

Analysis of Online Rumors during Covid-19 Pandemic

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Abstract. During the Covid-19 pandemic, real and false information mingled. This resulted in audiences being unable to identify correct information and take effective action on it on time. Internet rumors can disturb people's emotions while damaging the government's credibility and reducing social trust. Internet rumors have fast-spreading characteristics, low cost of rumor creation, and strong concealment. It also has distinct structural and content characteristics. Information demand increases during a pandemic, and the public wants more information to safeguard life and prevent disease and has different levels of discernment about information. Rumor mongers create social chaos to achieve economic comeback and pathological psychological factors. The multi-channel development of new media facilitates the circulation of rumors. The legal system's imperfection gives spreaders opportunities to take advantage. These reasons increase the difficulty of regulation. This paper analyzes rumors' linguistic characteristics, causes, and effects. The authors focus on improving users' awareness of the law and responsibility, social media platforms to strengthen supervision, and actively advocating for users' correct use of information and participation in online supervision. Authoritative organizations improve laws to punish rumor makers and provide timely and practical information in three areas of recommendations to govern the spread of rumors and build a healthy online information environment.

Keywords: Online Rumor, Covid-19, Characteristics, Emotion.

1. Introduction

With the development of the Internet, audiences have more channels to obtain information, among which online media platforms have become the main way to obtain information during the pandemic. The development of digital media has facilitated information sharing, and people can gather across time and places to interact and share information. However, the rapidly evolving Internet has also made rumors easier and faster to spread. Rumors are unconfirmed information and hearsay. It may be fictional, fabricated, and deliberately distorted content. The spread of rumors builds the public's cultural beliefs and attitudes [1]. Rumor propagation is misleading and socially social, and people's behavior and social environment may influence the process of rumor propagation [2]. Rumor propagation is formally divided into false information and misinformation [3]. A social environment conducive to the survival of rumors occurs when public interest in an event and a lack of authoritative information [1]. The existence of rumors is an abnormal or pathological common-sense assumption that causes tension and misunderstanding among the audience and hinders effective information dissemination. In the context of the Covid-19 pandemic, rumors reduce mental health status and interfere with disease diagnosis, prevention, and treatment processes [4]. Differences between people lead to different abilities to identify online rumors, and the level of education and ability to recognize information can influence people's reactions to rumors [2]. The high public demand for health information and the wide range of online information sources makes it difficult for users to identify them. Incorrect handling of rumors can cause social panic. As a platform for pandemic audiences to obtain information, the Internet is of great significance in studying the causes and solutions of rumor transmission for maintaining social stability and security.

In this article, the author analyzes the characteristics, causes, and effects of rumor spreading through the content of online rumor information during the Covid-19 pandemic. Finally, this research proposes corresponding measures to solve the problem. The paper proposes measures to build a healthy environment for effectively transmitting correct information and reducing social panic.

2. Characteristics of rumor spreading

2.1. Speed of spreading

The first linguistic characteristic of rumors is their speed of transmission. Rumors spread as fast as an epidemic virus, spreading quickly and covering a wide area [5]. Social networks are becoming more and more average, which allows rumors to spread widely in a short time [6]. With the development of technology and network coverage, the speed and spread of rumors are also rising. Social psychologists have found that rumors often become rumors based on allegations and questioning based on circumstantial evidence that multiply rapidly in a short period when there is a shortage of authoritative information in information channels [7]. Because people eagerly seek information, true and false information are blended, and the truth is covered in rumors. Rumor passers have a short attention span [7], and after creating false news is published, they start creating new rumors after a moment of attention to the content. Describing some unknown truth requires a rapid creation process to gain the audience's attention, and rumors flourish as the number of messages increases.

2.2. Low cost of rumor creation

The anonymity and openness of the Internet provide easy access to users. Anyone can post statements and disseminate unverified content using a mobile device connected to the Web. The cost of disinformation is extremely low, referring to information fabrication's economic and time costs [5]. These inaccurate contents mislead the audience and put more pressure on truth diffusion. For example, the rumor monger posted 100 new cases of infection in Shanghai. The Shanghai government needs to investigate the source of the rumor and issue an official statement to stabilize social panic. The rumor monger could change the location of the rumor to "Beijing," and the content would be something like this; 80 of the passengers transferring from Shanghai to Beijing are close contacts of the newly infected patients in Shanghai. The rumor maker can change the data and make minor changes to the false content at will, but eliminating this false information requires more effort from the government and relevant departments.

2.3. Concealment spread of rumors

With the development of technology, information is disseminated and accessed in a way that is no longer one-sided output. Previously, it could be transmitted through oral and written letters. However, now it can be shared through video and multi-platform information, which has increased the task of information filtering to some extent. The audience can use a variety of channels and forms, such as Weibo, WeChat, links, and pictures, to spread false content. The control of false information occurs after the information is disseminated with a certain lag. The multi-platform dissemination of personal anonymity makes it difficult to trace user information, and the task of pursuing legal responsibility is heavy.

2.4. Rumor content structure characteristics

The study found that rumor spread has obvious structural characteristics in content and information channels. Compared with a structurally sound and dense network structure, a sparse network structure is susceptible to social fragmentation of media, which facilitates the survival and mutation of rumors [7]. Compared with traditional media, rumors have more power on the Internet [6].

To prevent rumors from being exposed, rumors are generally short in sentence form, usually not exceeding 200 words, and use exclamation points and pictures to draw attention to them [8]. In addition, rumors have a similar sentence structure, use highlighted statements, and frontload the event's outcome to gain the audience's attention. For example, do not eat poultry; animals carry viruses that cause infection [9]. These contents quickly capture the attention of the audience and are quickly forwarded.

2.5. Content characteristics of rumors

From oral transmission to online circulation, the content of rumors has two major linguistic characteristics; confusing and inflammatory [9]. Rumor spreaders usually imitate accurate data to fabricate false numerical evidence to make the audience visualize the impact of the virus. In contrast, by adding inflammatory words to the content, such as (urgent, important, and dangerous), the spreaders exploit public psychology to create social panic. According to the analysis of the main false contents of Covid-19, it is found that its information structure contains both input and output. The output refers to the fact that Covid-19 testing sampling can cause permanent damage to the throat and that the sampling process carries the risk of infection. The false input information is that vaccines are harmful to the body. There are also rumors distributed on items connected to people or related to vaccination. For example, pets are pathogens; Covid-19 donated vaccination supplies are not distributed in a rational way and other forms of content.

3. Causes of the spread of rumors

3.1. Spreader's perspective

Some spreaders seek to enhance organizational interests and commercial value. Some pharmaceutical companies, for example, advocate that their drugs are effective in preventing infection, provoking the masses to buy them, and reducing the economic impact of the pandemic on the company. To vent their bad feelings or dissatisfaction with society, some communicators publish false content and create social crises through the Internet to achieve psychological satisfaction. For example, centralized treatment hospitals for infected viruses are concentration camps, and people who go there are treated centrally. Similar rumors exploit the public's fear of disease and unknown territory and are unethical.

3.2. Demand for information and the spread of rumors

Covid-19 spreads quickly and dangerously, and this virus concerns everyone's life and personal interests. In the case of secure information, the limited public content has dramatically increased the number of rumor spreaders and information [10]. The Alpert study found that rumor (R) = event importance (i) × event ambiguity (a) [9]. Event ambiguity is a major element in rumor generation. The public usually misinterprets rumors as facts without their knowledge and keeps amplifying and passing them on. The speed at which rumors spread requires a certain population base, and differences among people and some of their attributes, education level, and ability to recognize information may influence their decisions when they hear rumors [2]. The public has no tangible factual proof of what is being spread, and sharing false content without screening the information and following the crowd ("following the crowd") creates an environment conducive to the spread of rumors. Truth spreads faster than rumors, and the cost of maintaining facts is higher than rumors and takes time [10]. The truth requires time and process to investigate things, while rumors do not need to be based on the truth. In the process of fact verification, rumors occupy a certain space for development, and it costs more to eliminate falsehoods and advocate facts.

3.3. Peer communication and rumor spreading

Information transmission by peer communication is an essential factor influencing audience attitudes and behaviors [11]. Information transmission among social network users directly affects the closeness between users. The higher the closeness between users, the wider the rumors spread, which also tend to rise dramatically [12]. When individuals communicate with their peers on the topic of "COVID-19", negative information is four times more persuasive than positive information. Other studies have also shown that people tend to pay more attention to negative information than positive information [13]. When the information base is not perfect, information related to people's lives is more likely to spread [2]. For example, in the case of the Covid-19 pandemic, there was news that

the "Shuanghuanglian" oral solution could effectively prevent the virus infection. People snapped up Shuanghuanglian online and offline at one time. It was later confirmed that this medicine is just an ordinary cold medicine and has no effect on infection prevention. When rumors emerge, it needs to be tested by science and time whether such drugs have the effect of preventing infection by counteracting the rumors, which often requires a specific process, in which the low level of audience's ability to handle crises and identify information leads to the continuous spread of rumors.

3.4. Legal aspects

A large part of the general rumor generation is due to loopholes in current laws [14]. The law requires a rigorous process for determining the harmfulness of the content of rumor spreaders and the corresponding penalties. Whether the rumor maker's behavior is intentional or negligent, at this time, rumors are already harming the social order, and the corresponding legal measures are not implemented, which caused the development of rumors.

4. Effects of rumor spreading

4.1. Rumors and emotions

During Covid-19, people tend to believe that the information obtained from peer communication influences individuals' perceptions and behaviors about diseases [11]. The Internet is a complex and well-defined environment with rapid information updates, a wide range of information, people achieving information interaction online, and a clear division of labor. Each of these actors affects the structure of rumor networks [7]. Rumor spreaders transmit relevant information to the group and play messengers' jobs. Skeptics express doubts about the veracity of the information and hold dialectical thinking. Internet users, who lack scientific knowledge, constantly transmit false information, which constantly changes the transmission process and loses its value. With the continuous development of new media, people share rumors online to relieve their emotional tensions [15], and this behavior causes social instability. A study based on laboratory interviews showed that rumor transmission dominates negative audience emotions such as anxiety, uncertainty, gullibility, and involvement related to outcomes [7].

Due to the lag and asymmetry of information, exaggerated and fabricated online rumors about the audience's life take advantage of the situation. The harmful content generates reactions that affect personal actions, aggravating public panic and disrupting social life. In social psychology, groups are more likely to believe in rumors than individuals due to the implication and emotional contagion between groups, expanding the spread of false information [14]. This "butterfly effect" is a potential crisis risk for social stability.

4.2. Rumors and Social Credibility

The concealment of rumor publishers and the dispersion of rumors make it difficult to identify the sources of information and make online monitoring more difficult. At the same time, public cultural beliefs and attitudes are built up through rumor transmission [1]. Inaccurate reporting of health crises and untimely control of information on online platforms can exacerbate uncertainty and public mistrust in public health events [10], undermining the excellent trust relationship between the government and the public [14]. On the other hand, some studies have demonstrated that different rumors may interact with each other, and information interacts with each other [6], leading to increased difficulties in information identification. When new rumors appear, people may shift their attention or combine them to derive new rumors, which are constantly amplified, causing rumors to spread and escalate into social crises.

5. Solution Measures

First, as an audience, raise their legal and responsibility awareness, stay sensible about unofficial official news, establish dialectical thinking, and do not pass on rumors. Actively participate in online discussions and activities of reporting false information to build a healthy online environment.

Secondly, as an online media platform, it should establish a sense of responsibility, set up a false information filtering system, and strengthen supervision work. Classify and summarize the content of rumors and publicize the characteristics of false information to help audiences raise their awareness of information management. Establish real names for online speech to make participants responsible for their freedom of expression and reduce the management burden. It also increases reporting channels to facilitate feedback on inaccurate information and malicious users. Users who publish inaccurate content are warned and banned by the platform, and those who report successfully receive rewards such as points and network security officers.

Finally, relevant governments and organizations should improve laws and regulations to impose specific penalties on rumor spreaders to warn society and bad users. Rational communicators can waver due to the lack of authoritative release [10]. Internet rumors have room for survival due to the lag in the publication of official authoritative and authentic information [5]. The government's information disclosure system needs to be optimized and efficient, and the facts of the case investigation should be announced as early as possible. After the official organization investigates and reveals the actual situation, the scope and scale of rumor spreading will be controlled to a certain extent. At the same time, authoritative information released by the officials can effectively and positively guide the awareness and behavior of the audience, reduce their tension, help them get through the social crisis, and compress the space for the development of rumors.

6. Conclusions

During the pandemic, information data mingled, network communication provided convenience for users, and rumors as a form of information brought significant challenges and influenced the spread of real incidents. The author needs to continuously study all aspects of the characteristics and causes of rumors, develop targeted solutions, and continuously optimize the network system to provide users with a safe, trusted information resource platform.

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