The Fake News Sharing in Social Media During Covid-19 from Users and Gratification 2.0 Theory Perspective: Malaysian Users as example

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Abstract

Amidst the COVID-19 pandemic, the proliferation of fake news has raised significant concerns globally. This research aims to examine the influence of disseminating false news on social media channels throughout the pandemic period in Malaysia, utilising the perspective of the uses and gratification 2.0 theory. Employing a close-ended survey questionnaire for data collection and employing statistical methods, 308 respondents from Malaysia were included in the study. The findings indicated that interactivity and modality significantly influenced fake news sharing among the respondents, whereas social media usage negatively moderated the association between navigation and fake news sharing. The findings indicate that interactivity and modality increased sharing, but social media usage negatively moderates the link between navigation and sharing. The study acknowledges limitations such as the small sample size of 308 respondents from Malaysia due to time constraints, and its focus on the Uses and Gratification 2.0 theory. Nevertheless, these results highlight the significance of comprehending the mechanisms involved in the spread of fake news on social media platforms during pandemic events.

Keywords: *Covid-19, Fake News Sharing, Gratification 2.0 Theory, PLS-MGA, Malaysia, Social Media.*

Introduction

COVID-19 has rapidly amassed and produced hoaxes during the past year. Social media has evolved as the main information source as people turn to it for help when they find themselves in unfamiliar settings or lack the confidence that comes with being unable to freely move around. Due to the pandemic, a deluge of data—both real and fake—was instantly sent to people all over the world. Spreading misinformation is indeed hardly new, but the pandemic witnessed an unprecedented level of intensity and scope. Over the past three years, Google's research on "misinformation" and "disinformation" reveals the exponential growth in the worldwide distribution of fake news in 2020. (2018-2020). In 2020, the landscape of cyber warfare underwent a significant shift, with the proliferation of COVID-19-related fake news emerging as a paramount concern globally. Over 25% of the most-viewed YouTube videos on the topic had false or misleading content and were viewed over 62 million times around the world, and over half of the British population (46% to be exact) was determined to have read or seen fake news regarding COVID-19 (Balakrishnan et al., 2021).

Since January 2020, at least 270 investigations into allegedly false news have been initiated in Malaysia, leading to criminal charges for 35 people. A Rapid Response Troop has been formed to counteract misinformation regarding the epidemic, a MCO (Movement Control Order) has been implemented, and the Welfare Department has stepped up its efforts to aid those in need because of the pandemic. Utilising catchy phrases such as "tak pasti, Jangankongsi" ("not sure, don't share") and "pastikan sahih" ("ensure it is verified"), the government has actively endorsed the fact-checking website SEBENARNYA.MY, is a centralised platform operated by the government to refute false information. The National Security Council also regularly dispatches text messages advising the public against disseminating fake news, citing its potential threat to national security (Balakrishnan et al., 2021).

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In reviewing the current literature regarding fake news, the majority of studies concentrate on crafting detection techniques rooted in social media platforms (such as Twitter, Facebook, and online news portals) and platform characteristics (including users, content, and network) through the utilisation of machine learning algorithms or pre-programmed instructions for computers. Nonetheless, empirical investigations into fake news predominantly hinge on content analysis of social media interactions, with some additionally delving into linguistic characteristics and writing styles, documenting the origins of identified fake news, and scrutinising underlying content and information through comments and articles. As another technological tool, websites that verify information, such as Sebenarnya.my, PolitiFact.com, Factcheck.org, and Snopes.com, are used to spot bogus news (Ngadiron et al., 2021).

Fake news has been shown to have far-reaching consequences, yet the causes behind this phenomenon are mostly unexplained and have received little academic attention. Among the elements associated with the deliberate spread of fake news that Talwar and his colleagues (2019) identified in their analysis of WhatsApp chats were online trust, self-disclosure, fear of missing out (FOMO), and social media fatigue. Researchers found that users' willingness to verify news reports before publishing correlated negatively with their level of trust in online news sources. The growing body of research and writing on the topic of disseminating false information during the COVID-19 epidemic lends credence to the burgeoning issue under investigation. While Islam et al.(2020) found that the primary reasons for sharing fake news were socialising, exchanging information, seeking information, and simply passing time, they found that entertainment and self-promotion were the primary motivations for spreading unverified information among young adults in Bangladesh (Ngadiron et al., 2021).

Six factors (altruism, ignorance, amusement, availability/effort, hobby, and fear of missing out) were found to predict the propagation of fake news during the COVID-19 outbreak, and these factors were investigated using the SCulPT, U&G, and SDT models/theories (FoMO). Several factors, including people's information-seeking and sharing behaviours, their exposure to comments/news and the extent to which they are willing to share personal information, their faith in online forums, and their exhaustion from media consumption, all contribute to the proliferation of false information, and more research is needed to enhance the comprehension of these relationships.

Most positively influencing the dissemination of fake news were altruism, ignorance, and fun, whereas availability/effort, time invested, and fear of missing out all had negative consequences (FOMO). By a considerable margin, the most crucial factor in forecasting whether a specific piece of misleading information would be spread in the future is the desire to help others, as shown by an analysis of a data set acquired in Nigeria. People in Asia and Southeast Asia are thought to be more collectively (focus on societal goals and personal relationships with one's bigger network) rather than individually (focus on one's local social group) oriented than people in the West (which is more individualistic). The fact that they have been distributing false information while claiming to aid others proves they are not who they say they are.

Evidence showed that ignorance considerably affected both people's propensity to believe in a higher source and their inability to recognise the repercussions of such a belief. Research participants should have the appropriate background knowledge and education for the study at hand (such as teachers, retirees, and those with PhDs). As a result, individuals likely have a propensity to trust the information they acquire from diverse sources, leading to widespread misinformation. As studies in technology have shown, people are more willing to take chances when they have no idea the potential consequences. Respondents may unintentionally provide inaccurate information to those who aren't paying attention, much like the concept of charity. The findings of the researchers who investigated the matter and discovered certain falsehoods being sent accidentally corroborate this evaluation.

Although these findings align with the evidence shown in Refs., they go against the contention that widespread disinformation is disseminated through the media. Cyberbullying and smartphone addiction are only two of many online problems that have been shown to have similar origins. Several respondents (particularly the younger ones) admitted to spreading hoaxes to gain rapid fame. It can be seen even among college kids in Pakistan. Respondents' propensity to spread incorrect information to stand out is another evidence of immaturity. Many of the respondents are under the age of 30, which could explain their

deliberate ignorance in spreading the urban legend. Due to the propagation of false information, they are creating harm (as indicated by ignorance). Strange myths are spreading quickly during the current COVID-19 epidemic, with the suggestion that drinking salty or warm water may help people get rid of the virus is the most recent example. People of the younger generation (who may recognise that this information is false) might disseminate such "funny" news to those less suspicious to provide them with a quick and inexpensive thrill. A fake would have sent bizarre or hilarious news to networks to prove the story's implausibility.

Compared to the technological variables (mobile phones, social media, etc.) linked to antisocial online conduct, it has not been proven that the cause of the spread of fake news is particularly essential. Most of our respondents are under the age of 23, and both Generation Z and millennials are recognised for their in-depth understanding of and creative application of technology. There was probably not a lot of thought put into that aspect when the decision to propagate false information was taken. Pass time always failed to accomplish anything worthwhile. This result is somewhat unexpected given that the majority of voters were students who had been stuck indoors for four to six months owing to the state-wide lockdown. Findings from the study indicate that participants being FoMO had no bearing on how they reacted to the bogus news. These results suggest that those who chose to stay at home during this outing did not feel like outsiders.

Though the reasons for this trend have received very little attention, the dissemination of fake news concerning COVID-19 has sped in the previous few months. Among the elements influencing the propagation of COVID-19 false news, a study (Apuke & Omar, 2021) discovered that altruism was the most crucial. We also found that the propagation of false information on COVID-19 could be predicted by the reasons people share information, interact, search for knowledge, and spend their leisure time on social media. Conversely, there was no statistically significant link between the entertainment motivation.

Research on the dissemination of false information is starting to emerge within this phase of the COVID-19 outbreak. Two studies aiming to prove a connection between social media and the dissemination of misleading information during the present epidemic are (Hou et al., 2020; Huynh, 2020). Recent research indicates that the COVID-19 pandemic has been the most detrimental example of misleading false news propagation in the last few months (Pennycook et al., 2020). Russonello (2020) claim that false information concerning COVID-19 is proliferating on social media. Furthermore, many people are increasingly looking for information online, which could result in a wide spectrum of people consuming and sharing false news (Huynh, 2020). Pennycook et al. (2020) allege that the rise of COVID-19 coincided with the spread of misleading news claims about treatments and approaches to handle the epidemic. Many people believe that salty water, bleach, and oregano can cure the disease due to the flood of misleading information (Lampos et al., 2021).

Orso et al. (2020) argued that our Facebook contacts, mostly non-doctors, kept reporting the data. They urged every one of their connections to be informed as well as to avoid using such drugs. Their behavior seemed guided by a solidarity spirit. What then disturbed us? 'So should I tell my father to stop taking cardio aspirin?' one of our nurse colleagues asked us. Unaware of it and wanting to act morally, our people were disseminating perhaps fatal news, now that they could have increased potential COVID-19 and reduced the symptoms (Orso et al., 2020).

There is a dearth of theoretical, empirical, and applied studies regarding the issue of fake news in Malaysia. Despite media coverage and statistics indicating the widespread dissemination of fake news within the nation, a review of the literature yielded solely written perspectives on fake news, its likely consequences, and prohibitions. As per the 2017 Internet Users Survey (MCMC), the majority of Malaysians (83%) said they trust health-related information found online regardless of its source. It has also been argued that the average Malaysian is confused and unable to distinguish between fact and fiction in the media; therefore, it is important to examine the root reasons for this worrying phenomenon in a timely manner. People propagate misinformation (with or without malice) for many reasons, none of which can be explained by any existing theoretical framework. Ngadiron et al. (2021) utilised a combination of factors from established

models, including Technology, Entertainment, Ignorance, Altruism, Pass Time, and Fear of Missing Out (FoMO), to determine the main motivations driving fake news sharing behavior among Malaysians.

Thus, aligning with the objectives of this study, the adaptation of the U&G 2.0 model is deemed appropriate. The objective of this research is to explore how the elements of U&G 2.0 predict fake news sharing. To achieve that, there will be four sub-objectives.

- To investigate the impact of modality on sharing fake news on social media in Malaysia.

- To investigate the impact of the agency on sharing fake news on social media in Malaysia.

- To investigate the impact of interactivity on sharing fake news on social media in Malaysia.

- To investigate the impact of navigation on sharing fake news on social media in Malaysia.

Literature Review

Sharing Fake News on Social Media

With the surge of dissemination of fake news on social media platforms during the unprecedented pandemic period in Malaysia, several empirical studies have surfaced, shedding light on the motivations of social media users concerning information sharing, information seeking, socialisation, and leisure (Apuke & Omar, 2021; Balakrishnan et al., 2021).

In existing literature, multiple studies have underscored that with the declaration of the health emergency due to Covid-19, a significant volume of fake news regarding this topic began circulating. Fake news on social media concerning Covid-19 has proliferated more rapidly than evidence-based news, which not only impacted the mental health of individuals but also led them to formulate uninterested and unnecessary decisions (Rodríguez et al., 2020). Atehortua and Patino (2021) emphasise that the spread of false information related to the pandemic adversely affects the already strained public health system by generating significant confusion and fear within the community, eroding trust in social media platforms. Public health practitioners faced panic, tension, and unpredictable behavior from individuals due to the spread of fake news concerning Covid-19. Despite numerous research studies conducted in existing literature during that period to analyse the impact of Covid-19-related fake news, No study has yet formulated a conceptual framework that significantly enhances comprehension of the behavior propelling the spread of fake news on social media platforms. Evidence suggests that related research in this area remains at a nascent stage (Scheufele & Krause, 2019). Additionally, several previous studies have been conducted within this domain of social media and U&G theory have omitted quantitative research methods (Md Nordin et al., 2021), which indicates that there has been very limited research on sharing fake news (Vafeiadis et al., 2020). Other research studies have investigated the consequences of interactivity and the factors limiting such impacts as media applications continue to change the nature of interaction by removing the borders between recipient-source and the barriers between content and media (Yang & Shen, 2018).

U&G 2.0

This theory represents a human-centric perspective employed for analysing mass communication (Liyakat & Studies, 2017). Menon (2022b) elaborates that gratifications are theorised as satisfaction related to the fulfilment of the innate desire of users through media usage that aligns with their expectations. Accordingly, gratifications are viewed as meeting the users' needs through media utilisation. According to Shahab et al. (2022), the Uses and Gratifications theory is extensively applied in the consumer technology and media landscape, offering insights into the reasons behind people's utilisation of media technologies. The primary sources of audience gratification encompass the content of media, social context, and exposure to media. The primary objective of this theory is to investigate and comprehend the users' needs and their motivations

for utilising media. When proposing this theory, Elihu (1974) suggests that most past studies concentrate on the influence of media on users, overlooking entirely the necessity driving people to engage with media.

In literature, U&G Theory has evolved and added new dimensions to the theoretical perspective in which people have fundamental demands that media can satisfy. Gratifications are envisioned as satisfaction when specific media sources match a person's expectations and their requirements are satisfied. The fundamental tenet of this theory suggests that media consumption is discerning, driven by an informed self-awareness of individual needs and an anticipation that particular media and content will meet these needs (Marengo et al., 2020). Chen et al. (2022) highlight that U&G theory (1.0) argues that users are active participants, possess an understanding of media usage to satisfy their needs, and are capable of purposive selection among various choices related to media. However, highlighting the fact that this theory focuses much on active audience and motivation, Ruggiero (2000) and Sundar and Limperos (2013) indicate that U&G (1.0) is not very effective as it ignores the significant role played by the technology. They believe that the gratifications proposed by previous frameworks rely on the psychological paradigm, which mostly employs the design of traditional measures for media. Subsequently, there has been a transformation in the framework of the U&G theory in recent decades. Sundar and Limperos (2013) proposed a revised U&G 2.0 which updated theoretical stance proposes that the affordances of media technology, associated with the potential actions enabled by interface features, can underscore the emergence of novel forms of gratification. Expanding on this notion, a fresh perspective of affordance-based gratifications has been formulated, demonstrating how technology meets users' needs and acts as a fundamental source of gratification. Sundar and Limperos (2013) emphasise that while U&G studies traditionally focus less on the technology of the medium, and most research is guided by the methods and principles of the traditional U&G perspective, understanding new media emphasises social-psychological factors over medium-related ones. Hence, there is an exploration into the idea that technology itself contributes to the development of new gratifications, aiming to expand the scope and relevance of U&G theory.

In recent studies, the traditional perspective of the Uses and Gratifications (U&G) theory mainly suggested that how people use media is driven by their personal needs, especially in the context of traditional mass media. This idea stems from the core principles of U&G, where individuals' media consumption is closely linked to their psychological and social needs (Katz et al., 1973). However, with the rise of technology and increased user engagement on social media platforms, gratification is now seen beyond just an individual's psychological and social requirements. Following this, C. Chen et al. (2022) underscored that whereas the original U&G theory concentrates on user motivations, U&G 2.0 signifies the active involvement of technologies in shaping human interaction with media. In existing literature, before the advent of U&G 2.0, Lichtenstein and Rosenfeld (1983) identified media as an information source and discovered that gratification can arise from various media attributes rather than solely from users' needs. This concept is referred to as technological affordances. For example, social media platforms enable users to interact with content through textual responses, such as using "Like" or "Heart" symbols on Facebook and Instagram, respectively. Presently, technology is recognised as a gratification source that motivates users to sustain their usage (Wang et al., 2016).

In the former literary studies related to U&G 2.0, Menon (2022a) indicates that the potential gratification which is arising from newer media is categorised into four classes of affordances which are (i) modality, which refers to the affordance which assists the user to expressing themselves through the multiple roles of the media (ii) agency; that deals with the affordances of generated activities of the user, for instance, his likes and comments, (iii) interactivity; that refers to the affordance which enables the user to make real-life changes and (iv) navigability; which deals with affordance which assists the user to explore the platform and all these four aspects generate the MAIN model.

Modality deals with the various presentation methods in new media, which focuses on attracting the perceptual system of the users (Sundar et al., 2014). The affordances of modality in U&G 2.0, as presented in the MAIN model, focus on enhancing heuristics related to coolness, realism and novelty, which are generally conceptualised as gratifications of the users (Wang et al., 2016). Coolness refers to the deliberate acceptability of the trendiness of digital devices, which is demonstrated in their attractiveness, originality and subcultural appeal. Meanwhile, realism denotes the extent of realism in the mediated representation,

and novelty refers to the gratification's users pursue when utilising technology. In the MAIN model, agency refers to the notion that all users act as agents or sources of information, promoting agency, community building, filtering, and ownership. The boosting of agency is the gratification that enables users to contribute as the prime source of the content, building of community is gratification gained by the affordance that passes the receptions of others related to their posts, filtering is the affordance-based gratification related to customisation. Ownness refers to gratification related to the development and ownership of the content. Interactivity in the The MAIN model emphasises affordances that enable users to engage with the medium and develop heuristics related to activity, interaction, responsiveness, and dynamic control. Interaction allows users to express their needs, activity signifies a departure from passivity seen in traditional media usage, responsiveness refers to the medium's adaptability to user needs, and dynamic control indicates users' ability to manage interaction through multiple choices. In contrast, navigation in the MAIN model refers to affordances aiding users in traversing the medium, encompassing gratifications related to browsing, scaffolding, and play. Browsing refers to the satisfaction users gain from freely exploring within or outside of an interface or a particular site, scaffolding is the gratification that is indicated by users when they expect to be guided while interaction and play refers to the gratification which allows the user to follow their favorite board which integrates the feeling of fun in them (Sundar, 2008; Sundar & Limperos, 2013).

Meng and Leung (2021) discussed the potential rewards associated with the context classes of modality, agency, interactivity, and navigability in contemporary digital media, which directly led to the development of the MAIN model within the framework of U&G 2.0. They emphasise that modality-based gratifications can be categorised into four types of enjoyment: realism, coolness, innovation, and presence. Agency-based gratifications empower enhancement and community-building, while activity, responsiveness, control, and choice enhance the gratification sought by the audience from media. Navigation-based modality improves the searching function and the ability of users to find what they want to see. Gratifications related to realism and presence would likely fulfill an instrumental function when applied to traditional U&G 1.0 communication orientations, while coolness and novelty would be more pertinent to a ritualised use of the medium. Jung and Sundar (2018) highlight that the concept of affordance in U&G 2.0 is employed from previous models, which is dependent on the interactive features that enable the possible actions of the users. The MAIN model of U&G 2.0 affordances emphasises technological features that offer the potential for action. For instance, the affordance associated with sharing photos gives the user action possibility to upload pictures along with the textual content, while agency affordance enables users to affirm their agency by executing actions such as tagging and clicking the Like button. In this context, users derive gratification from their media experience after adopting and utilising specific features, such as affordances, which ultimately result in significant gratifications. Describing U&G 2.0, Menon (2022b) explains that the distinction in technological attributes between new and traditional media lies in the fact that new media users manifest distinct motivations. The gratification of new media focuses on interactivity, demassification and asynchronicity, which is evident in tenets of U&G 2.0.

Chemnad et al. (2023) state that the basic purpose of U&G 2.0 is related to the preferences of the users, which includes the structural design of the media platform, content and features that it offers thus, the respective framework suggests the association between users and technology and assert this relationship as highly complex and individualised. In addition, users' preferences change with the evolution of technology. Rathnayake and Winter (2018) state that the theoretical perception of U&G 2.0 stresses the significance of conceptualising affordance-based gratifications thus, U&G in new media is a slightly modified version of older media gratifications to fulfil the needs of new media. In view of Sundar and Limperose (2013), the gratifications of news media are not entirely specified. Yet, they focus on affordance-based measures that are important in considering the interactive nature of new media. In view of Rathnayake (2016), it differs from traditional media as the three functions of the internet (information giving, information retrieval and conversion capacities) emphasise the utilisation of the internet, encompassing functions such as mediated interpersonal technologies. As the internet is more interactive and engaging thus, U&G 2.0 stresses its unique characteristics. In this accordance, the focus of U&G 2.0 studies is to theorise the gratifications of users resulting from internet use, specifically social media, formulates efficient measures to operationalise them and analyse them on various populations.

There are still certain gaps even if a lot of studies are on the subject of false news. Research gaps include the underuse of mixed approaches and the over-reliance on qualitative or quantitative methods. Although qualitative studies abound in detail, they provide little information on the user's intentions; quantitative approaches only seek for correlations. For instance, research using machine learning to identify false news give algorithmic accuracy top priority over behavioral insights, according to Sundar and Limperos (2013). All these strategies combined will help to see things more fully.

Rather than addressing Southeast Asia's cultural and regulatory processes, most studies concentrate on Western settings such as the US and Europe. Although Westerners value personal autonomy highly, nations like Malaysia are more swayed by collectivism and strong government control of daily life (Ngadiron et al., 2021). This makes studies concentrating on specific areas essential to find the elements inspiring people to spread fake news.

Sometimes past studies overlook the effect of the shifting terrain of social media on disseminating misinformation. Many empirical studies, especially those on pandemics, neglect to apply the U&G 2.0 framework (Sundar & Limperos, 2013), aggregating modern media affordances like algorithms and interactivity. Cultural differences and varying technology adoption rates help explain why people distribute false news for diverse purposes such as entertainment, ignorance, or altruism Talwar et al., 2019; Islam et al., 2020. For instance, Southeast Asian users could prefer group security over individual recognition. Filling these gaps can help one better grasp the dissemination of fake news, particularly in understudied regions like Southeast Asia.

Theoretical Framework and Hypothesis

The research seeks to offer insights into the dissemination of fake news across various social media platforms during the Covid-19 pandemic. It connects factors from the Uses and Gratification (2.0) model as predictors of fake news sharing within Malaysia. In line with the objective, the study explores the MAIN model of U&G 2.0 to investigate the associations between modality, agency, interaction, and navigation with the propagation of fake news on social media concerning COVID-19. The conceptual framework for this study is depicted in the figure provided.

Figure 2.1. Conceptual Framework
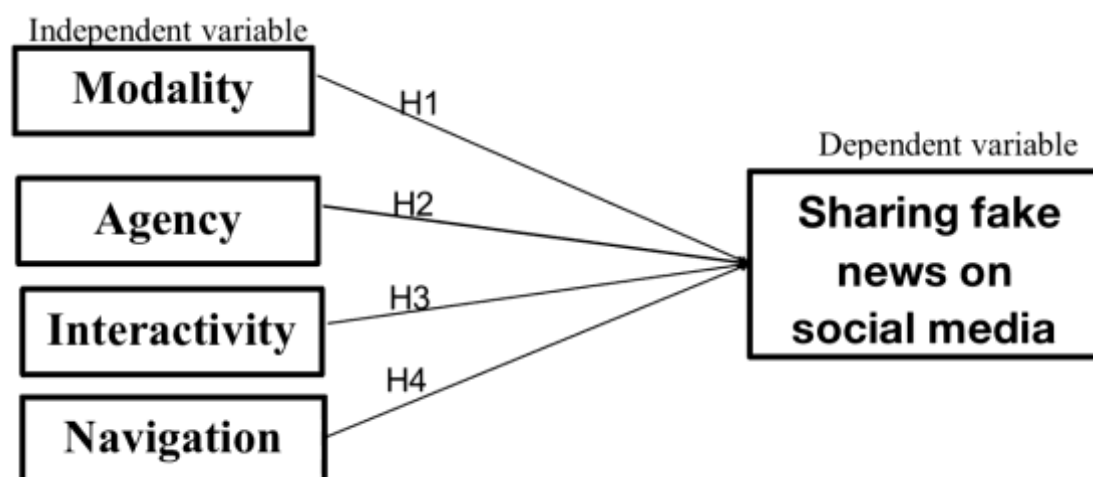
Table 2.2. List of Hypothesis and Relative Paths

Hypothesis	Paths
Modality significantly impacts the Fake news sharing on social media	MOD -> FNS
Agency significantly impacts the Fake news sharing on social media	AGN -> FNS
Interactivity significantly impacts the Fake news sharing on social media	INT -> FNS
Navigation significantly impacts the Fake news sharing on social media	NAV -> FNS

"MOD = Modality, AGN =Agency, INT = Interactivity, NAV = Navigation, FNS = Fake news sharing on social media"

Methodology

The quantitative research method is utilised to collect the primary statistical data for the present research. A questionnaire was developed, entailing questions regarding the respondents' demographic and different dimensions of U&G 2.0 theory and fake sharing of news on social media. The target population in this study includes 308 social media users (mainly Twitter users) in Kuala Lumpur, Malaysia. The present research study employed purposive sampling, a type of non-probability sampling technique, to select the required sample size. The participants were contacted via e-mails to get their consent and formulated questionnaires were distributed. The data for this study was collected over a six-month period.

Measurement

For this research study, a "5-point Likert scale" varying from "1= strongly disagree" to "5= strongly agree" was employed. Consequently, the following measures were utilised for assessing the constructs of the study:

Table 3.1 Measures of the Study

Variables	Number of items	Items	Sources
Modality	6	1. I know the content on social media is real and not made up. 2. The experience on social media is very much like real life. 3. It creates the experience of being present in distant environments. 4. The news on social media, lets me see it for myself. 5. The news on social media is like communicating face-to-face. 6. Social media helps me immerse myself in places that I cannot physically experience.	(Sundar & Limperos, 2013; Wang et al., 2016)
Agency	6	1. Social media allows me to have my say. 2. Social media allows me to assert my identity.	(Sundar & Limperos,

		3. Social media allows me to send my thoughts to many others. 4. Social media gives me the power to broadcast to my followers. 5. It allows me to expand my social network. 6. It makes me realise that I am part of a community.	2013; Wang et al., 2016)
Interactivity	5	1. I expect to interact with the system via social media. 2. I can perform several tasks via social media. 3. It responds well to my requests. 4. I can control my interaction with the interface. 5. I can influence how it looks.	(Sundar & Limperos, 2013)
Navigability	5	1. Social media allows me to obtain a wide variety of information. 2. It helps me to skim and check out various links. 3. It allows me to surf for things that I am interested in. 4. It allows me to link to other pieces of information. 5. It offers several visual aids for more effective use.	(Sundar & Limperos, 2013)
Fake news sharing	5	1. I often share fake news on social media because I don't have time to check its authenticity. 2. I share fake news on social media because I don't have time to check facts through a trusted source. 3. I rely on TV news channels to check the authenticity of any message before sharing it on social media. 4. I advise the sender of fake news to always crosscheck its authenticity before sharing. 5. I ask my family/relatives to check the authenticity of any message before sharing.	(Chadwick & Vaccari, 2019; Talwar et al., 2019)

Sampling

For the current research study, purposive sampling was employed as the technique to choose the necessary sample size. As SEM (Structural Equation Modeling) was utilised for data analysis, G*Power software was employed to determine the sample size. The findings revealed that a sample size of 96 participants was required to attain a medium effect size and achieve a power of 0.8. Consequently, a sample size of 308 participants from Malaysia was selected for the present study.

Pilot Study

Before proceeding with full-scale data collection, a pilot test involving 40 respondents will be conducted for the present research study. Cronbach's alpha and composite reliability scores were utilised to evaluate the internal consistency among the items used. All constructs demonstrated a Cronbach's alpha score well above 0.7, indicating that the instrument employed was reliable and internally consistent. As a result, the instrument was deployed in the full-scale study. Table 2 displays the Cronbach Alpha score for each construct.

Table 3.2 Cronbach Alpha Score for Each Construct

No	Constructs	No. of Item	Cronbach Alpha
1.	Modality	5	0.770
2.	Agency	6	0.885

3.	Interactivity	6	0.858
4.	Navigability	5	0.901
5.	Fake news sharing	5	0.849

Data Analysis

The gathered responses from participants underwent initial screening to identify any missing data. Following this, demographic and descriptive findings were assessed using descriptive statistics. Comparative analysis was conducted utilising an independent sample t-test. To determine if the path coefficient of one group significantly outweighed another, Partial Least Squares – Multi-Group Analysis (PLS-MGA) was employed.

Findings

Demographics

When data was gathered from the Malaysian respondents, it was observed that the respondents had varying level of gender, education, age or social media usage. Table 4.1 shows that out of 308 respondents, there were 170 males with 55.2% and 138 females having 44.8%, respectively. The education of respondents also varied as 64 respondents had completed their diploma with 20.8%, 140 respondents completed their bachelor's degree with 45.5%, 83 respondents completed a Masters degree with 26.9% and 21 respondents completed the degree of PhD with 6.8%.

The demographic characteristics also revealed that there were 43 respondents between the age of 18-25 years showing a percentage of 14%, 139 respondents were aged between 26 to 35 years with a percentage of 45.1%, 113 respondents were aged between 36-45 with a percentage of 36.7% and there were 13 respondents who were aged more than 45 years with a percentage of 4.2%. Since the demographic characteristics of respondents showed huge variations, it can be observed that Malaysian respondents of distinct genders, ages, or educational backgrounds participated in the study.

Table 4.1 Demographical Characteristics of Respondents

Respondents profile	N	Percentage (%)
Gender		
Male	170	55.2%
Female	138	44.8%
Age		
18 – 25	43	14%
26 – 35	139	45.1%
36 – 45	113	36.7%
45 or above	13	4.2%
Educational level		
diploma and below	64	20.8%
Bachelor	140	45.5%
Master	83	26.9%
PhD	21	6.8%
Social Media Use		
Sometimes	84	27.3%
Generally	131	42.5%
Often	93	30.2%

Descriptive Analysis

Table 4.2 presents the results of the descriptive analysis of the variables studied based on the collected response data. Results indicate the normality of the data. In this regard, the number of cases reported against each variable is 308. It is evident that there are no missing values in the dataset. Additionally, the minimum and maximum value ranges lie within the constraints of a five-point Likert scale i.e., 1-5. There are no outliers in the data. Mean values for the variables MOD, AGN, INT, NAV, and FNS also fall within 3.0 to 3.5. The results depict that the data is normal since no outliers, missing values or normality issues are observed in the data.

Table 4.2. Descriptive Statistics of Observed Variables

Descriptive Statistics					
	N	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
MOD	308	1.00	5.00	3.5043	0.80970
AGN	308	1.17	4.80	3.4177	0.80427
INT	308	1.20	5.00	3.3825	0.84888
NAV	308	1.20	5.00	3.4409	0.80601
FNS	308	1.00	5.00	3.3532	0.82763
Valid N (listwise)	308				

"MOD = Modality, AGN =Agency, INT = Interactivity, NAV = Navigation, FNS = Fake news sharing"

Assessment of Measurement Model

During the initial phase of analysis, it is crucial to verify the adequacy of the measurement models. Evaluating a measurement model involves examining the validity and reliability of its latent variables (LVs). Validity encompasses two aspects—convergent and discriminant. The assessment of model reliability and validity involves examining the relationships between the LVs and their corresponding items, utilising composite reliability (CR) and average variance extracted (AVE). In this study, the measurement models comprised five constructs: (i) sustainable brand awareness, (ii) perceived quality of sustainable initiatives, (iii) brand association, (iv) brand loyalty to sustainable initiatives, and (v) sustainable brand equity.

To gauge model reliability, it is crucial to calculate and compare the loading of each indicator on its respective LV against a predetermined threshold. In addition, a measurement model attains 'validity' if the AVE surpasses 0.5 and is deemed 'reliable' if the CR exceeds 0.70. As illustrated in Table 4.3, both sample groups exhibited a CR value surpassing 0.70, and the AVE was greater than 0.50. Consequently, it can be concluded that the employed measurement was valid and reliable for both groups.

Table 4.3 Convergent Validity and Reliability

Construct	CR	AVE
MOD	0.866	0.594
AGN	0.862	0.588
INT	0.860	0.633
NAV	0.828	0.584
FNS	0.833	0.597

Note: Composite Reliability (CR), Average Variance Extracted (AVE)

Discriminant validity assesses the extent to which each latent variable (LV) is distinct from other constructs within the model (Rasoolimanesh, 2022). In recent years, the heterotrait-monotrait (HTMT) ratio has emerged as a superior criterion for establishing discriminant validity compared to traditional methods like the Fornell-Larcker criterion. Previous research suggested constructing thresholds of either 0.85 or 0.90 for the HTMT ratio to validate discriminant validity. This study opted for the more flexible HTMT ratio of 0.90 to evaluate discriminant validity. Table 4.4 presents the HTMT ratios utilised in assessing the discriminant validity of the measurement model.

Table 4.4 Discriminant Validity Based on the Heteroit-Monotrait (HTMT) Criterion

	MOD	AGN	INT	NAV	FN
MOD		0.539	0.480		0.625
AGN					
INT		0.326			0.486
NAV	0.423	0.236	0.248		0.498
FNS		0.501			

"MOD = Modality, AGN =Agency, INT = Interactivity, NAV = Navigation, FNS = Fake news sharing"

Assessment of Structural Model

During the second phase of analysis, the structural model was assessed. Hypotheses were examined via bootstrapping with 5,000 resamples. The R2 value, indicative of the model's explanatory capability, was computed for the endogenous constructs (Hair et al., 2019). The resulting R2 values amounted to 0.405. These outcomes underscored the substantial predictive capacity of the endogenous variable, FNS, for Malaysian users.

To determine the substantial influence of each construct on FNS, a bootstrapping analysis with 5,000 sub-samples was conducted. Table 4.5 demonstrates that all four elements significantly predict FN in Malaysia. The results from this analysis affirm the acceptance of all hypotheses in this study.

Table 4.5. Hypotheses Testing

	Original sample (O)	Standard Deviation (STDEV)	T statistics ($\lvert$O/STDEV$\rvert$)	P values
AGN -> FNS	0.198	0.198	0.056	0.000
INT -> FNS	0.192	0.194	0.055	0.000
MOD -> FNS	0.280	0.278	0.062	0.000
NAV -> FNS	0.234	0.240	0.058	0.000

Discussion

Research Objective 1

The findings from the literature review informed the development of the initial hypothesis. Progressing to the first hypothesis of the research, we can see a significant and positive association between modality and the sharing of fake news among social media users in Malaysia. Based on the current study's findings within the Malaysian context, this country has a more diverse digital landscape and people have access to global social media networks. The emergence of modality as a significant factor indicates that the employment of sensational language and clickbait may appeal to the social media users and draw them to the content containing fake news. Visual media, for example, plays a notable role in enticing individuals towards misleading and fake news. These contrasting findings regarding the influence of modality on social media

users' sharing of fake news may be influenced by broader factors, such as media literacy and the political climate.

Previously, a study was conducted by Zhou et al. (2020b) to detect fraudulent news with the help of a multi-modal framework known as SAFE (Similarity-aware fake news detection methodology). This Similarity Aware Fake news detection multi-modal framework is a significant and considerable methodology to detect the falsity of big data related to the real world based on the texts and images of the news articles thus shared on social media by social media users regarding miscellaneous disciplines. This could be discussed in a way that the modality framework is a crucial tool for detecting the falsity of news shared on miscellaneous social media network sites, which was evident in the context of Malaysia.

Research Objective 2

Recent studies in the literature review highlighted a notable influence of news agencies on social media users' sharing of fake news in Malaysia. Consequently, the researcher proposed the second hypothesis of the current study, suggesting a significant and positive correlation between agencies and social media users' sharing of fake news in Malaysia. With the surge in the dissemination of fraudulent news on social media platforms during the pandemic, misinformation regarding COVID-19, including its transmission, treatment, and symptoms, has been widespread among users across various countries. This has led to a sense of alarm among people worldwide. In addition, this rapid sharing of fraudulent news regarding the pandemic is very painful and has caused many losses of lives because it also affects their psychological well-being. However, the findings indicate that the agency did not significantly impact social media users' sharing of fake news in Malaysia. The rejection of the second hypothesis indicates that news agencies may not significantly impact social media users' fake news sharing. This finding indicates that the origin of online fake news may not be influential in directing social media users to fake news sharing. As social media platforms are dominated by user-generated content, the findings regarding the insignificant impact of agencies may reflect that social media fake news sharing may be influenced by factors other than the agency. In addition, the dissemination of news on media is based on the algorithms of user-generated content. Therefore, according to the findings of this study, users of social media might be encouraged to spread and share the content and fake news that is more popular according to their algorithm. The rejection of the second hypothesis for Malaysia indicates that the social media agencies thus formulated by the governments of Malaysia will not be as effective in amplifying the dissemination of fake news on social media platforms like Twitter or Facebook within the framework of the theory U&G 2.0.

Research Objective 3

In the context of Malaysia, the structural equational model analysis has determined the positive influence of interactivity, and the value of P indicates the significant level of interactivity which postulates the acceptance of the third hypothesis. The researcher in current research believes that interactivity serves a positive role in the detection of fake news and, ultimately, it will mitigate the extensive dissemination of fake news in Malaysia and the findings support the researchers' belief by indicating the p-value (0.013) according to target criteria referring threshold value. It has been observed that when individuals engaged with social media platforms were interacting continuously with each other during the crisis, they were able to discuss the news that had been shared on the social media network sites and a mutual discussion thus by sharing comments on the news article or by sharing their point of views by a single click between the individuals as quite beneficial to discern whether the provided news is authentic or fabricated. According to research, interactivity might affect people's psychological perceptions of truthfulness or falsity regarding news articles in different ways (Yang & Shen, 2018; Montesi, 2021).

Within the context of Malaysia, the SEM postulates the negative influence of interactivity and indicates the significant effect of interactivity, which ultimately tends to acceptance of the third hypothesis where p-value (0.01) lies under the threshold value. In light of the exceptional rise in the dissemination of false news throughout the pandemic period, it could be discussed that interaction between Malaysian social media users will be helpful in the detection of fraudulent news. Fake news is often associated with high levels of interaction but low levels of trustworthiness. The increase in the amount of news that people consume

online suggests that, despite some false information, consumers are using digital media because it is more enticing than traditional news sources. When predicting Malaysians' fake news consumption, news credibility matters more than interaction.

Research Objective 4

The fourth hypothesis, posited by the researcher, asserts a notable positive correlation exists between navigation and the sharing of fake news among social media users in Malaysia. Within the context of Malaysia, the structural equational model indicates the positive influence of navigation. Still, the value of p has exceeded the target criteria, ultimately leading to the rejection of the fourth hypothesis. It is intricate the value of p (0.276) is greater than the threshold value (0.05). It refers to Malaysian people mostly relying on established tools and platforms regarding navigation compared to social media's location-based impact. It would, however, have little effect on reducing the dissemination of false information throughout the nation because it can be cumbersome to analyse and decide whether information about the recent coronavirus outbreak's symptoms, spread, or treatments is accurate or not. The study found that exposure, influencer, content, social media user interaction, navigation ...constitute the four primary elements of fake news on social media. Additionally, the study demonstrated the way in which the characteristics of fake news on social media contribute to its acceptance during COVID-19. The results showed that the navigation between visibility, influencers, and social media postulates that certain people make decisions based only on nonverbal signals (Foo et al., 2021).

Despite the direct relationship between the dimensions of uses and gratification 2.0 and sharing fake news during COVID-19, the researcher in the current study has proposed some moderation hypotheses in which the use of social media significantly moderates the nexus between modality, agency, navigation, interaction, and sharing fake news in Malaysia. According to research, there are numerous social media platforms that social media users use, and despite having a positive and safe side that it keeps people to be updated on the latest news, also accused of sharing dome detrimental and fraudulent news, which represents the darker aspects of social media platforms such as YouTube, WhatsApp, and Instagram. All these social media platforms have made ongoing efforts to mitigate the dissemination of false news (Gongane et al., 2022). However, during the COVID-19 crisis, when everything was under lockdown, people were restricted to their houses, and the only way to get updated about the pandemic was to keep in touch with social media networks. Individuals living in various developed and developing countries worldwide found social media networks to be an authentic source of information. To some extent, it was not true that social media is a genuine source for being updated about the pandemic or current affairs. The same was the case with the individuals thus living in Malaysia; they were becoming extremely dependent on social media sites to get information about the coronavirus without knowing about the fact that either the news was false or true by its nature, which proved to be a major drawback and it was essential to assess and formulate a model that could mitigate sharing of fake news by detecting its falsity, which is the novelty of the current research.

Conclusion

This study explores the components influencing the dissemination of false news on social media in Malaysia during the COVID-19 pandemic using the Uses and Gratifications 2.0 theory. According to the results, the dissemination of false news is much influenced by interaction and modality. When modality enhances the reality and originality of content, fake news attracts credibility and appeals to people. False information is easier spread thanks to the dynamic user interactions made possible by likes, comments, and shares. Although navigation facilitates content discovery, it showed a moderating effect when combined with rising social media usage, meaning greater online interaction might result in less uncritical sharing. Furthermore, the studies show the influence of cultural factors on the sharing behavior of Malaysian consumers and the major role technology affordances play in user behavior. These findings increase our understanding of the processes by which false news travels and show the relevance of the MAIN model in this environment.

Through an examination of social media users in Malaysia, this study has illustrated how factors such as modality, agency, interactivity, and navigation contribute to the propagation of fake news on social media

platforms in the country, allowing for the prediction of fake news sharing behaviors. The study will add to the current body of literature regarding the ramifications of sharing fake news on social media, both in general and specifically from the lens of Covid-19 in Malaysia. Thus, adding to the existing body of literature. The current study will also strengthen the empirical evidence as it will analyse the data and statistics. The results and findings of that data analysis will provide great empirical evidence that can help strengthen the existing empirical evidence.

This study utilises the four constructions of the MAIN model—mode, agency, interaction, and navigation—to analyse how social media users in Malaysia share false news. It includes an examination of SEBENARNYA, a proactive initiative by the Malaysian government to combat the spread of false information during the COVID-19 pandemic. Additionally, the analysis highlights efforts like the MY platform and public awareness slogans, such as "Tak Pasti, Jangan Kongsi" (If Unsure, Don't Share), which stress the importance of fighting misinformation. These programs provide consumers with reliable methods to verify facts and avoid misleading content, complementing the MAIN model's navigation architecture. The degree of interaction and modality clearly influences the way bogus news was distributed among Malaysian respondents of the empirical investigation. For instance, demographic data shows that younger people, probably because they are more at ease with digital platforms, choose sensational information (modality) without consistently verifying its accuracy. Likewise, the dynamic control function of the MAIN model may be seen in the fact that high degrees of interaction, likes, comments, and shares might disseminate misleading news. This study reveals how technology affordances influence user actions. While the encouragement of involvement through interaction might contribute to the dissemination of misinformation, realism and novelty brought forth by modality give credibility to bogus news. The findings also suggest that while navigation enables users to explore many kinds of content, insufficient media literacy might expose them to questionable knowledge. This paper bridges theoretical aspects with empirical data to emphasise the relevance of the MAIN model in understanding the socio-technical dynamics of spreading fake news in Malaysia.

In addition, those working in healthcare could benefit from our findings as they provide them with an understanding of the elements contributing to sharing false information among social media users. Lastly, this study will be of great significance for policymakers or any authority responsible for making policies, laws, or acts. This study discussed the issue of fake news with different factors that can greatly help understand this issue more deeply as it has become the need of the hour. It was found that the study had several limitations. Most specifically in the form of sample size, time constraints, choice of research methodology, tools and mechanisms, and country context. Despite this, the current research was based on some limited factors that the researcher had chosen and only analysed some specific factors of the theory U&G 2.0. Though there are several research limitations, the current research still contributes to future research and provides various future directions. The current research has prioritised a cross-sectional time horizon for data collection, but in the future, the researchers could adopt longitudinal time constraints to gather the data and analyse the influence of dimensions of the theory U&G 2.0. Also, the researcher has used a small sample size from a specific city in Malaysia, but in the future, the research could incorporate an extensive sample size and include more than one city in Malaysia. Moreover, in terms of practical and theoretical implications, it has been observed that the present study also offered several practical implications. The research findings showed that the dissemination of fake news on social media pages significantly depended on the interactivity of fake news navigation. Moreover, based on the findings, it could be suggested that the development of intervention strategies urges social media users to consume a manageable or less amount of content involving COVID-19 through social media platforms and other online sites.

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