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FROM MANGA TO SOCIAL MEDIA: ANALYZING THE RISE AND CONSEQUENCES OF EARTHQUAKE RUMORS IN JAPAN THROUGH THE LENS OF SOCIAL CONTAGION THEORY

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ABSTRACT

This paper uses Social Contagion Theory (SCT) to analyze how rumors about a predicted mega-earthquake in Japan in July 2025 spread, focusing on social and psychological mechanisms. SCT suggests that information and behaviors propagate through social networks like disease transmission, highlighting social influence and imitation. Key societal factors driving rumor spread include uncertainty, super-spreaders, social media structures, internet anonymity, and confirmation bias. Psychological elements such as emotional arousal, lack of accountability, and social identity play significant roles in this contagion process. The rumors originated from the manga "Watashi Ga Mita Mirai" and have notably impacted Japan's tourism industry. A content analysis of online discussions in Hong Kong revealed five major rumor types: misinformation, exaggerated damage, unsubstantiated theories, misinterpretations, and conspiracy theories. The study concludes with recommendations for mitigating the effects of rumor contagion, offering insights into managing misinformation in the digital age.

KEYWORDS: *Social Contagion Theory, Rumor, Misinformation, Social Media, Japanese Manga, Natural Disasters, Economic Impact*

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INTRODUCTION

The spread of misinformation, particularly through social media, has become a significant societal challenge. One salient example is the proliferation of rumors about an impending earthquake in Japan in July 2025. Social Contagion Theory (SCT) offers a powerful explanatory lens for this phenomenon. It posits that information, attitudes, and behaviors can diffuse through populations via social networks, much like a contagious virus, driven by mechanisms of imitation and social influence (Centola, 2010; Levy & Nail, 1993). This theory is particularly relevant in the context of the Japan earthquake rumors, as it provides a framework for understanding how unverified information can rapidly disseminate across vast networks and influence public beliefs and behaviors. The theory emphasizes the role of social influence and can explain how rumors propagate online through mechanisms resembling disease transmission.

The source of this rumor traces back to a Japanese manga titled "*WatashiGa Mita Mirai*"(*The Future I Saw*) published in 1999. The work is based on the dream diary of the 70-year-old author, Rio Tatsuki (The Economic Times, 2025).It foresaw events like the death of Freddie Mercury, whow as the lead singer of Queen, the earthquake of Kobe in 1995, and the earthquake and tsunami of Tohoku in 2011. On the reprint of manga in 2021 (see Figure 1), the author made

a new claim that there will be a megaquake and tsunami on 5 July 2025 and this is purportedly three times more destructive than the earthquake in 2011.This claim became the infectious agent within the SCT framework.

Figure 1: Japanese Manga titled "The Future I saw"

Because of these rumors, Japan's tourism is suffering. Airline tickets to Japan are selling much less than usual (Japan Daily, 2025). Despite the fictional origin, tourists change to other destinations like Australia, Dubai or South Korea. Airlines routes from Hong Kong to Tokushima are reduced from three to two flights weekly. Hong Kong's Greater Bay Airlines reduced flights to Tokushima and Sendai. Reservations dropped to 40% when they expected 80% (Dimsumdaily Hong Kong, 2025). Many airlines and travel companies are surprised by how much the rumors have hurt business. Greater Bay Airlines (Hong Kong) has cut flights to Japan by 30% and canceled some routes until October. Travel agencies claim few people are booking trips to Japan, even with discounts and refund guarantees. Instead, travelers are choosing other destinations (The Asahi Shimbun, 2025).

Japan is one of the most popular travel destinations for Hong Kong tourists, with a record high of 2.68 million Hong Kong tourists visiting Japan in 2024 (Cheng & Fukue, 2025). However, only 208,000 people visited Japan from Hong Kong in March this year, down 9.9% compared with the same period last year, resulting in the reduction of flights between Japan and Hong Kong, and the corresponding decrease in travel agencies' groups to Japan (DotDotNews, 2025).This decline exemplifies the behavioral contagion predicted by SCT, where avoidance behaviors spread through the population.

The Japanese media NHK recently made a special report on the matter, pointing out that the news of no scientific basis has hit the Japanese travel industry hard, and some airlines have even reduced flights for this reason. The news is mainly spread in Chinese-speaking areas, and Hong Kong and Taiwan are the most serious (The Standard, 2025a).

In the face of earthquake rumors, the Japanese government has repeatedly refuted the rumors. The Meteorological Administration emphasized that information that can clearly predict the time and place of the earthquake can be regarded as rumors because at today's scientific level, it is impossible to accurately forecast the time and place of an earthquake. The rumor has no scientific basis and only repeats the unfounded fear of the past (The Standard, 2025a).

We conducted content analysis identifying the types of rumors being disseminated on the Internet and analyzed the reasons for these rumors. We use social contagion theory to examine the spread of rumor messages, particularly those circulating on social media in Hong Kong. We explore mechanisms through both social and psychological aspects of rumor propagation. Furthermore, the paper will suggest how government agencies can effectively respond to these rumors to alleviate their effects on individuals and society.

CONTENT ANALYSIS OF RUMORS ON SOCIAL MEDIA

Content analysis was performed and 1,520 messages posted in *Hong Kong Golden Discussion Forum* (https://forum.hkgolden.com/) between 1 Jan 2025 and 31 May 2025 were analyzed. It is a popular Internet channelwith many Hong Kong people discussing and sharing different topics on megaquake in Japan (see Figure 2). In this channel, the main language is Chinese, including Cantonese (a dialect common in Hong Kong).

Figure 2: Examples of Messages on Megaquake found on https://forum.hkgolden.com/

The messages selected for study are those with the keywords like “earthquake”, “tsunami”, “natural disaster”, “Japan”, “*The Future I Saw*”, “Feng Shui prediction”, etc. These messages were classified into the rumor types shown in Table 1. Because a message may belong to two or more rumor types, the total percentage is larger than 100%. This categorization reveals the diverse "strains" of the misinformation contagion circulating within this network.

Table 1: Types of Rumors found in the Content Analysis

Rumor Type	Percentage
1.Misinformation about timing and location	
Specific dates and times for the earthquake with no scientific basis.	38.3%
Incorrectly pinpointing areas likely to be affected.	27.2%
The earthquake impacting distant locations or countries beyond Japan.	24.1%
2. Exaggerated damage and casualties	
The death toll higher than official projections.	35.2%
Overstated economic losses and infrastructure damage.	25.4%
Unrealistic predictions of the tsunami height and its impact on various areas.	28.5%
3. Unsubstantiated theories about causes and events	
A volcanic eruption triggering the earthquake or tsunami.	36.2%
Government conspiracies or hidden causes.	23.2%
Specific geological processes or plate movements being misinterpreted or exaggerated.	45.1%
4. Misinterpretations and emotional responses	
Relying on vague predictions from non-scientific sources, like dream journals or Feng Shui masters.	47.4%
Focusing on emotional impact and fear rather than scientific facts.	35.1%
Spreading misinformation to create panic or justify certain actions.	32.2%
5. Conspiracy theories	
Information about the quake or its risks hidden by the government.	23.5%
The involvement of specific groups or entities in planning or triggering the earthquake.	33.6%
The earthquake being part of a larger plot or agenda.	12.4%

There are five major types of rumors disseminated on the Internet. First, the rumors are about the time and location of the earthquake although this kind of information is impossible to be known in advance scientifically. Second, the rumors are about the damage and causalities that are caused by the disasters. However, such misinformation is usually more unrealistic and overstated than normal. Third, people discuss unsubstantiated theories about causes and events, and they like to create invalid reasons for explanation of issues they are not sure. Fourth, the rumors are caused by the wrong interpretation and the emotional reactions to unclear issues. People trust Feng Shui masters, who further speed up the spread of rumors on social media. The last type of rumors is about the conspiracy theories. People believe natural disasters are really triggered physically by humans with some purposes.

These categories highlight the diverse ways in which misinformation can spread, driven by emotional and normative influences. The analysis also revealed that Hong Kong residents, lacking experience with earthquakes, were particularly susceptible to these rumors, further amplifying their spread. Hong Kong people are afraid of lack of experience. Because Hong Kong people rarely encounter earthquakes and they do not know how to deal with them. Unlike the Japanese, they have not been trained and this reflects that Hong Kong, as a rare earthquake area, people lack relevant knowledge of disaster prevention and will be afraid of natural disasters.

There is an amazing communication power of social media (Yang & Giua, 2020). More than 1,400 Japanese videos related to "July 2025" have been accumulated on the YouTube platform, with a total number of more than 100 million views. At the same time, more than 50 related videos were also found on the TikTok platform, with a cumulative number of plays of more than 40 million. This prophecy has spread from Japan to overseas since the end of last year, especially in Hong Kong and Taiwan. The number of related videos produced in traditional Chinese on YouTube has reached more than 220, and the total number of plays has exceeded 52 million. Feng Shui master pushes the tide. In

addition, Hong Kong society generally believes in Feng Shui. Many Feng Shui experts claim that Japan will have a disaster through YouTube and other platforms, calling for avoiding going to Japan, further strengthening the people's risk-averse mentality.

The megaquake in July is not latest news, but with the release of a new estimate of the damage from the Nankai Trough earthquake at the end of March, people's interest in the earthquake in Japan is increasing. Moreover, the Chinese Embassy in Japan issued a document reminding citizens to beware of earthquake disasters, suggesting safe arrangements for traveling or studying in Japan, and carefully considering any real estate purchases, which further caused anxiety.

The superposition effect of multiple factors explains the rapid spread of earthquake rumors. There has already been a discussion about "July 2025" in the Hong Kong online community, laying the foundation for the subsequent large-scale dissemination. At the end of March, the Japanese government officially released the latest disaster loss estimate report of the Nankai Trough earthquake. The release of this official document unexpectedly provided seemingly credible evidence for the rumors. As the mainstream media continues to report news related to the Nankai Trough earthquake, the public's attention to the issue of the earthquake in Japan has increased significantly, forming a favorable environment for the spread of rumors. Subsequently, YouTubers and Feng Shui masters quoted manga content to release videos, which led to the rapid spread of rumors.

PROPAGATION OF RUMORS: SOCIAL MECHANISMS

Social Contagion Theory(SCT) provides a framework for understanding the social structures and dynamics facilitating rumor contagion. The spread of rumors can be attributed to several social factors, including uncertainenvironment and economic, the impact of super-spreader, public’s confirmation bias reinforcing misinformation, and the unique structure and features of social media platforms acting as the transmission network.

Uncertainty Fuels Rumor Transmission

Uncertainty is a significant driver of rumor spread. When individuals face ambiguous or uncertain situations, they actively seek and share information, even unverified, to reduce anxiety and make sense of the situation. The prediction of a major earthquake in July 2025 created an environment of uncertainty, prompting people to seek answers and share information, regardless of its veracity.

Individuals constantly compare themselves to others to evaluate their own beliefs and behaviors (Festinger, 1954). The prediction of a major earthquake in July 2025 created a pervasive environment of uncertainty, prompting information seeking and sharing regardless of veracity. Under uncertainty, reliance on others' information increases significantly, heightening susceptibility to social influence and accelerating rumor transmission, mirroring the spread of contagion in susceptible populations (Centola & Macy, 2007).

Super-Spreaders Amplify the Contagion

Central to SCT is the role of highly connected individuals or "hubs" (super-spreaders) who dramatically accelerate transmission (Centola, 2010).Opinion leaders or key social media influencers act as super-spreaders that play a crucial role in disseminating information. Vosoughi et al. (2018) found that verified accounts (e.g., celebrities, politicians)on social media platforms like Twitter significantly amplified false news compared to ordinary users, spreading it faster, farther, deeper, and more broadly. Individuals were more likely to share the Japan earthquake rumors if they saw trusted others

doing so, driven by conformity and fear of social disapproval. Influencers amplified this effect, as their followers imitated their actions and beliefs – a direct manifestation of complex contagion often requiring multiple exposures or trusted sources (Centola, 2010). In this case, Japanese YouTubers and Hong Kong Feng Shui masters acted as super-spreaders. Their content based on the manga "*The Future I Saw*," attracted massive attention, amplifying the spread of rumors.

The prediction of the megaquake on "*The Future I Saw*" was silent for many years. The author of the manga, Tatsuki, never gave exact dates or locations. For the 2011 disaster, she only wrote *"abigcatastrophe in March 2011"* in her dream diary. Still, this made her famous. Predicting another major disaster on July 5, 2025,she said that a tsunami three times bigger than 2011's could hit Japan and adjacent countries like Indonesia, Taiwan, and the Philippines. Her book describes that the southern sea of Japan is boiling with bubbles, which some believe means an underwater volcano explosion. The involved area connects Japan, Indonesia, Taiwan and the Northern Mariana Islands (The Guardian, 2025).

In recent years, it was raised by a Japanese YouTuber, attracting many online creators to produce relevant content, which began to spread online around 2023, especially in 2025. Then, there was a rapid surge. At present, there are more than 1,400 Japanese videos related to the keyword "July 2025" on YouTube, with a total number of views of more than 100 million. Afterward, earthquake rumors began to be translated into English and other languages to spread abroad, among which the most popular were in Chinese-speaking areas, mainly concentrated in Hong Kong and Taiwan. There are more than 220 traditional Chinese YouTube videos discussing earthquake rumors, with a total of more than 52 million plays (The Standard, 2025a). After the earthquake in Myanmar in March, rumors were stirred up again. Subsequently, this wave of videos also invaded TikTok, with contributions in English, Thai and Vietnamese one after another, with more than 2 million views (Ewe, 2025; de Graaf & Muros, 2025). In April, online media in India, Indonesia, the United Kingdom and Spain also began to report.

Such a rumor attracted great attention and led many tourists to choose to cancel their trip to Japan. This rumor has been shared across various languages on the Internet and has resulted in unnecessary panic without scientific basis. People are spreading rumors online and on television about a huge disaster hitting Japan. This has caused fear, and many are canceling travel plans. More than 1,400 videos about this forecast are dispatched online in different languages, with over 100 million views.

Confirmation Bias and Reinforcement (Strengthen the Contagion)

SCT acknowledges that pre-existing beliefs and network structures can reinforce contagion. Confirmation bias (Wason, 1960) – seeking and sharing information confirming pre-existing beliefs – acts as a powerful reinforcement mechanism. In the context of the Japan earthquake rumors, individuals who already believed in the manga's predictions were more likely to share and amplify related content, reinforcing the spread of misinformation. They also tend to interpret relevant content in the way that matches their pre-existing beliefs.

An external event inadvertently acted as reinforcement that further fueling the rumor. The Chinese Embassy in Tokyo issued a routine natural disaster advisory on 14 April 2025. The Chinese embassy posted a warning telling Chinese citizens in Japan to prepare for natural disasters and register with the embassy. However, this was not because of Tatsuki's prediction (Korea Joong Ang Daily, 2025). It was based on a Japanese government report about possible earthquakes in the Nankai Trough, a fault line near Japan's Pacific coast. The warning came after this Japanese government report on 31 March 2025 (The Macao News, 2025). Although this is intended as a general preparedness guidance, it was misinterpreted as confirmation of the rumor after the Japanese government announcement on long-term seismic risk. This warning

accidentally increased fears about a possible earthquake in Japan, demonstrating how ambiguous information can be contorted to fit the existing contagion narrative within susceptible groups.

The Japanese government stated that science cannot predict exact earthquake times or locations. There is no credible prediction existing for July 2025. The only supported scientific forecast is a probability of 80% that an earthquake in Nankai Trough occurs in 30 years (The Japan Times, 2025). But this is a general estimation based on tectonic activities without specific dates. Social media rumors should not hurt tourism. The Japanese government urged people to ignore the rumors and visit Japan. The rumors are false, and they only make people nervous to create other dangers (Nippon.com, 2025).

Japanese experts have long warned about earthquakes in the Nankai fault. A major earthquake there could kill up to 298,000 people and affect cities like Kobe, Osaka and Nagoya. But they claim it will not happen soon, just an 80% chance in the next 30 years. Another possible earthquake (magnitude 8.8 or larger) might happen near the Chishima Trench, but experts say it is not about to happen, just a 40% chance in the next 30 years (The Standard, 2025b).Even scientists cannot predict earthquake dates precisely. Visiting Japan on 5 July 2025 is no riskier than any other day. Tatsuki's manga does not use real science and only spreads fear. Japanese officials called the rumors a big problem and asked people not to believe them.

Anonymity and Recommendation Algorism (Network Structure & Transmission Boosters)

Social media algorithms prioritize engaging content, actively boosting rumor visibility. Major social media like YouTube's recommendation system pushes content to interested users to create filter bubbles, and reverberate chambers that strengthen current beliefs and provide users with more similar (mis)information (Tufekci,2018).This algorithmic curation acts as a powerful transmission booster, ensuring repeated exposure that reinforces the contagion (confirmation bias) and accelerates spread within homophilous clusters (Del Vicario *et al*., 2016).

Furthermore, the anonymity prevalent on social media platforms reduces accountability (Moor *et al*., 2023; Postmes*et al*., 1998). This lowers the perceived cost of sharing unverified or false information, effectively removing a barrier to transmission and enabling the contagion to spread more rapidly and widely than in identifiable settings.

PROPAGATION OF RUMORS: PSYCHOLOGICAL MECHANISMS

SCT incorporates psychological factors, particularly emotional and normative influences, as core transmission mechanisms driving the contagion process. These factors explain individual susceptibility and motivation to acquire and transmit the rumor. The psychological factors identified by SCT played a crucial role in the spread of the rumors. These factors emphasize the role of emotional and normative influences in the propagation of information.

In 1991, a rumor spread in the African American community. It said that a soda brand, Tropical Fantasy, was made by the Ku Klux Klan. The rumor also claimed the soda had a special formula to make Black men sterile. This was false. But because of the rumor, soda sales dropped by 70%. People even attacked the company's delivery trucks (Levinson, 1991). How do rumors like this spread? Why do people believe them, even when they are not true?

Psychologists define rumors with four key traits (Allcott & Gentzkow, 2017):

- They give information. Rumors are not just opinions. They claim to share facts.
- They spread. If one keeps a belief to himself, it is not a rumor. Rumors must be shared.
- They are unverified. If something is proven true, it is not a rumor. For example, if a couple post a baby photo online, saying they had a baby is not a rumor. It is confirmed.
- They matter to people. Rumors answer important questions. For example, if people think their jobs are at risk, they will share rumors about layoffs. Rumors help people make sense of confusing situations.

It is found that importance and ambiguity as two important factors (Allport & Postman, 1946). When the rumor is more important and more ambiguous, it spreads more seriously. Rumors spread when the topic is important. If a rumor affects people, they are more likely to share it. When the rumor is not clear, it becomes easier to explain something with the rumor. The purpose of rumors is to socially express hopes and fears and they are collective interpretations of reality (Peterson& Gist, 1951). People share rumors to gain friends or respect. If someone likes a group, he may share good rumors about them. Oppositely, if someone dislikes a rival group, he may share bad rumors about them.

Fear-drive content disseminates rapidly (Emotional contagion)

SCT recognizes emotions, particularly high-arousal states like fear and anxiety, as potent vectors for contagion (Berger & Milkman, 2012; Goldenberg et al., 2001).It is more likely to share emotionally charged content.

Rumors are common in human society and people create and spread rumors for various reasons. Because of emotions, uncertainty, and fear, people create rumors (Prasad, 1935). When people do not know what is happening, they make up explanations. People share rumors when they are anxious. Fear makes rumors spread faster and anxious people share more rumors. Rumors spread when people are uncertain, anxious, or want to feel important (Pröllochs, Bär & Feuerriegel, 2021). They fill in gaps when real information is missing (Vosoughi, Mohsenvand, & Roy, 2017).This directly links psychological states to increased contagiousness and susceptibility within the SCT model.

The Japan earthquake rumors evoked intense fear and anxiety about a catastrophic event, significantly increasing their contagiousness and driving rapid dissemination through social networks via emotional contagion mechanisms. When uncertain about future threats, individuals seek information to reduce anxiety. Misinformation often fills this void, leading to rapid dissemination (Prasad, 1935). The fear of the predicted earthquake created a high-anxiety environment, making individuals highly susceptible to acquiring and transmitting the rumor contagion.

Social Currency and Social Identity (Normative Influence & Group Contagion)

SCT emphasizes the role of social norms and group identity in transmission. Sharing rumors can provide social currency – attention, respect, or a sense of being informed (Bandura, 1977). On social media, sharing can yield rewards (likes, shares), motivating dissemination. This operates through normative influence, where individuals share to gain approval or avoid disapproval within their network (Turner et al., 2021).Political sociology suggested that rumors are related to institutional and cultural contexts. Power dynamics create rumors as the outcomes of competing interests. On social media platforms the spread of misinformation can make profits because of the increased views. Online users spread sensational rumors to draw attention of others because rumors usually attract people emotionally. Some governments may spread rumors for political advantages when rumors may change the mind of people and affect their decisions.

Social identity processes are central to SCT's understanding of group-based contagion (Turner et al., 2021). Individuals define themselves through group membership. Sharing rumors related to the Japan earthquake, especially within groups focused on disaster preparedness, spirituality (e.g., belief in Feng Shui), or regional identity (e.g., Hong Kong communities), can reinforce group bonds and identity.

Social norms and group dynamics also contribute to the spread of rumors. Individuals may share misinformation to conform to group expectations or to gain social validation (Peterson & Gist, 1951). Individuals define themselves in relation to their social groups and rumors can become a tool for social bonding (Turner *et al*., 2021) in social media. Japan earthquake rumors and the emotional experience sharing can be a social currency on preferred online community, used to reinforce group identity and strengthen group ties.

Social psychology suggests that individual and group behaviors are related to rumor creation (Guess*et al*., 2023). Identities and biases of people affect belief in rumors. People of a group tend to spread and believe favorable rumors while people in an opposing group likely spread harmful rumors. People spread rumors to feel important because sharing rumors can make oneseem smart or well-informed. It can also make one feel better about his own group (Wang, Yang & Xi, 2018). For example, spreading bad rumors about a rival group can make one's own group look better. Social pressure enhances rumor spreading and sharing and conformity makes people spread rumors.

Network science suggests that communication among people socially affects belief in misinformation (Tu*et al*., 2023). Novel misinformation can spread faster than real information because people like to share noteworthy things, no matter if it is true or not (Lawson, Anand & Kakkar, 2023). People spread rumors when they believe them. If a rumor sounds crazy, people will not share it. But if it seems possible, it spreads. Computational tools may be applied to detect rumors based on some common features (like the specific textual pattern) found in rumors (Chierichetti, Lattanzi & Panconesi, 2011; Shelke & Attar, 2019).

STRATEGIES TO COMBAT RUMOR CONTAGION ON THE INTERNET

SCT provides crucial insights for designing effective interventions to disrupt the rumor contagion cycle. The Internet spreads and disperses information is undisputable in society but rumorsare also spreading in the same manner. It is an important channel in which people spread misinformation through blogs, web pages and social media (Yu*et al*., 2021). People cannot disregard the usage of information technology that assesses others' viewpoints discussed on the Internet to affect public attitudes. It is possible to collect and analyze rumors and prevent their spread. Inquiry logs and comments of social media can be studied to realize the causes of misinformation (Kim, 2018). Frequently collecting these data is required for analysis. Messages from relevant social media influencers should be checked regularly. Logs can trace circulation of rumors and their spread over time. Lastly, it is helpful to recognize what queries are asked by the public to prevent the relevant rumors from spreading (Kim*et al*., 2023).

A government may prevent the spread of online rumors. There may be several responses to rumors, including development of effective communication strategies, fostering media literacy, implementation of legal frameworks to address harmful online content (Agarwal, Aziz & Zhuang, 2022; Dubois, Rucker & Tormala, 2011).

The government should promptly respond to rumors and provide accurate information to counter them. Various channels like social media, websites and local media can be used to directly communicate with the public and address their concerns. It is necessary to ensure that disseminated information is correct and based on reputable and trusted sources

(Hosni, Li& Ahmad, 2020). Meanwhile, the government should develop mechanisms to recognize and debunk rumors with online platforms and community-based structures. Effective corrections require clear, detailed rebuttals, alternative explanations, and alignment with the audience's worldview (Lewandowsky et al., 2012). The government may collaborate with appropriate influencers like community leaders and experts to effectively address rumors and reach diverse audiences.

It is necessary to promote media literacy and encourage critical thinking about online information and identify credible sources. The resources should be provided to educate the public to help them to understand the harm of misinformation and rumors (Ji, Yan & Yu,2020). Media literacy should be incorporated into the school curriculum to develop these thinking skills in students.

The government should enact laws to address rumors and other harmful content and work with social media companies to develop guidelines for preventing the spread of rumors and addressing misinformation. Digital responsibility should be considered to hold individuals and companies accountable for spreading misleading and harmful content online (Greenhill & Oppenheim, 2017).The government should develop measures to monitor the spread of rumors and assess their impact on society. The effectiveness of interventions should be evaluated to make necessary adjustments of various strategies for combating rumors (Chua*et al*., 2017; Fu & Sun, 2021).

CONCLUSION

The propagation of earthquake rumors in Japan in 2025 serves as a compelling case study for understanding digital misinformation dissemination through the robust lens of Social Contagion Theory. SCT effectively illuminated the interconnected social and psychological mechanisms driving this contagion: the uncertain environment heightening susceptibility, super-spreaders (YouTubers, Feng Shui masters) injecting and amplifying the rumor pathogen, algorithmic amplification creating reinforcing echo chambers, confirmation bias strengthening belief within clusters, anonymity lowering transmission barriers, fear acting as a potent emotional vector, and social currency/identity motivating sharing within specific groups. This multi-faceted analysis underscores SCT's explanatory power.

There are various reasons for rumors about earthquakes in Japan have emerged. The first motivator is the manga *The Future I Saw* that predicts a future earthquake and triggers public anxiety and uncertainty regarding natural disasters. Rumors on megaquake were originally spread on the Japanese channel with urban legends. Then, there are many videos on YouTube that use traditional Chinese characters to describe disaster predictions in Japan. The Chinese embassy in Tokyo warned citizens to prepare for natural disasters. This warning accidentally increased fears about a possible earthquake in Japan. This phenomenon highlights how rumors can serve as a coping mechanism during crises.

Social media have significantly amplified the spread of these earthquake rumors. Videos and posts sharing the predictions of the manga have accumulated over 100 million views and this shows that social influence and the credibility of rumor spreaders contribute to swift dissemination. Travelers, especially those from Hong Kong, have canceled their trips and Feng Shui experts also warn that a major disaster will occur in Japan and advise people not to go there. All these further propagated the rumors.

The rumors have had noteworthy consequences for individuals and communities (Jia, Ruan& Zhang, 2017). There is increased anxiety among potential travelers and a significant decline in tourism. Travel bookings to Japan during peak seasons have dropped to half of previous levels. Rumors can cause emotional distress and economic disruption (Ghosh, Das & Das, 2023).

Effective strategies provide credible information and address the public's underlying anxieties about natural disasters to counter the rumors. The Japanese government's warnings about potential earthquakes along the Nankai Trough can clarify the situation. With the existing scientific level, it is impossible to predict the specific time, scale and location of earthquakes or volcanic eruptions. There is no scientific basis for prediction. Engaging with those spreading rumors is also crucial in mitigating their impact. It is suggested that everyone should take the premise that disasters may occur at any time, take precautions and prepare for the future. The attitude is the key to reducing the risk of disaster.

Japan is an earthquake-prepared country. It has emergency protocols, early warning systems and strict building codes. Travelers should trust official sources of information but emotional claims. It is necessary to focus on long-term seismic preparedness and stay informed with real-time alerts. Decisions should be based on scientific evidence, instead of unproven rumors. But this incident shows how misinformation can outpace real information in the digital age.

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