

# An Overview of Research on Internet Rumor Spread in Social Security Emergencies

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## Abstract

**This article reviews the research on information dissemination, network rumors dissemination and social security emergencies.**

## Keywords

**information dissemination; network rumors dissemination.**

## 1. Introduction

In recent years, with the continuous development and progress of network technology, the network has been widely used in my country's economic, political, social, cultural and other fields. At the same time, the Internet has gradually become a part of people's lives, playing an increasingly important role, and the dissemination of information has gradually shifted from the previous forms of newspapers and oral propaganda to the Internet, through the convenience and rapid spread of the Internet. With characteristics such as sex, information is spreading faster and faster among people, and the environment for information dissemination has become more complex.

## 2. Overview of Information Communication Research

Since ancient times, human beings have been good at using information to complete various social activities. The dissemination of information is reflected in all aspects of people's lives. In this evolutionary process, information has gradually complicated the relationship network between people and society. The emergence of the academic concept of information communication and was widely used by people at the end of the 19th century, after communication became an independent subject, scholars at home and abroad have indeed different definitions of information communication. Rxhani K puts forward: "Information dissemination is the sharing of information for people to adapt to their environment", and its content focuses on the function and purpose of information dissemination [1]. Wei J and other scholars proposed that information can be disseminated through individuals or groups, and networks with strong and weak relationships between individuals and between individuals and groups promote or inhibit information dissemination, and its content focuses on the process of information dissemination [2]. Domestic scholar Guo Qingguang defines communication as the transmission of social information or the operation of social information systems [3]. Shao Peiren believes that communication is an activity in which humans exchange information through symbols and media in order to change accordingly [4]. Although scholars at home and abroad have defined information dissemination from different perspectives, there are many things in common: first, information dissemination reflects the communication relationship among a series of communication elements such as the disseminator, communication channel, and receiver; Second, the diversity of information dissemination channels, including but not limited to text, pictures, sound, video, etc.; third, the dissemination of information is a dynamic, structured process with a feedback mechanism; fourth, the dissemination of information is

time-effective, and information Not only appear anytime and anywhere, but also iterate quickly, and outdated information will be eliminated by people.

Facing the increasingly complex network and social environment, many domestic scholars have conducted research on information dissemination from different angles according to their own backgrounds. On the basis of summarizing the modes and characteristics of information dissemination in platforms such as Weibo and WeChat, Liping Cai proposed the characteristics of rapid, diverse and complex information dissemination in the new era [5]; Wang Qiyun believes that in the Web 2.0 environment The sharing of technology makes the dissemination of information become decentralized[6]; Wang Xiuli believes that with the advent of new technologies and new media, the definition of the role of the disseminator and receiver of information is becoming more and more blurred, and the dissemination of information is gradually changing. Three-dimensional and networked transformations [7]; Li Chunhua, Long Houzhong, etc. used crisis communication and crisis management thoughts, combined with diversification and crisis management related theories, and proposed an information dissemination model that combines government, media and the public [8]; Li Weijie and Bao Hongyun believe that topic orientation plays a key role in the process of information dissemination and can determine the direction of information dissemination to a large extent [9]; Zhang Yajie is gradually moving towards network and high-speed information dissemination channels. The characteristics of transformation have summed up the mode of information dissemination in the new era, that is, the "face-to-face" information dissemination mode. Research on the mechanism and model of information dissemination [10]; Zheng Junjun, Yan Long, etc., based on the path and principle of individual information dissemination of environmental pollution mass incidents, and combined with dynamic optimization theory to build a behavioral information dissemination model for better Solving environmental pollution group incidents pointed out a new direction[11]; Hu Jiming conducted in-depth research on user relationship information dissemination mechanism and network information dissemination model, and based on this, proposed a socialized information dissemination model [12-13].

To sum up, with the continuous development of network technology, the dissemination of information is gradually developing in the direction of diversification, decentralization, three-dimensionality, networking and convenience. The single mode of information dissemination in the past will be gone forever. The participants involved in the process of network information dissemination are more diversified, and the role of the main body in the process of information dissemination is more obvious, and the iteration of information in the cyberspace is stronger. Therefore, the change in information dissemination makes the government and related units the control in the field of information dissemination is gradually decreasing. If negative effects occur in daily life and the government and related units cannot speak up in time, then the trend of public opinion changes in the entire cyberspace will only become more uncontrollable, and its impact in society the extent is also unpredictable. Of course, the dissemination of positive energy information will make the scope of dissemination wider, the benign influence on netizens will be better, and the cyberspace will become healthier.

### **3. An Overview of Research on Internet Rumor Spread**

At present, the research on Internet rumors mainly focuses on the study of the characteristics and laws of transmission. Among them, there are three main perspectives in the study of the characteristics of the spread of online rumors. First, analyze the characteristics and laws of the spread of Internet rumors from the evolution process. Using grounded theory, literature analysis, network observation, life cycle analysis and other research methods, construct a conceptual model of the evolution process, and divide the evolution stages of social risks

induced by Internet rumors. It is proposed that network rumors have the characteristics of instantaneity and governance delay, and the propagation process has the characteristics of immediacy, simultaneity, and extensiveness [14-17]. Second, analyze the characteristics of the spread of Internet rumors from the subject and object of communication. According to the transmission process of network rumors, it is proposed that the main body of network rumors has the characteristics of anonymity and role generalization; network rumors have the characteristics of fluidity, diffusion, interaction, and long-term existence, and the information content is random and negative. Features such as sex, fragmentation of information form [18-20]. Third, analyze the characteristics and laws of the spread of online rumors from the dissemination carriers. It analyzes the dissemination characteristics of online rumors under different carriers such as online social networks, mobile social networks, and social media in the big data environment, and proposes online rumors in online social networks. It is a "one-to-many" unidirectional, broadcast, and fission-type communication, with the characteristics of autonomy, interactivity, immediacy, explosiveness, etc.; Internet rumors in mobile social networks are information fission and loop nested transmission. It has the characteristics of complexity, non-linearity, low cost of communication, and irresponsible anonymous publishing; the spread of social network rumors in the big data environment has the characteristics of diversity, randomness, fragmentation, and crowd dissemination [21-22].

Some scholars have also used other methods to study the rules of spreading online rumors. D.J. Daley and D. GKendall proposed the DK model and began to study the rumor spreading model [23]. In the process of studying rumor spreading, Zanette considered building a rumor spreading model based on small-world networks on complex networks [24]. Moreno Y et al. established a rumor spreading model based on scale-free networks [25]. Domestic scholars Wang Xiaofan, Pan Zaofeng and others [26-27] also explored the influence of network coefficients on network rumors. The establishment of these models provides new ideas for the research on the spread of online rumors. Wang Hu [28] and others passed After the occurrence of the "Plastic Laver" incident, research on the release, influence, form and content of relevant subjects' information to refute rumors in the incident, as well as the text analysis of netizen comments, and the existence of various subjects in the process of refuting rumors on food safety networks Analyze and evaluate the problems, and put forward corresponding suggestions; Bai Zhongying [29] and others analyzed the connotation characteristics of online rumors, incubation stations, transmission mechanism, interpersonal trust and other issues; Zhang Jinhua [30] and others introduced the prospect theory into the three-party evolutionary game analysis process of online rumor supervision, and used the replication dynamic equation to analyze rumours. The three-party game strategy selection of operators, network platform operators and the government, and countermeasures and suggestions for the supervision of network rumors.

In summary, scholars at home and abroad have conducted quantitative and qualitative research on Internet rumors from multiple perspectives, using a variety of methods, and analyzed the basic characteristics and propagation rules of Internet rumors, which contributed to the research of this article. Certain basic online rumors, as a kind of information dissemination, are not much different from information dissemination in nature. When online rumors appear, rumors will flood the entire cyberspace. Most online rumors not only spread quickly, but also show explosive spread. They spread widely. They can easily cause panic, curiosity, and anxiety among netizens, and cause great loss of interest to the subjects or groups involved. It will damage the positive image of the government and reduce its credibility. However, the Internet rumors mentioned above are basically the study of the communication model under normal conditions. In real life, the high frequency of Internet rumors is mostly in emergencies. Due to the suddenness and uncertainty of emergencies, a large number of Internet rumors are flooding

the cyberspace, so further research on the emergent incidents on the Internet rumors has begun.

#### **4. An Overview of Research on Internet Rumor Spread in Social Security Emergencies**

In the study of online rumors of emergencies, some scholars have also conducted research and analysis from multiple angles. Among them, Li Yongsheng [31] and others from the perspective of law, starting from the constituent elements of behavior, analyzed the internal logic of fabricating rumors and spreading rumors, as well as the causal relationship between rumors and social disorder; Zhang Huiping [32] and others constructed The conceptual model of online rumors in emergencies was used to identify the influencing factors of behavior intentions, and questionnaires were collected through online channels to conduct empirical research; Zhang Yuliang [33] et al. Compound spread, and conduct an in-depth analysis of the changes in its variables, and put forward targeted opinions on each spread mode; Yuan Guang [34] and others analyzed the reasons for the emergence of Internet rumors from the motives of Internet rumor makers and disseminators, and proposed response strategies from the three levels of the public, media and government; Su Hongyuan [35], etc. People used the clear set qualitative comparative analysis method to analyze 20 cases of online rumors generated in emergencies, studied the conditions affecting the spread of online rumors, and proposed a strategy for collaborative governance of online rumors; Zhang Peng [36] et al. Based on the early warning indicator system of online rumors, the BP neural network model is used to simulate the spread of online rumors, and the effectiveness of the model is verified with the case of "the attack on girls from Yitel Hotel", which has a certain effect on reducing public panic and enhancing government credibility effect.

Some scholars have conducted research on network rumors of emergencies, but they have also classified research on network rumors of emergencies. The main research object of this article is social security emergencies network rumors, according to the classification of social security emergencies It mainly includes major criminal cases, terrorist attacks, financial security incidents, large-scale group incidents, ethnic and religious emergencies, school safety incidents, and other serious social impact incidents. A search of relevant documents on HowNet found that: At present, most scholars focus on the spread of social security emergencies network rumors in school security incidents, and a small number of scholars have studied the network in mass incidents and financial security incidents. The spread of rumors.

The research on network rumors about school safety emergencies mainly analyzes the process of network rumors spreading in schools and emergency measures from the perspectives of legal ideological education, emergency response plans, and specific cases. From the perspective of law, Song Jinghua analyzed the legal relationship between universities and students, focusing on the legal principles, imputation principles and identification rules, and promoted the construction of campus security prevention mechanisms in universities [37]; Liu Zhixin analyzed the problems of the lack of risk research, analysis, and lack of participation of multiple subjects in emergency plans in colleges and universities, and proposed an optimization method for emergency plans to achieve a balance between scientific rationality and democratic value of emergency plans[38]; Zhu Min is in the context of governing the country and governing education by law , Believes that colleges and universities lack the awareness of the rule of law, lack of special legislation, unclear subject responsibilities, and unclear power boundaries, and put forward relevant suggestions [39]; Deng Linnan emphasized that the emergence of colleges and universities should be resolved with legal thinking, from system design, prevention mechanism operation and responsibility Establish a legal countermeasure system in terms of distribution [40]; Shao Changwei analyzed the problems of single management structure and

rigid system in the management of online rumors in colleges and universities, deeply analyzed the inducing factors, put forward relevant opinions, and improved students' prevention and management capabilities [41]; From the perspective of ideological and political education, Wang Jian analyzed its main characteristics from the harm caused by the rumors on the University Emergency Network, and proposed that the ideological and political education system should be further improved[42]; Kuang Suxun and others used the case of Taifu Middle School in Lu County As an example, this paper analyzes the communication characteristics and rules of network rumors in the entire incident, as well as the deficiencies of the government and universities in the face of emergencies, and puts forward relevant improvement suggestions on this basis[43]; Tang Xuemei and others also took the Luxian Taifu Middle School case as an entry point to elaborate on the characteristics of online rumors, and constructed a rumor-defying strategy framework from four aspects: rumor-defying main strategy, rumor-defying timing strategy, rumor-defying channel strategy, and rumor-defying content strategy. Improve the diversity and possibility of government anti-rumor measures[44]; From the perspective of the online spokesperson system, Su Ke analyzed the characteristics of the spread and impact of college emergencies in the new media environment, and proposed the establishment of a high-level early warning mechanism, team building and Opinions on improving media literacy, building an information sharing platform, and focusing on the daily management of online publishing platforms[45]; Feng Hongqi analyzed the characteristics of subjective arbitrariness, social proliferation, and obvious propensity of communicators in college emergencies. When dealing with emergencies, colleges and universities should pay attention to the three stages of the dissemination process of emergencies, and use different methods to guide the audience at different stages [46].

There are few researches on online rumors about mass incidents and financial security incidents, and most of them are qualitative researches. From a legal perspective, Chen Wei and others clarified the online rumor-type stakeholder incidents, and proposed the direction and guidance that should be updated in the criminal policy, so as to realize the precise construction of the theory of imputation [47]; Zhang Changqing and others analyzed the effect of online rumor in mass incidents. Dissemination mechanism, establishment of early warning mechanism, disclosure of information, sound management mechanism, etc. to stifle Internet rumors[48]; Zhang Yue and others analyzed the time, content, characteristics, and causes of Internet rumors through case studies, and proposed sudden mass incidents The governance of online rumors in China should establish a joint governance mechanism based on the concept of "government-led and social participation"[49]; Qian Xiandong put forward suggestions for improving the governance of online rumors in mass incidents through case studies[50]; Ding Ying combed through the incidents of online rumors in mass emergencies in Gansu in the past ten years, and put forward the four stages of the development of online rumors Governance countermeasures[51]; Zhang Hua and others started from the securities market, analyzed the harm of online rumors to the securities market, and proposed the concept of building a network rumors monitoring and analysis platform, so that online rumors can be quickly located and governed [52]; Kimmel et al. described how rumors often lead to the generation and dissemination in the business environment under the situation of information uncertainty and people's strong desire for real information [53].

## 5. Conclusion

In summary, the current domestic and foreign scholars' research on social security emergencies network rumors mainly starts from school security and mass incidents, which supports the research of this article to a certain extent. Although most scholars have studied the participants, dissemination factors, transmission rules, and governance plans of various dimensions of cyber

rumors in social security emergencies, most of the research on cyber rumors in social security emergencies is qualitative. Few scholars use quantitative research methods to analyze the dynamic process of social security emergencies network rumors, taking into account deeper influencing factors, and failing to consider the changes of network rumors at different stages in the process of spreading.

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