

Impact of the Fukushima Nuclear Crisis on Chinese and Media Intervention

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Abstract: The Fukushima nuclear crisis refers to the public emergency triggered by the nuclear power plant atomic leakage in Japan in March 2011 in Fukushima. Nuclear radiation has the features of extensive, invisibility, long-term hazardous, and irreversible. It caused individuals and groups physiological, psychological and behavioral responses, resulting in panic, rumors, unconventional social assembly, etc. The nuclear crisis also triggered salt panic in China. It destroyed the regular social order seriously. Studying the impact of the emergency on public psychology will be helpful for the media to intervene in the general mentality rationally to maintain social development harmoniously.

Keywords: Public Emergencies; Earthquake; Nuclear Crisis; Salt Panic; Media Intervention.

1. Introduction: The Fukushima Nuclear Crisis Led to Salt Panic in China

Japan's "3.11" Earthquake in 2011 triggered a severe nuclear leakage, and a large number of residents were evacuated. By March 15, 2011, three explosions had happened in the Fukushima nuclear power plants, and the amount of radiation detected was eight times more than usual. Experts and self-defense forces began evacuating from the area. The 9th-scale devastating earthquake was easily related to the "5.12" Wenchuan Earthquake on May 12, 2008, and the Tangshan Earthquake on July 28, 1976. The nuclear leakage of the earthquake overwhelms the conventional public mental endurance.

The influence of nuclear leakage on people is caused by atomic radiation – the more radiation energy the body receives, the more serious the radiation sickness symptoms. People harmed by the radiation will be at significant risk of suffering cancer and deformity, consequently affecting the health of generations. Nuclear radiation will cause severe and irreversible harm to people and the surrounding environment. The Fukushima nuclear crisis significantly impacted the Chinese public mentality and stimulated the public's self-protective behaviors – panic salt buying. It started from Jiangsu and Zhejiang Provinces and gradually spread to China's western and central interior provinces. From March 16, in some parts of China, including Beijing, Guangdong, Zhejiang, and Jiangsu, the salt panic spread wave after wave. On the one hand, rumors spread widely that the Fukushima nuclear leakage would lead to pollution in the sea. Thus, edible sea salt would be very scarce; conversely, some stories said that adding iodized salt to food can prevent nuclear radiation. The two aspects cause the Chinese public to buy salt irrationally. [1]

2. Logic Chain and Public Psychological Characteristics of Salt Panic

The logic chain and public psychological characteristics of

the salt panic buying caused by the nuclear crisis in Fukushima are: Natural disasters cause accident disasters; accident disasters cause public health emergencies. And public health emergencies cause social security events. Under certain stimulus conditions, it is easy to lead a collection of unconventional colonial assemblies, such as fire, civil commotion, spontaneous gatherings, parades, rumor and panic, etc. Emergency seriously disrupts the regular social order. Studying the psychological impact of the crisis on the public will significantly benefit the media to intervene in the public mentality rationally, ensuring society runs according to the regular order.

2.1. Blind Faith with Blind Obedience

Affected by the nuclear crisis in Japan, people in high-spirit and excited mental states cannot irrationally analyze and criticize the rumors in the virtual environment, as well as interpersonal communication. They had blind faith with blind obedience, thus causing group infection. The rumor of iodized salt was inadequate, and the emotions and behavior of the end of the world spread rapidly in the crowd under the suggestion mechanism. The irrational emotions and behavior quickly dominate the entire crowd, which causes some people to lose self-control in such an atmosphere.

The French scholar Gustav Le Bon thought that some of the myths could quickly spread among the masses, not only because of their extreme credulity but also because of the misinterpreted consequences of the events by the crowd. [2] According to the reports across the country, the buyers rushed to buy salt, crowding before the supermarkets or the stores with long queues to obtain salt. Among the people were young or old laborers, peddlers, tradespeople, intellectuals, etc. French social psychologist Le Bon thought that individuals have a strong sense of "subjecting to suggestibility"; namely, in an excited crowd, the discourse, expression, gesture, and even the atmosphere of the scene will become influential in stimulating them, which makes his beliefs, thinking and acting manners quickly identify with the crowd.

2.2. Unconscious Imitation

The public behaviors in emergencies are more of unconscious, conditioned response imitation. General

information and emotional transmission in the nuclear crisis are primarily constrained by implying an infection mechanism. The conscious imitation will devastate the normal social order and cause destructive consequences. The reason is that when people face sudden or catastrophic events, the most simple and available way to cope with the situation is to imitate and keep pace with others, which is regarded as the most effective security choice. However, the consequences of irrationally imitating each other may be the most insecure.

On March 17, 2011, the salt panic spread rapidly from the coastal areas to central China, then to western China, and even affected many Chinese overseas. According to Feng Qiming, the spokesman of the Salt Bureau of Guangdong Province, at 2 pm on March 16, 2011, the monitoring points received a report that there was salt panic buying in Maoming in Guangdong. Soon, the panic spread from a supermarket to a region and spread to the adjacent area of Yangjiang; by 5:00-6:00 pm on the same day, 1/3 parts of the province were in salt panic buying; by 8:00-9:00 pm, the same day, the panic spread to 2/3 of the area with surprising speed. Without national franchise and salt reserves as a backup, panic buying would lead to salt shortage and heavy public panic, affecting economic development and social stability.

2.3. Easy to be Duped

A gentle flapping of a butterfly's wings may cause a hurricane in faraway countries. Japan's Fukushima nuclear leakage quickly led to panic salt-buying, a butterfly effect. Since the nuclear crisis is a long-term irreversible hazard, some instigators and crisis-fishers will use the mechanism of asymmetric information and irrational emotions to achieve a hidden agenda. In public emergencies caused by a major earthquake and the nuclear crisis, people no longer can identify rumors, thus leading to devastating consequences.

As for nuclear safety, the terrible thing is radiation rather than panic itself. As the consequences of the nuclear crisis, "nuclear phobia" is likely to turn into a kind of deadly panic. For example, someone in a remote small town in mainland China unexpectedly received five calls from a friend in the other place. In the urgent atmosphere, the masses are fragile to accept the rumors. Some people without salt were guided to buy substitutes for soy sauce, kelp, mustard, and pickles. According to the analysis of *Yangcheng Evening News*, the most significant "winner" in "the salt panic" was the holders of idle funds that bought salt shares early in the morning.

3. How the Media Intervene in Large-Scale Public Emergencies

The nuclear crisis will have a substantial negative impact. From the Chinese salt panic triggered by Japan's Fukushima atomic leakage, we know that the nuclear problem is likely to cause public health incidents and trigger social security events. People can not work, and their economic life is disrupted, which results in a substantial financial loss on the part of the government. It will affect the credibility of the government if it is mishandled. Consequently, the social will be in disorder. Therefore, as social public opinion monitor and guides, they must operate scientific intervention in public opinion timely. According to Lasswell's 5W model, it's wise to control several links of transmission when the nuclear crisis occurs, namely, "Who", "Says What", "In Which Channel", "To whom" and "With what effects", which will prevent the

public emergencies from impacting on public mentality negatively. In this condition, the media should do well in these aspects following:

3.1. Clarifying the Truth and Preventing the Rumors from Diffusing

In 1951, the American scholars Peterson and Gist defined rumor like this – it circulates privately among the people. It is the unconfirmed explanation and interpretation of events, issues, or problems of public interest. [3] During the Chinese panic salt buying caused by the Fukushima nuclear crisis, the new media played an essential role in the rumor spreading. QQ, SMS, microblogs, blogs, and forums have become an instant one-to-many communication platform, spreading information at a geometric growth rate. Due to the new media's ubiquitous, intertextual, and variable natures, the salt panic spread from Wenzhou to Zhejiang and the central and western parts of China and finally upgraded to national public emergencies.

The salt shortage rumors spread quickly and widely via the new media, triggering panic in society. The main party of the rumor spreaders turned from an individual into a diversified group or organization, including stakeholders, fribbles, media, and the second step, rumormongers. In this case, we must control the transmission source, cut off the transmission pathway, and publish authoritative information to set the record straight to prevent rumors from diffusing to large areas. After the occurrence of panic salt-buying, significant sites such as sina.com, sohu.com, 163.com, people.cn, xinhua.com, china.com, gmw.cn, xinmin.cn all issued messages, while the Ministry of Health, the Ministry of Commerce, the Development and Reform Commission, and China National Salt Industry Corporation all declared that the salt panic buying is unnecessary. At the same time, TV stations in China have refuted the rumor, too.

In response to the rumor, the Commerce Department declared that the national salt reservation is adequate, for the salt production capacity is more than 80 million tons a year while the sale consumption capacity is only 8 million tons. The Ministry of Health also informed the people that the consumption of iodized salt can not prevent radiation, and taking other drugs is unnecessary. National Development and Reform Commission issued an urgent notice on March 17, which declared that the rumors spread and the business driving up salt prices were illegal. At the same time, the police also affirm that the rumormonger may be given criminal sanctions. By March 19, panic salt-buying gradually subsided.

3.2. Raising Public Judgment and Eliminating Information Asymmetry

When people face a nuclear crisis, they have psychological stress responses in at least three aspects. The first is the cognitive disorder, in which they lose the right to judge the truth. For example, they think the world's end is coming and lose their head. The second is the affective disorders, such as stress, anxiety, frustration, and depression, and this happens more frequently. The third is a behavior disorder, such as escape, panic buying, suicide, and assault. These group psychological crises will lead to a more severe problem – social unrest.

In a crisis, the media help the public learn public rationality instead of unthinkingly imitation; the government also provides reasonable, more open, smooth, and efficient information channels. Suppose the public is concerned about

current affairs. In that case, they will easily relate salt buying panic to food speculation last year, such as mung bean, ginger, garlic, sugar speculation, etc. Even after several regulations, the prices can not fall to the original level. The benefit fishers used the salt buying panic to obtain money when the price rose.

If the public understood basic common sense, they would never participate in panic salt buying. According to common sense, the state will retain sufficient strategic reserves of salt, grain, and other necessities to meet the exceptional circumstances required. Since ancient times, the government monopolized salt in China, through which production, distribution, transportation, warehousing, and other links were strictly controlled by the government to prevent hoarding speculation. The knowledge will help to have correct and objective analysis and form the right insights and opinions. Because of information asymmetry and psychological conformity, people tend to believe the o's opinion. Sense opinions will help us understand enough information in a timely, accurate, and complete manner.

3.3. Finding out the Source of Rumor and Enhancing the Information Disclosure System

With the control of the government regulation and the media to intervene, the spread frequency of the rumors will continue to decline. The rumors gradually turn into a decline phase until they disappear entirely. At this stage, the secret behind the words begins to be exposed, and the public starts to resist the rumors calmly. It is necessary to establish the information systems and databases of disaster issues. Scientific information management and dissemination provide us with authoritative, comprehensive, and timely information security, which is conducive to preventing rumors from spreading timely. In the United States, rumor robots (rumor bots) are used for tracking rumors, by which online newsgroups and chat rooms can be tracked and analyzed in real time. They can be tracked through search engines and databases. It can analyze and determine the source of the rumors.

The salt-panic spreading was premeditated. From March 15, the rumors spread via SMS, "According to BBC, the Japanese government has confirmed a serious nuclear leakage, so all Asian countries should immediately take the necessary measures to prevent nuclear radiation..." The SMS was forwarded widely at an exponential growth rate. Despite that night, the BBC clarified that it had never released the news. Still, most people did not learn the clarifying information and continued to push nuclear radiation panic to the vertex. By March 16, the rumors that "water pollution will lead to a shortage of salt, so eating food with iodized salt can prevent nuclear radiation" started the salt-buying panic.

The biggest "winner" in the salt panic was not the salt merchants, but the idle fund bought many salt shares in the morning, as someone asserted in the microblogs: the idle fund was the driving force behind the salt panic. People with colossal capital are more sensitive to the evolution of significant events than ordinary people. They can take advantage of information asymmetry and use capital strength to stimulate some hot spots, even panic to increase the stock significantly and lead the ordinary investors to buy consortium. It was the "disaster investors" that took in unduly profit.

4. Reflection: Problems in Nuclear Crisis and Media Intervention

Jean-Noel Kapferer wrote like this: rumors are strengthened when the media are chasing media technology, obtaining live images, but the audience lacks enough time to verify the message. In a society, people get more and more information from the screen and the discourse, and more and more depend on their eyes and ears to obtain messages. At this time, rumors emerge about our living environment. [3] The nuclear crisis is the deep incentive behind the panic salt buying. Public emergencies usually bring devastating results to the usual social order and social norms, which affect social stability and unity and the healthy development of the national economy. Therefore, we should strengthen the media intervention capacity to clarify the truth and improve the audience's judgment.

It's wise to eliminate rumors early. We can eliminate the information asymmetry and stop the words using media rationally and scientifically. As the number of mobile phone users in China reached 800 million, SMS nearly covered most areas in China. If the government departments establish the SMS emergency rumor system to send authoritative rumor-eliminating SMS for the first time, it will significantly improve the stability. In this regard, Xinhua County in Hunan Province is worth promoting and learning from the perspective sense. At 15:21 on March 17th, Xinhua County People's Government sent a rumor-eliminating SMS through China Mobile to mobile phone users, by which most people in that area were reminded not to trust the rumors or buy salt rationally. It is suggested that the relevant department amend the applicable laws and regulations to require significant mobile services in China to provide free SMS to the public during emergencies.

Biography

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References

- [1] A public emergency is an accident that occurs suddenly, threatening to cause heavy casualties, loss of property, destruction of the ecological environment, or severe social harm that endangers public safety. It can be divided into four categories: 1) natural disasters, 2) accidental disasters, 3) public health events, and 4) social security events.
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