One Case Study of Public Opinion from Micro-blog: Perspective from Negative Public Emergencies

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Abstract: Using the Sina Micro-blogs related to the China restaurant assault as a source, this study explores the pattern of public opinion evolution related to negative public emergencies and the reasons behind it. This paper divides the public opinion development process into four stages according to the change of micro-blog volume, namely, the gestation period, the climax period, the fluctuation period and the recession period. It also analyzes the change of public opinion focus based on the high-frequency words in different periods. The study found that surveillance videos sparked outrage during the gestation period, and the controversy about gender opposition pushed public opinion to its peak. During the fluctuating period, conscious public scrutiny could maintain the heat of the event. At the same time, the fluctuating period also showed an obvious phenomenon of emotional infection and catharsis. In addition, this paper analyzes the first police notification micro-blog of this incident, and finds the worthwhile improvements of official government micro-blog accounts in responding to such incidents.

Keywords: public emergencies, Micro-blog public opinion, public opinion dissemination

1. Introduction

Emergencies are natural disasters, accidental catastrophes, public health incidents and social security incidents that occur suddenly, cause or are likely to cause serious social hazards, and require the adoption of emergency measures to deal with them [1]. At present, China is in a period of rapid development, the pattern of interests is constantly being adjusted, and public emergencies are frequent. Negative public emergencies often develop into hot topics of public opinion due to their characteristics of involving a wide range of groups, strong sense of agency, and obvious broken-window effect. If it is not handled properly, this kind of events will easily cause adverse social impact and jeopardize the credibility of the Government. As of September 2022, Sina micro-blog had 584 million monthly active users, making it an important platform of public opinion on emergencies. Taking representative events as cases, restoring the evolution process of micro-blog public opinion in negative public events will help relevant subjects summarize the rules, accumulate experience, and guide them in a more timely and effective manner.

Public emergencies have become a hot object of academic research because of their own characteristics and their impact on society. Sheng and Zhou analyzed the information dissemination path of public emergencies in the context of all-media [2]. Liu and Chen et al. analyzed the law of public opinion dissemination and evolution of similar events by taking the Tianjin Port explosion

accident as an example [3]. Ding and Lei selected 128 public emergencies as a research sample to explore the development of online public opinion on emergencies from an empirical perspective [4]. Combining with the theory of public crisis management, Wang analyzed the law and path of the evolution of public opinion from the perspective of new media [5]. Cui and Zhang et al. constructed a "six-stage" model of the life cycle of online public opinion development in public emergencies [6]. Liu and He proposed an information opinion evolution model for public emergencies based on dynamic diffusion networks [7]. Zhao combined empirical data and simulation experiments to study the case of killing a doctor in Wenling and established a model for information dissemination in emergencies [8]. Dong et al. argued that the dissemination of online public opinion depends largely on the emotions of netizens and proposed a model for predicting emotional dynamics in real time in order to make informed decisions ahead of time when public opinion crises develop rapidly [9]. Wang et al. studied the problem of identifying "self-media" opinion topics from the characteristics of "self-media" online opinion elements [10].

Most of these studies summarize the patterns embodied in the data and develop relevant models through quantitative methods, but they lack an exploration of the deeper phenomena represented by the patterns and the reasons for their emergence. The "China Barbecue Restaurant Assault" is a public incident with a high negative impact in 2022.According to the statistics of the Public Opinion Monitoring Platform of Uuwatch.com, as of 15:00 on June 21, 2022, the incident has generated a total of 1,950,756 related public opinion messages, with the participation of 106 important media.Sina micro-blog was the main communication platform for the event. According to the information from the Zhiwei Data platform, the data on Sina micro-blog accounted for 92.92% of the overall. The discussion volume of the event exceeded 15 million. The influence of the event exceeded 99% of social events. This paper analyzes the focus of micro-blog public opinion at different stages of the "China Barbecue Restaurant Assault" and discusses the reasons for the large public opinion impact of the event. At the same time, this paper analyzes the content and dissemination path of the local public security department's police notification for the incident. It explores the role of government micro-blog accounts in the dissemination of public opinion on negative public emergencies and provides ideas for relevant departments to respond to such events.

2. Data Sources

The data for this study are mainly from the Sina micro-blog platform. Relevant reports on China barbecue restaurant assault from public opinion monitoring platforms such as Zhiwei Data and Uuwatch were also referenced. The researcher collected relevant content on the Sina micro-blog platform on an hourly basis during the period of June 10th 2:40 (the event occurred) - June 14th 0:00 and collected more than 23,500 micro-blogs in total. After cleaning the data, 23,342 valid micro-blogs were obtained. Segmentation and word frequency statistics were performed on the hourly micro-blog text to determine the three high-frequency topic words for each hour after removing meaningless words.

In addition, the researcher captured the transmit data of the police notification micro-blog posted on June 10, 2022, by the political micro-blog account @Lubei Public Security Network Spokesperson and obtained 4,337 forwarding path information. For visualization effect, the author use Gephi software to plot the information of 1000 randomly selected forwarding paths into a propagation path diagram to analyze the propagation nodes and sentiments of this micro-blog.

3. Analysis of the Evolution of Public Opinion

3.1. Stages

According to the data from the Zhiwei Data Platform, the researcher categorized the development of micro-blog public opinion on the "China Barbecue Restaurant Assault" into four periods: gestation, climax, fluctuation and recession. Among them, the fluctuation period is further divided into four phases based on the scale of the discussion: high fluctuation, medium-high fluctuation, medium-low fluctuation, and low fluctuation. June 10, 2022, 2:40-16:00 is the period of formation of the event's public opinion, and the development of public opinion culminates at 16:00-17:00 on the 10th. From 17:00 on the 10th to 23:00 on the 13th, public opinion was in a fluctuating period. After 23:00 on the 13th, public opinion entered a recession period. Overall, the event's discussions lasted four days from ferment to recession, with a relatively short gestation and culmination period
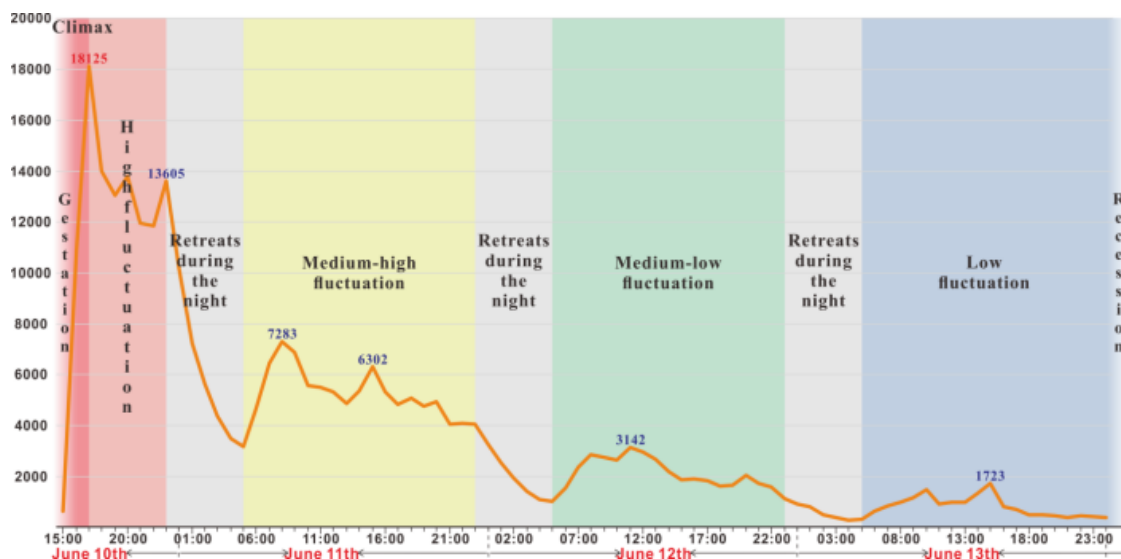(See Figure 1).

Figure 1: Stages of Public Opinion Development in the China Barbecue Restaurant Assault(Data source: Zhiwei Data.com).

3.2. Focus Analysis

From 14:00 on June 10 to 23:00 on June 11, the changes of high-frequency words in the micro-blog opinion of the China barbecue restaurant assault are shown in Figure 2. The high frequency of the words "Tangshan", "girl" and "beating" at the beginning is related to the fact that people usually construct cognitive frames from the dimensions of place, person and event. June 10 15:00-16:00, the victimized girl became the focus of attention, and the word "video" appeared frequently, indicating that the exposure of the surveillance video stimulated the outbreak of public opinion at that stage.

At the peak of public opinion from 16:00 to 17:00 on June 10, "female" replaced "girl" as the first high-frequency word, which means that the incident has been labeled and escalated from men harassing and beating women to an antagonistic conflict between "male" and "female". Similarly, the presence of the word "society" implies that the event has been risen from an isolated incident to a social phenomenon.

During the high fluctuation period from 17:00 to 23:00 on June 10, "severe punishment" became the first high-frequency word. The unscrupulous behavior of abusers challenges the law and undermines the public's sense of security. As the impact of the incident grew, the common call for

severe punishment of the assailants transcended the male-female camps at this stage. Meanwhile, "now" and "arrest" appear as high-frequency words, indicating that the progress of police handling has become the focus of this stage.

During the medium-high fluctuation period , the high frequency of "we" and "myself" indicates that the public generally connects the incident with themselves, discusses how to protect their rights in the face of local criminal gangs, and calling for rooting out organized crime (See Figure 2).

Date/Time		Blogging volume	High-frequency words			Stage
			1	2	3	
June 10th	14:00-15:00	614	Tangshan	girl	assault	Gestation
	15:00-16:00	10875	girl	video	angry	
	16:00-17:00	18125	female	society	Tangshan	Climax
	17:00-18:00	13998	severe punishment	now	arrest	High fluctuation
	18:00-19:00	13038	severe punishment	society	girl	
	19:00-20:00	13802	severe punishment	girl	hope	
	20:00-21:00	11959	severe punishment	girl	myself	
	21:00-22:00	11832	severe punishment	what	girl	
	22:00-23:00	13605	severe punishment	Tangshan	female	
	23:00-24:00	10217	female	myself	Tangshan	Retreats during the night
June 11th	00:00-01:00	7210	society	myself	we	
	01:00-02:00	5622	society	myself	we	
	02:00-03:00	4355	female	myself	we	
	03:00-04:00	3470	Tangshan	myself	we	
	04:00-05:00	3170	Tangshan	beating	we	
	05:00-06:00	4635	Tangshan	beating	myself	Medium-high fluctuation
	06:00-07:00	6451	Tangshan	beating	grill	
	07:00-08:00	7283	Tangshan	beating	myself	
	08:00-09:00	6862	Tangshan	beating	society	
	09:00-10:00	5585	Tangshan	beating	society	
	10:00-11:00	5488	Tangshan	beating	myself	
	11:00-12:00	5314	Tangshan	beating	myself	
	12:00-13:00	4856	Tangshan	beating	myself	
	13:00-14:00	5363	myself	Tangshan	beating	
	14:00-15:00	6302	severe punishment	beating	Tangshan	
	15:00-16:00	5318	Tangshan	severe punishment	myself	
	16:00-17:00	4830	Tangshan	beating	myself	
	17:00-18:00	5077	Tangshan	beating	video	
	18:00-19:00	4767	Tangshan	beating	severe punishment	
	19:00-20:00	4944	Tangshan	beating	severe punishment	
	20:00-21:00	4042	Tangshan	beating	we	
	21:00-22:00	4083	Tangshan	beating	myself	
	22:00-23:00	4046	Tangshan	beating	we	
	23:00-24:00	3244	Tangshan	beating	we	

Common high-frequency words: Tangshan | beating | myself | severe punishment | we | society | girl | female | other

Figure 2: High Frequency Words for Public Opinion on China Barbecue Restaurant Assault.

3.3. Reasons

3.3.1. Gestation Period

The incident did not immediately trigger a strong public outcry when it first occurred. June 10, 15:57 The netizen with the name @flowers all fall, leaving their beauty only uploaded surveillance video footage of the barbecue restaurant on Sina micro-blog. Surveillance cameras captured the arrogance and brutality of the attackers, and the video was broadcast more than 70 million times in a short period of time. Although the clarity is not enough, but compared with text and pictures, the form of video is more intuitive and can give Internet users an "immersive" experience. In addition, the distribution form of video facilitates the secondary processing and cross-platform dissemination of the content. Internet users spread the message in the form of screenshots and posted numerous comments. Surveillance footage ignited public outrage, and the violent details such as "dragging", "hair" and "resistance" were discussed in the first instance. The "sexual harassment" behavior of the abuser became another point that sparked outrage (See Table 1).

It has been found that auditory and visual image information enhances the intensity of emotional responses [11]. Moving images are more capable of mobilizing the viewer's emotions [12]. Tian et al. argued that short-video media have a "spiral filtering" effect on the expression of negative group emotions [13]. The high frequency with words such as "anger" is evidence of that public anger is aroused at the gestation stage.

Table 1: High Frequency Words of Public Opinion, June 10, 2022,15:00 - 16:00.

high-frequency words	word frequency
Girl/Girls	121
take offence/get angry/vitality	65
video	64
Drag out/drag in	52
Assault/Beatting	41
harass	32
revolt	28
hair	26

3.3.2. Climax Period

There are two main reasons for discussing this incident in relation to gender, one is that men and women show a clear power differential in the surveillance video, and the other is that the incident started when the abuser was rejected for sexual harassment. According to data from the website Zhiweidata.com, women accounted for 71.2% of users who participated in the discussion, much higher than the 28.8% of male users. The reason for this phenomenon is that the plots of "picking up" and "flirting", and the scenes of "early morning", "barbecue" and "drinking" can easily resonate with the female public. Thinking of their own relevant experiences, women netizens form a community of interest with the abused girls and speak out from the perspective of defending the group's interests. Many female netizens expressed emotions such as "disgust", "fear", "helplessness" and "anger", and then launched a crusade against the abusers and even the entire group of men (See Table 2).

In China's current online environment, the topic of gender is highly sensitive. One of the reasons for this is that in the real world of China, men and women are to some extent antagonistic. This is related to the conflict between the historical traditions of patriarchal society and the rise of modern women's sense of entitlement. Another reason is that the emotional stereotypes of men and women as opposites have been consolidated by a large number of events in the past. The impact of public

opinion events such as the "Me Too" campaign, the murder of the Leqing girl, and the Changsha woman jumping out off lorry hasn't disappeared because of the decline in attention, but rather, it integrated into the public opinion environment in an invisible way. It will be revisited and linked to new events as related events arise, rekindling the public opinion field.

Table 2: High Frequency Words of Public Opinion, June 10, 2022, 16:00 - 17:00.

high-frequency words	word frequency	high-frequency	word frequency
Female/Woman	141	Drinking/Alcoho	35
Male/Man	100	Gender	28
Sexual Harassment/Indecenity	77	Refuse	21
Imagine/If	65	Nausea	20
Early morning/Night/Time	57	Weakness/helple	20
Horror/Terrible/ Terror	37	Anger	19
Barbecue shop/Restaurant	35	Dining	14
Going out	35		

3.3.3. Period of High Fluctuation

During the period when public opinion fluctuates within a higher range, the progress of events becomes the attention focus and public begins to play a role in monitoring public authorities. The terms "arrest", "police", "call the police" and "police presence" indicate that police action has become a key element of public judgment. The words "then", "now" and "already" reflect the fact that timeliness and speed is an important criteria for review. High-frequency words such as "public opinion", "heat", "micro-blogging" and "case handling" indicate that online public opinion supervision played an important role during this period. Through forwarding and other behaviors, netizens consciously maintained the heat of the incident to put pressure on the police.

On the one hand, public opinion pressure plays a significant role, and the heat of the event is directly proportional to the efficiency of incident resolution. On the other hand, the helpless flirtation that "the authorities only work after a micro-blogging report" is rampant, and the public is plunged into a new round of skepticism and fear: Is the normal law enforcement reporting process still credible? How many other incidents are hidden in unseen corners? The China barbecue restaurant assault goes against the general trend of fair and stable development and breaks the public's expectations and imagination of social security. There is a certain inevitability to the tremendous response it has generated (See Table 3).

Table 3: High Frequency Words of Public Opinion, June 10, 2022, 17:00 - 18:00.

high-frequency words	word frequency	high-frequency	word frequency
Severe punishment	162	Heat	11
Now	62	Detention	9
Arrest/Catch	52	Death penalty	9
Police/Policeman	37	Gangland	7
Police presence	36	Speed	6
Occur	17	Micro-blog	6
Call the police	17	Handle a case	6

Table 3: (continued).

At that time	16	Government	5
Public opinion	12	Capacity	5
Netizen	11	Prison	5

3.3.4. Periods of Fluctuation

On the one hand, a more pronounced emotional contagion was observed during the period of fluctuations, with an increase in the number of "slogan" type call-to-action micro-blogs. Many people quoted Lu Xun's "The Scream", in which he said, "If I look on coldly from the sidelines today, when the disaster befalls me someday, there will be no one to wave the flag and shout for me", in the hope of galvanizing more netizens to participate in the campaign. The slogan of the Women's Solidarity Movement, "Girls help girls", has also been mentioned repeatedly; On the other hand, words such as "trash," "scum," and "livestock" appeared frequently, and the catharsis of negative emotions was evident.

Research has shown that expressing righteous anger on behalf of others can demonstrate a sense of morality in the self [14].In the China barbecue restaurant assault, many comments calling for the "death penalty" gained a great deal of support, and many people made moral accusations against the shopkeeper for failing to pull the plug and customers for being cold-blooded onlookers, which even evolved into acts of cyber-violence. "Righteous indignation" transcends the boundaries of public discourse (See Table 4).

Table 4: High Frequency Words of Public Opinion, June 10, 2022, 18:00 - 19:00.

high-frequency words	word frequency	high-frequency	word frequency
Death penalty/Shooting/	40	Waving flags and	6
Anger/Rage/Fury/Wrath/ Indignation	28	Rampant	5
Trash/Scum/Livestock/Dregs	22	Look coldly from	5
Beast/ Domestic animal/ Dirty	22	Head broken and	4
Killing	12	Desperate/Insane	4
Imprisonment/Jailbird	12	flesh	4
Things/Stuff	9		

4. Analysis of Police Notification

Negative public emergencies often involve moral and legal disputes, and the public security department is the first body responsible for dealing with such contradictions, which puts the public security department at the center of the public vision. At 17:50 on June 10, 2022, the political micro-blogging @ Lubei Public Security Network Spokesman made the first official briefing on the China barbecue restaurant assault, with 21,000 re-posts and 66,000 comments, and the dissemination effect was very significant. Taking this micro-blog as an example, it is of practical significance to explore the role of police notification in the change of public opinion on negative public emergencies.

4.1. Content Analysis

In terms of timeliness, the first police briefing was released at 17:50 on June 10, when two hours had passed since the surveillance video triggered concern at 15:57, and it was about to exceed the "golden

two hours" for emergencies' responding, which is a bit of a delay in action. In terms of content, the briefing said, "At about 2:40 a.m. on June 10, 2022, a case of provocation and violent injury occurred at a barbecue restaurant under the jurisdiction of the Airport Road Police Station of the Lubei Branch of the Tangshan Public Security Bureau. Police in Lubei, Tangshan have locked the suspect and are making every effort to carry out the arrest. The police will never let any criminal off the hook!". The handling progress of "arrests are carrying out" contradicts the response of the Airport Road police station in previous media reports - "there was a police call that night" - prompting netizens to question "why there was a police call at the time but no arrests". Netizens believe that there is willful ignorance of the facts of sexual harassment in characterizing the incident as a provocation and violent injury. In addition, the police did not present the specific circumstances of the abuser and the victim, which are of public concern, so much so that rumors such as "the victimized girl is dead" and "the abuser has high-level protection" later emerged. This further affects the follow-up of events such as the off-site hearing of this case and the examination of relevant public officials, making the online crisis extend offline.

Judging from the comments under that post, public sentiment has not been relieved. The main reason for this is that the police notification failed to demonstrate the efficiency of the authority and the importance they attached to it. This has given rise to public criticisms and questions about the impartiality and work initiative of the government sectors concerned.

4.2. Dissemination Paths

Yu studied the micro-blog communication mode through social network analysis, called the micro-blog dissemination mode "node communication", and categorized the nodes into three different types: core nodes, bridge nodes, and long-tail nodes [15]. The information posted by the core nodes reaches the bridge nodes through first level propagation and the bridge nodes may add their own comments while doing second level forwarding. This information reaches the long-tail nodes through further forwarding. The above process is the main "core-edge" pattern in the micro-blog propagation path (See Figure 3).

The 1000 forwarding data of this micro-blog are randomly selected, and a total of 1199 propagation nodes and 1220 edges are generated. The forwarding paths are shown in Figure 4. The re-post path of this micro-blog takes @Lubei Public Security Network Spokesperson as the core node. Voice actor micro-blogger @Jiang Guangtao, user @Wang Sanlun, political micro-blogger @Ningjiang Public Security Online, and network technology blogger @Chen Laohan Still Wants to Wear Women's Clothes served as important bridge nodes, driving 12.4%, 4.8%, 3%, and 2.3% of re-posts, respectively. Long-tail nodes accounted for 84.4%. The maximum forwarding depth of the micro-blog is 9. There are 629 (52.6%) re-posts in the first tier, 423 (35.3%) in the second tier, 81 (6.7%) in the third tier, 28 (2.3%) in the fourth tier. The overall situation is consistent with the power law distribution.

Jiang Guangtao re-posted the micro-blog and commented, "Stop explaining with that psycho shit!". The sentiment was so strong that it contrasted with its everyday language habits and attracted the attention of his fans. Government micro-blog accounts such as @Hebei Public Security Network Spokesman and @Jiangning Public Security Online forwarded this police notification, reflecting the mutual cooperation and support among government micro-blogs.
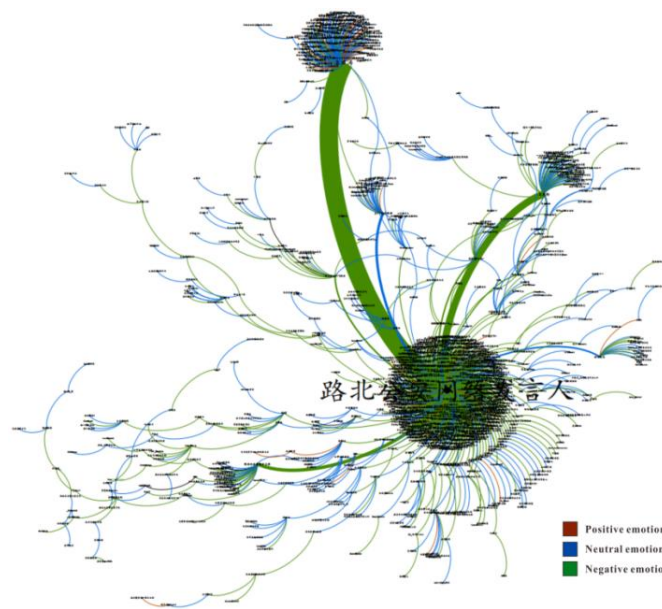
Figure 3: Dissemination path of @ Lubei Public Security Network Spokesman's notification micro-blog.

4.3. Sentiment Analysis

Opinions are a collection of information and emotions, and content with strong emotions is more likely to be further spread. The micro-blog forwarding path is also an emotional contagion path. Emotional mobilization played a key role in the development of public opinion on this event. 42.2% of all re-posted police notification micro-blogs were accompanied by a comment. Negative emotions accounted for 82.5% of the comments, mainly related to: 1. questioning the speed of arrest 2. dissatisfaction with the public opinion supervision to push back the public authorities 3. catharsis of grief and indignation 4. questioning the existence of the "protection umbrellas" that shelter gang crimes in Tangshan; Positive emotional comments accounted for 12.8% ,and neutral views accounted for 4.6%. The spread of negative emotions dominates across the board, largely due to the opinion leaders expressed strong emotions such as skepticism and negativity during re-posting.

5. Conclusion

This study focuses on the high incidence area of public opinion hot-spots, negative public emergencies. Taking the widely influential "China Barbecue Restaurant Assault" in 2022 as a case study, the public opinion development process on the Sina Micro-blog platform was analyzed. This paper divides the evolution of public opinion into four periods: gestation, climax, fluctuation and recession, and counts the high-frequency micro-blogging words in different periods. The analysis found that the anger triggered by the surveillance video played an important mobilizing role during the gestation and formation period; During this climactic period, antagonistic arguments between men and women quickly amplified the impact of the incident; During the fluctuating period, the public's conscious monitoring made the heat of the incident decline slowly, while at the same time, the obvious phenomenon of emotional infection and irrational emotional catharsis appeared. Subsequently, this paper analyzed the police's first notification micro-blog, and concluded that the notification lagged slightly in timeliness and the content was templated, which triggered a secondary public opinion crisis. The celebrities act as opinion leaders in the dissemination of police notification micro-blog, which had a great impact.

Generally speaking, the evolution of public opinion on negative public emergencies varies from event to event, and it is not comprehensive enough to summarize only using one event as an example. Meanwhile, the incident involved a large number of dissemination subjects, and other subjects subsequently issued multiple briefings. For space reasons, this paper only analyzes the first police notification micro-blog, and its dissemination effect cannot represent the overall level of China's political micro-blog accounts in responding to such events.

References

[1] State Council of the People's Republic of China. Law of the People's Republic of China on Emergency Response. Beijing: State Council, 2007.

[2] Zeng, X. M., Zhou, S. (2020) Exploration of the information dissemination path of public emergencies in the context of all-media--A study based on the coverage of the new coronary pneumonia outbreak. Contemporary Television, (04), 4-10.

[3] Liu, Y.J., Chen, S.J., and Huang, Y., et al. (2016) Analysis of online public opinion dissemination of major production and safety accidents and its policy suggestions--Take the "8-12 Tianjin Port explosion accident" as an example. Management Review, 28(03), 221-229.

[4] Ding L, Lei, Y. J. (2016) An empirical study on the evolution of online public opinion and administrative accountability of public emergencies--an analysis based on 128 relevant sample data. Modern Intelligence, 36(02), 79-85.

[5] Wang, Y. Y. (2017) Research on Government Public Opinion Crisis Response in the New Media Era. Thesis for master's degree, Shandong University.

[6] Cui, P., Zhang, W., He, Y., and Qi, J. (2018) Research on the evolution of online public opinion on public emergencies and government response capacity. Modern Intelligence, 38(02), 75-83+95.

[7] Liu, X.Y., and He, D.B. (2019) Research on information dissemination dynamics model and public opinion evolution based on sudden public events. Computer Science, 46(05), 320-326.

[8] Zhao, J., Zeng, D., and Qin, J., et al. (2020) Simulation and modeling of the microblog-based spread of public opinions on emergencies. NEURAL COMPUTING & APPLICATIONS.

[9] Dong, X., Lian, Y., and Tang, X., et al. (2020) The damped oscillator model (DOM) and its application in the prediction of emotion development of online public opinions. EXPERT SYSTEMS WITH APPLICATIONS, 148, 113268.

[10] Wang, G., Chi, Y., and Liu, Y., et al. (2019) Studies on a multidimensional public opinion network model and its topic detection algorithm. INFORMATION PROCESSING & MANAGEMENT, 56(3), 584-608.

[11] Schill, D. (2012) The visual image and the political image: A review of visual communication research in the field of political communication. Review of Communication, 12), 118-142.

[12] Detenber, B.H., Simons, R.F, and Bennett, G.G. (1998) The effects of picture motion on emotional responses. Journal of Broadcasting & Electronic Media, (42), 113-127.

[13] Tian, W. G., and Zhang, S. C. (2021) Arousal, diffusion, and resonance: A study on the mechanism of negative emotion dissemination in short videos. News and Writing, (08), 33-40.

[14] Owen, G. (2008) Self-presentation in everyday life / (American) Irving. The self-presentation in everyday life / (American) Irving Goffman; translated by Feng Gang. Beijing: Peking University Press.

[15] Yu, G. M. (2011) Microblogging: an examination of a new communication form - influence modeling and social applications. Beijing: People's Daily Press.