & Lee, Y. S. (2023). COVID-19 fake news among the general population: Motives, sociodemographic, attitude/behavior and impacts–a systematic review. *Online Information Review*, 47(5), 944–973. [CrossRef]
- Bazrkar, A., Moradzad, M., & Shayegan, S. (2024). The use of artificial intelligence in employee recruitment in the furniture industry of Iran according to the role of contextual factors. *Studia Universitatis "Vasile Goldis" Arad–Economics Series*, 34(2), 86–109. [CrossRef]

- Bendixen, M., Endresen, I. M., & Olweus, D. (2003). Variety and frequency scales of antisocial involvement: Which one is better? Legal and Criminological Psychology, 8(2), 135–150.
- Bendixen, M., & Olweus, D. (1999). Measurement of antisocial behaviour in early adolescence and adolescence: Psychometric properties and substantive findings. *Criminal Behaviour and Mental Health*, *9*, 323–354.
- Berger, J., & Milkman, K. L. (2012). Emotion and virality: What makes online content go viral? *Journal of Marketing Research*, 49(2), 192–205.
- Berrondo-Otermin, M., & Sarasa-Cabezuelo, A. (2023). Application of artificial intelligence techniques to detect fake news: A review. *Electronics*, 12(24), 5041. [CrossRef]
- Bielby, W. T., & Hauser, R. M. (1977). Structural equation models. Annual Review of Sociology, 3, 137-161.
- Bushman, B. J., & Anderson, C. A. (2009). The impact of negative news on aggression and antisocial behavior. *Psychological Science*, 20(5), 531–536. [CrossRef]
- Byrne, B. M. (2013). Structural equation modeling with Mplus: Basic concepts, applications, and programming. Routledge.
- Cardoso, M., Ares, E., Ferreira, L. P., & Pelaez, G. (2023). Using index function and artificial intelligence to assess sustainability: A bibliometric analysis. *International Journal of Industrial Engineering and Management*, 14(4), 311–325.
- Chan, M. (2024). News literacy, fake news recognition, and authentication behaviors after exposure to fake news on social media. *New Media & Society*, 26(8), 4669–4688.
- Chen, Z. F., & Cheng, Y. (2020). Consumer response to fake news about brands on social media: The effects of self-efficacy, media trust, and persuasion knowledge on brand trust. *Journal of Product & Brand Management*, 29(2), 188–198. [CrossRef]
- Ciortea-Neamțiu, Ş. (2020). Critical thinking in a world of fake news. Teaching the public to make good choices. *Studia Universitatis Babes-Bolyai-Ephemerides*, 65(2), 21–39.
- Commisso, C. (2017). The post-truth archive: Considerations for archiving context in fake news repositories. *Preservation, Digital Technology & Culture, 46*(3), 99–102.
- Dabbous, A., & Aoun Barakat, K. (2022). Fake news detection and social media trust: A cross-cultural perspective. *Behaviour & Information Technology*, 41(14), 2953–2972. [CrossRef]

De Leeuw, E. D. (2012). Choosing the method of data collection. In International handbook of survey methodology (pp. 113–135). Routledge.

- Divya, D. T. (2024). Fake news detection stay informed: How to spot fake news effectively. *International Journal of Trend in Scientific Research and Development*, 8(5), 753–759.
- Elías, C. (2020). Coronavirus in Spain: Fear of 'official' fake news boosts WhatsApp and alternative sources. *Media and Communication*, 8(2), 462–466. [CrossRef]
- Escolà-Gascón, Á. D. (2021). Critical thinking predicts reductions in Spanish physicians' stress levels and promotes fake news detection. *Thinking Skills and Creativity*, 42, 100934. [CrossRef]
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, *18*(1), 39–50.
- Gallagher, D., Ting, L., & Palmer, A. (2008). A journey into the unknown; taking the fear out of structural equation modeling with AMOS for the first-time user. *The Marketing Review*, 8(3), 255–275. [CrossRef]
- Gaozhao, D. (2021). Flagging fake news on social media: An experimental study of media consumers' identification of fake news. *Government Information Quarterly*, 38(3), 101591. [CrossRef]
- Garg, S., & Sharma, D. K. (2022). Linguistic features based framework for automatic fake news detection. *Computers & Industrial Engineering*, 172, 108432.
- Gonzalez, F. J. (2019). This session is fake news: The impact of fake news and political polarization on media and attitude change, and strategies for societal intervention. *Advances in Consumer Research*, 47, 105–110.
- Greene, C. M., & Murphy, G. (2021). Quantifying the effects of fake news on behavior: Evidence from a study of COVID-19 misinformation. *Journal of Experimental Psychology: Applied*, 27(4), 773. [PubMed]
- Gregory, R. W., Henfridsson, O., Kaganer, E., & Kyriakou, S. H. (2021). The role of artificial intelligence and data network effects for creating user value. *Academy of Management Review*, 6(3), 534–551.
- Horn, S., & Veermans, K. (2019). Critical thinking efficacy and transfer skills defend against 'fake news' at an international school in Finland. *Journal of Research in International Education*, *18*(1), 23–41. [CrossRef]
- Iqbal, A., Shahzad, K., & Khan, S. A. (2023). The relationship of artificial intelligence (AI) with fake news detection (FND): A systematic literature review. *Global Knowledge, Memory and Communication,* (ahead-of-print).
- Islam, N., Shaikh, A., Qaiser, A., Asiri, Y., Almakdi, S., Sulaiman, A., Moazzam, V., & Babar, S. A. (2021). Ternion: An autonomous model for fake news detection. *Applied Sciences*, 11(19), 9292.
- Islas-Carmona, J. O.-C.-U. (2024). Disinformation and political propaganda: An exploration of the risks of artificial intelligence. *Explorations in Media Ecology*, 23(2), 105–120.
- Jahng, M. R. (2021). Is fake news the new social media crisis? Examining the public evaluation of crisis management for corporate organizations targeted in fake news. *International Journal of Strategic Communication*, 15(1), 18–36.

- Karadayi-Usta, S. (2024). Role of artificial intelligence and augmented reality in fashion industry from consumer perspective: Sustainability through waste and return mitigation. *Engineering Applications of Artificial Intelligence*, 133, 108114.
- Kietzmann, J., Lee, L. W., McCarthy, I. P., & Kietzmann, T. C. (2020). Deepfakes: Trick or treat? Business Horizons, 63(2), 135–146.
- Kim, S. K., Huh, J. H., & Kim, B. G. (2024). Artificial intelligence blockchain based fake news discrimination. *IEEE Access*, 12, 53838–53854.
- Kline, R. B. (2023). Principles and practice of structural equation modeling. Guilford Publications.
- Krstić, L., Aleksić, V., & Krstić, M. (2022). Artificial intelligence in education: A review. In Proceedings of the 9th international scientific conference technics and informatics in education—TIE 2022 (pp. 223–228). University of Kragujevac, Faculty of Technical Sciences. [CrossRef]
- Kumari, R., Gupta, V., Ashok, N., Ghosal, T., & Ekbal, A. (2024). Emotion aided multi-task framework for video embedded misinformation detection. *Multimedia Tools and Applications*, 83(12), 37161–37185.
- Landon-Murray, M., & Mujkic, E. (2019). Disinformation in contemporary US foreign policy: Impacts and ethics in an era of fake news, social media, and artificial intelligence. *Public Integrity*, 21(5), 512–522.
- Larraz, I., Salaverría, R., & Serrano-Puche, J. (2024). Combating repeated lies: The impact of fact-checking on persistent falsehoods by politicians. *Media and Communication*, 12. [CrossRef]
- Lecheler, S., & Bos, L. (2015). He mediating role of emotions: News framing effects on opinions about immigration. *Journalism & Mass Communication Quarterly*, 92(4), 812–838.
- Lida, T., Song, J., & Estrada, J. L. (2024). Fake news and its electoral consequences: A survey experiment on Mexico. *Ai & Society*, 39(3), 1065–1078.
- Lim, W. M. (2023). Fact or fake? The search for truth in an infodemic of disinformation, misinformation, and malinformation with deepfake and fake news. *Journal of Strategic Marketing*, 1–37. [CrossRef]
- Liu, J. L. (2023). Exploring rumor behavior during the COVID-19 pandemic through an information processing perspective: The moderating role of critical thinking. *Computers in Human Behavior*, 147, 107842. [CrossRef]
- Lutzke, L., Drummond, C., Slovic, P., & Árvai, J. (2019). Priming critical thinking: Simple interventions limit the influence of fake news about climate change on Facebook. *Global Environmental Change*, *58*, 101964. [CrossRef]
- Machete, P., & Turpin, M. (2020). The use of critical thinking to identify fake news: A systematic literature review. In *Responsible design*, *implementation and use of information and communication technology: 19th IFIP WG 6.11 conference on e-business, e-services, and e-society, I3E 2020, Skukuza, South Africa, April 6–8, 2020, Proceedings, Part II 19* (pp. 235–246). Springer International Publishing.
- Malär, L., Krohmer, H., Hoyer, W. D., & Nyffenegger, B. (2011). Emotional brand attachment and brand personality: The relative importance of the actual and the ideal self. *Journal of Marketing*, 75(4), 35–52.
- Martel, C., Pennycook, G., & Rand, D. G. (2020). Reliance on emotion promotes belief in fake news. *Cognitive Research: Principles and Implications*, 5, 1–20.

McDougall, J. (2019). Media literacy versus fake news: Critical thinking, resilience and civic engagement. Media Studies, 10(19), 29-45.

- Mihailidis, P., & Viotty, S. (2021). Critical thinking and media trust: Implications for democracy. *Journal of Democracy*, 32(3), 95–109. [CrossRef]
- Mills, A. J. (2020). Brand management in the era of fake news: Narrative response as a strategy to insulate brand value. *Journal of Product & Brand Management*, 29(2), 159–167.
- Mohammed, A., Elega, A. A., Ahmad, M. B., & Oloyede, F. (2024). Friends or foes? Exploring the framing of artificial intelligence innovations in Africa-focused journalism. *Journalism and Media*, 5(4), 1749–1770.
- Mukherjee, A. M. (2023). Artificial intelligence and its relevance in fake news and deepafakes: A perspective. *Globsyn Management Journal*, 17(1/2), 93–95.
- Nabi, R. L., & Sullivan, J. L. (2001). Emotional engagement with news and its impact on hostility and aggression. *Journal of Communication*, 51(3), 475–499. [CrossRef]
- Nazar, S. (2020). Artificial Intelligence and New Level of Fake News. In *IOP conference series: Materials science and engineering* (Vol. 879, p. 012006). IOP Publishing. No. 1.
- Nazari, Z., & Oruji, M. (2022). News consumption and behavior of young adults and the issue of fake news. *Journal of Information Science Theory and Practice*, 10(2), 1–16.
- Obada, D. R. (2022). In flow! why do users share fake news about environmentally friendly brands on social media? *International Journal of Environmental Research and Public Health*, 19(8), 4861.
- Olweus, D. (1989). Prevalence and incidence in the study of antisocial behavior: Definitions and measurements. In *Cross-national research in self-reported crime and delinquency* (pp. 187–201). Springer Netherlands.
- Orhan, A. (2023). Fake news detection on social media: The predictive role of university students' critical thinking dispositions and new media literacy. *Smart Learning Environments*, 10(1), 29.
- Ozbay, F. A. (2020). Fake news detection within online social media using supervised artificial intelligence algorithms. *Physica A: Statistical Mechanics and Its Applications*, 540, 123174. [CrossRef]

- Palos-Sánchez, P. R., Baena-Luna, P., Badicu, A., & Infante-Moro, J. C. (2022). Artificial intelligence and human resources management: A bibliometric analysis. *Applied Artificial Intelligence*, 36(1), 2145631. [CrossRef]
- Paschen, J. (2020). Investigating the emotional appeal of fake news using artificial intelligence and human contributions. *Journal of Product & Brand Management*, 29(2), 223–233.
- Pennycook, G., Cannon, T. D., & Rand, D. G. (2018). Prior exposure increases perceived accuracy of fake news. *Journal of experimental* psychology: General, 147(12), 1865. [CrossRef]
- Pérez-Escoda, A., Pedrero-Esteban, L. M., Rubio-Romero, J., & Jiménez-Narros, C. (2021). Fake news reaching young people on social networks: Distrust challenging media literacy. *Publications*, 9(2), 24. [CrossRef]
- Puig, B., Blanco-Anaya, P., & Pérez-Maceira, J. J. (2021). "Fake news" or real science? Critical thinking to assess information on COVID-19. In *Frontiers in education* (Vol. 6, p. 646909). Frontiers Media SA.
- Raman, R. N., Nedungadi, P., Sahu, A. K., Kowalski, R., & Ramanathan, S. (2024). Fake news research trends, linkages to generative artificial intelligence and sustainable development goals. *Heliyon*, 10(3), e24727. [CrossRef] [PubMed]
- Roozenbeek, J., & van der Linden, S. (2022). The relationship between critical thinking and trust in media during the COVID-19 pandemic. *Health Communication*, *37*(10), 1213–1222.
- Ross, A. S., & Rivers, D. J. (2018). Discursive deflection: Accusation of "fake news" and the spread of mis-and disinformation in the tweets of President Trump. Social Media+ Society, 4(2), 2056305118776010. [CrossRef]
- Sardinha, T. B. (2024). AI-generated vs human-authored texts: A multidimensional comparison. *Applied Corpus Linguistics*, 4(1), 10008. [CrossRef]
- Schlemitz, A., & Mezhuyev, V. (2024). Approaches for data collection and process standardization in smart manufacturing: Systematic literature review. *Journal of Industrial Information Integration*, *38*, 100578. [CrossRef]
- Schulz, A., Fletcher, R., & Nielsen, R. K. (2024). The role of news media knowledge for how people use social media for news in five countries. New Media & Society, 26(7), 4056–4077.
- Setiawan, R. P., Sengan, S., Anam, M., Subbiah, C., Phasinam, K., & Vairaven, M. (2022). Certain investigation of fake news detection from facebook and twitter using artificial intelligence approach. *Wireless Personal Communications*, 127, 1737–1762.
- Shephard, M. P., Robertson, D. J., Huhe, N., & Anderson, A. (2023). Everyday non-partisan fake news: Sharing behavior, platform specificity, and detection. *Frontiers in Psychology*, 14, 1118407. [CrossRef]
- Slater, M. D., & Rouner, D. (2002). The role of emotional attachment to news in predicting antisocial behavior. *Media Psychology*, 4(3), 291–311. [CrossRef]
- Sonni, A. F., Hafied, H., Irwanto, I., & Latuheru, R. (2024). Digital newsroom transformation: A systematic review of the impact of artificial intelligence on journalistic practices, news narratives, and ethical challenges. *Journalism and Media*, 5(4), 1554–1570.
- Strömbäck, J., Tsfati, Y., Boomgaarden, H., Damstra, A., Lindgren, E., Vliegenthart, R., & Lindholm, T. (2020). News media trust and its impact on media use: Toward a framework for future research. *Annals of the International Communication Association*, 44(2), 139–156. [CrossRef]
- Stupavský, I., & Dakić, P. (2023). The impact of fake news on traveling and antisocial behavior in online communities. Overview. *Applied Sciences*, *13*(21), 11719.
- Tavakoli, S. S., Mozaffari, A., Danaei, A., & Rashidi, E. (2023). Explaining the effect of artificial intelligence on the technology acceptance model in media: A cloud computing approach. *The Electronic Library*, 4(1), 1–29.
- Tayie, S. S., & Calvo, S. T. (2023). Alfabetización periodística entre jóvenes egipcios y españoles: Noticias falsas, discurso de odio y confianza en medios. *Comunicar: Revista Científica de Comunicación y Educación*, 74, 73–87.
- Thakkar, J. J. (2020). Structural equation modelling. In Application for research and practice. Springer.
- Thomson, M., MacInnis, D. J., & Whan Park, C. (2005). The ties that bind: Measuring the strength of consumers' emotional attachments to brands. *Journal of Consumer Psychology*, 15(1), 77–91.
- Túñez-López, J. M., Fieiras-Ceide, C., & Vaz-Álvarez, M. (2021). Impact of Artificial Intelligence on Journalism: Transformations in the company, products, contents and professional profile. *Communication & Society*, 34(1), 177–193.
- Usman, B., Eric Msughter, A., & Olaitan Ridwanullah, A. (2022). Social media literacy: Fake news consumption and perception of COVID-19 in Nigeria. *Cogent Arts & Humanities*, 9(1), 2138011.
- Veinberg, S. (2018). Unfamiliar concepts as an obstacle for critical thinking in public discussions regarding women's rights issues in Latvia. Reflective thinking in the 'fake news' era. *ESSACHESS-Journal for Communication Studies*, 22(2), 31–49.
- Verma, N., & Fleischmann, K. R. (2017). Human values and trust in scientific journals, the mainstream media and fake news. Proceedings of the Association for Information Science and Technology, 54, 426–435. [CrossRef]
- Verma, N., Fleischmann, K. R., & Koltai, K. S. (2018). Demographic factors and trust in different news sources. Proceedings of the Association for Information Science and Technology, 55(1), 524–533.
- Verma, P. K., Agrawal, P., Madaan, V., & Prodan, R. (2023). MCred: Multi-modal message credibility for fake news detection using BERT and CNN. Journal of Ambient Intelligence and Humanized Computing, 14(8), 10617–10629. [CrossRef]
- Vosoughi, S., Roy, D., & Aral, S. (2018). The role of emotion in the spread of misinformation. Science, 359(6380), 1146–1151. [PubMed]

- Wan, M., Zhong, Y., Gao, X., & Lee, S. Y. (2023). Fake news, real emotions: Emotion analysis of COVID-19 infodemic in weibo. *IEEE Transactions on Affective Computing*, 15, 815–827.
- Węcel, K., Sawiński, M., Stróżyna, M., Lewoniewski, W., Księżniak, E., & Stolarski, P. (2003). Artificial intelligence—Friend or foe in fake news campaigns. *Economics and Business Review*, 9(2), 41–70.
- Weiner, J. M. (2011). Is there a difference between critical thinking and information literacy? A Systematic Review 2000–2009. *Journal of Information Literacy*, 5(2), 1600.
- Weiss, A. P., Alwan, A., & Garcia, E. P. (2020). Surveying fake news: Assessing university faculty's fragmented definition of fake news and its impact on teaching critical thinking. *International Journal for Educational Integrity*, *16*, 1–30. [CrossRef]
- Wijayati, D. T. (2022). A study of artificial intelligence on employee performance and work engagement: The moderating role of change leadership. *International Journal of Manpower*, 43(2), 486–512.
- Xie, B. (2023). Detecting fake news by RNN-based gatekeeping behavior model on social networks. *Expert Systems with Applications*, 231, 120716. [CrossRef]
- Zhang, C., Gupta, A., Qin, X., & Zhou, Y. (2023). A computational approach for real-time detection of fake news. *Expert Systems with Applications*, 221, 119656. [CrossRef]

Disclaimer/Publisher's Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.