

Is citizen journalism better than professional journalism for fact-checking rumours in China? How Weibo users verified information following the 2015 Tianjin blasts

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Abstract

This article investigates how citizens contribute to rumour verification on social media in China, drawing on a case study of Weibo communication about the 2015 Tianjin blasts. Three aspects of citizen engagement in verifying rumours via Weibo are examined: (1) how they directly debunked rumours related to the blasts, (2) how they verified official rumour messages and (3) how they used Weibo's community verification function to collectively identify and fact-check rumours. The article argues that in carrying out such activities, ordinary Weibo users were engaging in practices of citizen journalism. Findings from our analysis suggest that even though citizen journalists' direct engagement in publishing debunking messages was not as visible as that of the police and mainstream media, self-organised grassroots rumour-debunking practices demonstrate great potential. In terms of both the reposts and the positive comments they received, rumour-debunking posts from non-official actors appear to have been given more credibility than those from their official counterparts. In contrast, the official narratives about the Tianjin blasts were challenged, and the credibility of the official rumour-debunking messages was commonly questioned. Nevertheless, this article also shows that Weibo's community verification system had limited effects in facilitating how Weibo users could collaboratively fact-check potentially false information.

Keywords

Citizen journalism, crisis, rumour, verification, Weibo

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Introduction

The advent of social media as an information source comes with numerous challenges for identifying and verifying rumours. In this article, rumour is defined as a form of unverified information that arises from, and is publicly circulated under, conditions of uncertainty (DiFonzo & Bordia, 2007). Scholars have discussed rumour's potential threats in jeopardising public health (Ngade, Singer, Marcus, & Lara, 2016), intensifying racial conflicts (Williams & Burnap, 2015) and influencing presidential elections (Howard, Kollanyi, Bradshaw, & Neudert, 2018). During times of crisis, the consequences of online rumours can be particularly severe, as they can lead to social unrest and hamper efforts to control and contain a crisis (Gupta, Lamba, Kumaraguru, & Joshi, 2013; Starbird, Maddock, Orand, Achterman, & Mason, 2014).

Journalistic verification plays a crucial role in assessing information on social media. Both Facebook and Twitter have been working with news organisations from around the world to fact-check potentially false information (Agence France-Presse (AFP), 2018; Bump, 2016). Even though similar collaborations have also occurred between domestic social media platforms and news organisations in China (Tencent, 2018), the dynamics of journalistic verification there are different from those in the West. Firstly, in a media system that is heavily controlled by the state, the lack of trust in mainstream news outlets can cause official rumour-debunking efforts to backfire (Huang, 2015; Zeng, Chan, & Fu, 2017). Secondly, state control of media can reshape journalistic verification as a tool for propagating 'official rumours' (官谣) – disinformation deliberately placed by government agencies into official media, in an attempt to cover up facts they deem to be harmful to their interests (Yu, 2015).

In existing literature on citizen journalism, the vast majority of studies focus on the *reporting* aspect of citizen journalism, but rarely discuss the role citizens play in *verifying* information. However, as the limitations of journalistic verification in a highly controlled media environment such as in China, it is now increasingly significant and timely to develop a contextualised understanding of citizen participation in verification. This article explores citizen participation in verifying information about the 2015 Tianjin blasts on Weibo, emphasising the socio-political particularities of China's media system. We argue that such participatory practices constitute the unique phenomenon of Chinese citizen journalism in social media.

On 12 August 2015, a series of explosions took place in the privately held logistics company *Rehai Logistics'* warehouse in Tianjin, in northern China. In what was one of China's most destructive industrial incidents in recent years, 165 people were killed and another 800 injured. Over 300 buildings and 12,000 cars were damaged (Xinhua, 2016). Due to the large amount of toxic chemicals stored in the warehouse, the explosions seriously polluted much of the surrounding area (Phillips, 2015). Immediately after the blasts, only limited information was cleared for publication in official news outlets (Levin, 2015), and so social media users quickly rushed to fill the information vacuum with video footage, photos, as well as speculation and rumours.

The remainder of this article discusses citizen participation in the verification of rumours related to the Tianjin blasts, focusing on three types of activity: how rumours were debunked, how official rumour-debunking messages were verified and how the Weibo platform's community verification system was used.

Rumour verification in the Chinese media system

The discipline of verification has long been a core pillar of journalism (Kovach & Rosenstiel, 2014), but the approaches to and effects of journalistic verification vary depending on the historical, cultural

and technological contexts. Historically, in both democratic and authoritarian states, the establishment of journalism as a profession required its own authority and standards for information verification (Kovach & Rosenstiel, 2014; Latham, 2000). The proliferation of new participatory communication technologies, in particular social media, has significantly reshaped the authority of journalistic verification. In a digital media environment, practices of information verification have become increasingly decentralised. For example, Anderson (2008, p. 262) introduces the notion of 'networked authority', which highlights the impact of connectivity on power shifts in journalistic verification. As Anderson (2008) points out, 'bloggers, online journalists, and other ordinary citizens and writers are attacking the very idea that there is any sort of journalistic expertise at all' (p. 248).

Whereas Anderson (2008) emphasises the disruptive power of non-journalist actors, others focus more on the collaborative nature of this new model of verification. For instance, Bruns (2008, p. 24) and Hermida (2012, p. 2) use the notions of 'communal evaluation' and 'collaborative verification', respectively, to describe the decentralised verification model. As Bruns (2008) explains, contrary to institutional and industrial models of information verification, communal evaluation presents a more community-centred quality control, which is self-organised by Internet users. Likewise, Hermida (2012) argues that on social media, the authority to verify is no longer the preserve of media institutions: instead, 'fragments of information are reported, contested, denied or verified in the open, involving both professional journalists and the public' (p. 4). The potential of this collaborative verification model has also been discussed in the context of rumour management and in the context of crisis (Mendoza, Castillo, & Poblete, 2011; Procter, Vis, & Voss, 2013) and health communication (Ozturk, Li, & Sakamoto, 2015).

In the case of China, however, information generated and curated by ordinary social media users has long been stereotypically labelled by official rhetoric as irrational and trivial. For instance, Dong (2012) described Weibo as an 'emotive public opinion field' (情绪舆论场). In this view, on social media, rationality is always overpowered by the public's negative emotions and therefore can only be reinstated with the 'Party's guidance.'

Although this attitude is often promoted by the government to justify harsh Internet regulation (Zhu, 2013), it overlooks the contribution of Chinese social media users in reporting natural disasters, uncovering corruption and fighting injustice (Nip, 2009; Reese & Dai, 2009; Xin, 2010). To further test the impacts of Chinese citizens' online engagement, we examine their participation in verifying rumours. Therefore, the first objective of this article is to answer the following question:

RQ1: What role did citizens play in debunking rumours on Weibo following the blasts?

The Chinese government began to advocate the regulation of online rumours as early as 2012 (Xinhua, 2012). This campaign against online rumours led to the passing of new laws to regulate rumour circulation. For example, following the anti-rumour law of 2015, the spreading of rumours online carries a maximum 7-year jail term (Xinhua, 2015b). Alongside such legislation, Chinese authorities including police and official media also launched hundreds of official Weibo accounts to help identify and debunk rumours (Xinhua, 2016).

However, this vigorous anti-rumour campaign is not free from criticism. Because social media serves as a common channel for Chinese citizens to uncover corruption and highlight injustice, scholars have expressed their concern that the official crackdown on rumours may suppress public discussion and silence dissident voices (Creemers, 2016; Jiang, 2016).

Such criticism is not groundless. In a number of cases, state media or government organisations have wrongly debunked citizen reports as ‘rumour’, in order either to cover up scandals or to under-report the casualties resulting from crises (Blanchard, 2008; Tai, 2007; Yang, 2013; Zhang, 2006). This practice is commonly described as *yi yao piyao* (以谣辟谣): using rumour to refute rumour (Wen & Huang, 2015). Actions such as these have severely undermined the public’s trust in official media as a credible authority for verifying rumours. This also explains why, in some cases, official efforts to debunk rumours can have the reverse effects of triggering the even wider dissemination of rumours (Zeng et al., 2017). Against this background, we also expand the scope of our understanding of citizen journalists’ verification activities to include their assessment of the official media’s debunking messages. We ask the following question:

RQ2: How did citizens verify the official rumour-debunking messages after the blasts?

Because Chinese online platforms are legally liable for rumours and other controversial content appearing on their websites, social media providers actively self-censor in order to avoid potential penalties such as licence revocation or shutdown (Jiang, 2014; MacKinnon, 2009). As part of its content-moderation strategies, Weibo began to recruit users for committees that are responsible for inspecting and managing user posts in 2012 – the same year that the government started to advocate a crackdown on online rumours (Weibo, 2012a).

According to the official Weibo Community Management Regulations (Weibo, 2012b), once rumours are reported by Weibo users, accepted cases are examined and arbitrated by nine randomly selected committee members. Once the committee has classified the post as rumour, the author of the post may receive penalties such as account suspension. At the same time, the original Weibo post is tagged with a warning message, notifying other users that the post contains a false rumour. Until February 2017, Weibo committees had processed over 1,200,000 user-reported cases, including rumours, personal attacks and copyright violations (Weibo, 2017).

While there are few studies researching Weibo’s rumour arbitration system, prior studies of user-based verification mechanism on other platforms have shown divergent results. Some researchers acknowledge that the intelligence of the crowd facilitates rumour control in social media (Ratkiewicz et al., 2011; Sethi, 2017), but others raise concerns about the impacts of user bias in such user-centred rumour verification system (Ribeiro, Calais, Almeida, & Meira Jr, 2017). In order to investigate how Weibo’s community verification feature may improve citizen collaboration in verifying information, the third question this article examines is

RQ3: How did citizens use Weibo’s community verification system to verify rumours following the 2015 Tianjin blasts?

The Tianjin blasts case analysis

Background on the Tianjin blasts

Communication around the Tianjin blasts was replete with rumours. Based on prior studies of the 2015 Tianjin blasts, the most common topics for online rumours related to the accident were casualties; environmental and health damage and local authorities’ mishandling of the incident



Figure 1. Two Weibo posts about the casualties of the Tianjin blasts.

(Zeng et al., 2017). In the wake of the Tianjin blasts, speculation about the number of people killed in the explosions was widely propagated on Weibo; two examples are shown in Figure 1.

The number of casualties is often the most sought-after and most contested information following a disaster in China (Nip, 2009). One historical reason is the frequent under-reporting of casualty numbers by local governments, in order to keep both the public and the central government in the dark or prevent journalists from investigating (Blanchard, 2008; Zhao, 2003). Due to this record of under-reporting and cover-ups following crisis events, the public's trust in official casualty figures has been significantly eroded, and rumours about casualties tend to proliferate and become difficult to debunk.

Rumours related to pollution and potential health consequences from the blasts were also widely shared on Weibo (Zeng et al., 2017). For instance, Weibo users shared photos of dead fish and white foam in the river and streets of Tianjin after the explosion, claiming that they were caused by water and air-pollution (Figure 2).

The local authorities' mishandling of the event was another common topic of rumours about the blasts. For example, one widely circulated Weibo post claimed that the Urban Police (城管) in Tianjin had confiscated public donations gathered by volunteers, and another rumour claimed that Tianjin government officials had attacked a CNN journalist during a live report. It is not surprising that the Tianjin local government became the target of online rumours: government officials are a common subject of rumours on social media in China (Huang, 2015; Lu & Qiu, 2013).

As these examples demonstrate, the wide propagation of rumours after the Tianjin blasts has deep historical and cultural roots in Chinese society. Social issues related to the country's environmental problems, government corruption and media control all contributed to the proliferation of rumours.

In response to online rumours, the local authorities conducted a strict crackdown on unofficial reporting about the blasts. According to official reports, over 300 social media accounts and 50

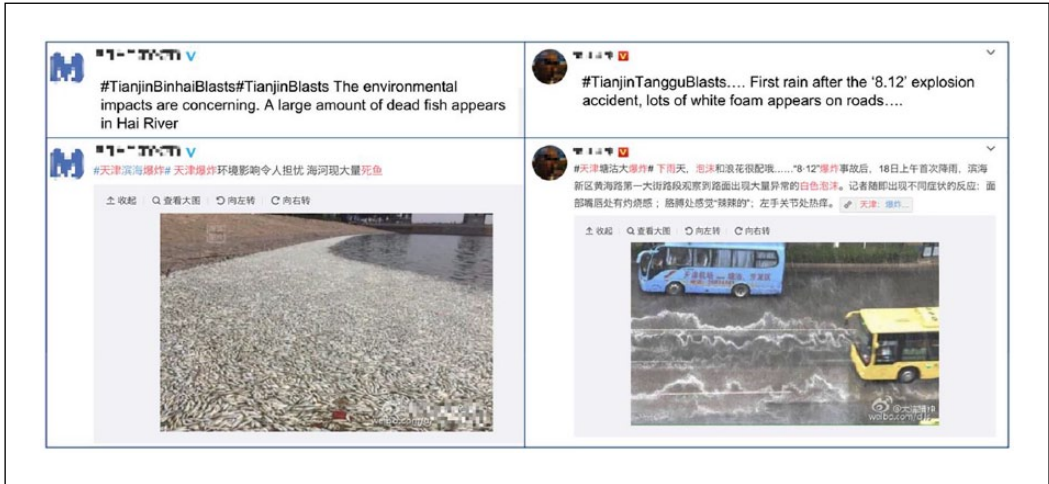


Figure 2. Weibo posts about the environmental impact of the Tianjin blasts.

websites were shut down, and several people were arrested for circulating rumours online (Li, 2015; Xinhua, 2015a). It is against this background of discursive tensions between grassroots storytelling and official narratives that we investigate the role of citizens in verifying rumours related to the blasts.

Methods

To analyse citizen engagement in verifying information following the Tianjin blasts, we use three separate datasets: (1) a dataset of rumour-debunking Weibo posts, (2) a dataset of comments on these original rumour-debunking posts and (3) a dataset of Weibo posts that were reported and debunked as false rumour on Weibo's Community page. All three datasets were collected through web-crawling, a data retrieval method that is commonly used in Weibo studies in the absence of a fully functional Application Programming Interface (Chen, Zhang, & Wilson, 2013; Ding, Chen, & Fu, 2013; Fung et al., 2016). The same timeframe was applied in all data gathering: only content published between 23:00 on 12 August 2015 and 23:00 on 28 August 2015 was collected.¹

For the first dataset, Weibo posts related to debunking rumours following the Tianjin blasts were collected through Weibo's search engine, using the search terms '天津' (Tianjin), '爆炸' (explosion or blasts) and '辟谣' (rumour-debunking) to retrieve posts that contained all three keywords, in any order. The third search keyword is an established Chinese term used to describe the action of debunking rumours. Taking advantage of the advanced search function, only posts published within the selected timeframe was retrieved; in total, 1744 posts were collected. In order to collect any comments and reposts received by each rumour-debunking message, the crawler visited each debunking post's individual page and scraped the comments and list of users who shared the posts (limited to a maximum of 100).

The dataset used to examine Weibo's community verification system consists of 1020 posts and their case reports from the case archive of Weibo's Community Management Centre (社区管理中心). The crawler first retrieved all cases published between 12 and 28 August 2015 and then



Figure 3. Example of case decided by platform (left) and by user committee (right).

identified content related to the blasts by only selecting posts containing the keywords ‘天津’ (Tianjin) and ‘爆炸’ (explosion or blasts).

In order to address the first two research questions, the rumour-debunking messages from individual Weibo users and those from official accounts need to be differentiated. Therefore, from Dataset 1, the users who contributed original (non-repost) debunking posts were categorised in three groups: police accounts, media accounts and individuals. In order to measure the influence of these debunking messages, the repost counts and repost networks were also examined.

As discussed in the previous section, one key role of Chinese citizen journalists in the verification of rumours is to assess the authenticity of rumour messages from the authorities. We use the dataset of user comments (Dataset 2) to study this practice in the context of Tianjin blasts. More precisely, we employ multi-step coding to identify the themes of Weibo users’ responses to these rumour-debunking posts. A sample of 10% of these comments was used to develop the codebook. In the first stage, we grouped these comments into three general categories: positive, negative and other. In this context, ‘negative’ refers to comments that explicitly challenge or criticise the rumour-debunking message itself; ‘positive’ comments indicate agreement with the message and comments that did not fit either category were classified as ‘other’. After initial coding into these three categories, open coding was used to annotate comments in each group, in order to identify sub-themes within these posts. By doing so, we developed a codebook (Appendix 1) that was then used to examine the remaining user comments in Dataset 2.

As outlined earlier, Weibo’s community verification feature can have great potential for citizens to collaboratively verify rumour content on Weibo, but at the same time, it also presents a risk of abuse. For instance, according to Weibo’s Community Management Guidelines, the platform can bypass the user committee to directly fact-check reported posts when the content is ‘obviously false’. Since the Weibo platform also decides what constitutes ‘obviously false’, without specific definition or justification, the system is vulnerable to interference. Therefore, our analysis of the 1020 rumour reports in Dataset 3 focuses on (1) what the debunked rumour content was, (2) who did the verification (platform or user committee) and (3) what source was used to verify the information. All 1020 cases were coded for these three aspects. As shown in the two examples in Figure 3, all information required to answer these three questions is available from the case page.

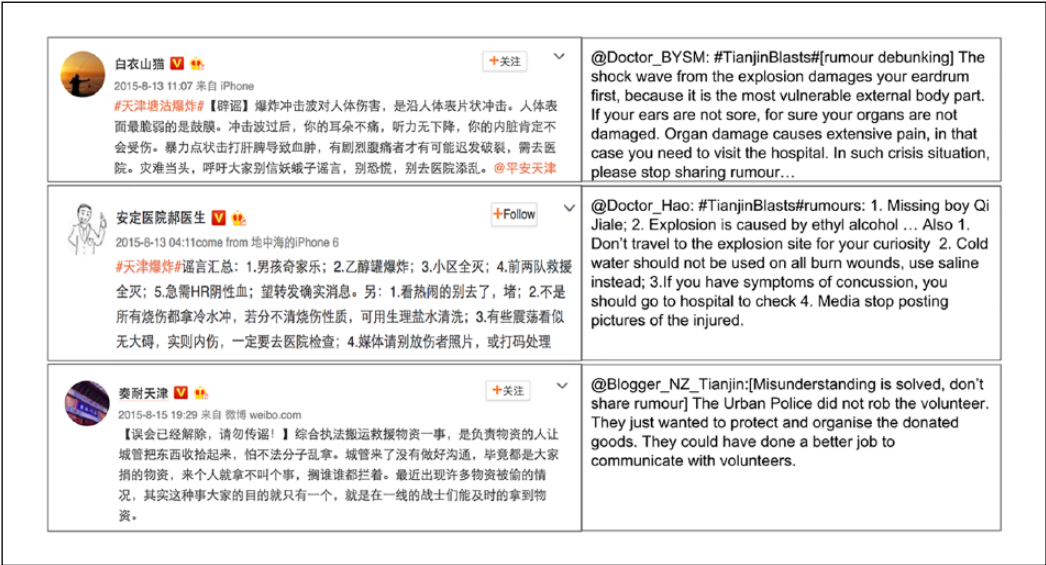


Figure 4. Three rumour-debunking messages from individual users.

Analysis

Direct verification. We draw on the dataset of rumour-debunking Weibo posts to examine the contributions made by individual user accounts in verifying rumours following the blasts. Among the 1744 rumour-debunking posts, 34 are original posts, while the rest are their reposts. These 34 posts are published by 28 unique accounts, including 13 police, 12 media organisations and 3 individual accounts. Examples of posts from these three individual accounts are shown in Figure 4.

The first post shown here was from @Doctor_BYSM, a surgeon from a hospital in Zhenjiang province. This message was posted in response to the rumour that people living near the explosion site should go to the hospital to have their organs checked, because the shock wave may have seriously damaged organs without causing any pain. @Doctor_BYSM challenged the claims and explained how shock waves impact health in this Weibo post. This message was reposted 52,833 times, making it the most widely circulated rumour-debunking message in the dataset. @Doctor_Hao, shown in the second example, is another medical practitioner who participated in debunking rumours around the Tianjin blasts. In the post shown here, alongside listing out a few rumours, @Doctor_Hao also made suggestions for the media’s and general public’s activities after the incident. Both doctors actively use Weibo to debunk medical myths and to share medical advice with their followers.

The third individual user is a blogger based in Tianjin and was one of the first people reporting the explosion on Weibo. After the rumour claiming that Urban Police in Tianjin were forcing volunteers to hand in public donations became viral on social media, @Blogger_NZ_Tianjin clarified that police were not robbing volunteers, but instead trying to organise all donated goods with them prior to distribution. This post was shared over 6000 times.

Even though these individual accounts only represent a small portion of the accounts in the sample that were identified as participating in debunking rumours, their messages on Weibo

Table 1. Sources of rumour-debunking messages.

| | Accounts | Posts | Reposts | Average reposts of each post |
|---------------------|----------|-------|---------|------------------------------|
| Police accounts | 13 | 16 | 55,600 | 3475 |
| Media accounts | 12 | 14 | 77,580 | 5541 |
| Individual accounts | 3 | 4 | 70,851 | 17,713 |
| Total | 28 | 34 | 204,031 | 6001 |

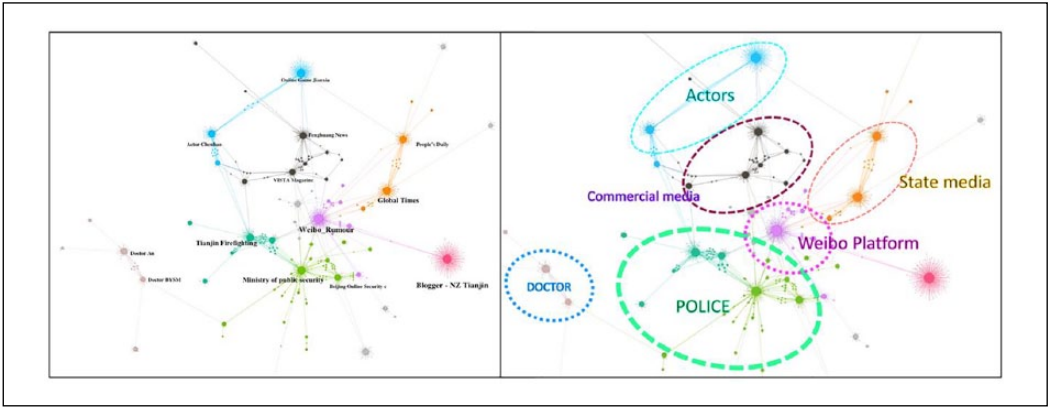


Figure 5. Repost network for rumour-debunking messages (left: full network; right: annotated network core). The graph was constructed using the Force Atlas 2 algorithm in Gephi. Nodes were sized according to the number of reposts received by the account and coloured according to the communities detected by the modularity algorithm. Considering the limited space for this visualisation, the giant component filter was used to filter out isolated nodes that are at the edge of the graph. 2100 nodes that are connected to the key clusters in this graph remain.

received significantly higher average reposts than those by media and police organisations. As shown in Table 1, rumour-debunking messages from police and media organisations received an average of 3475 and 5541 reposts, respectively, while the three individuals’ posts were shared 17,713 times on average.

Moreover, the repost network for debunking messages (Figure 5) suggests that Weibo’s own official accounts – @Weibo_Secretary, @Weibo_Admin and @Weibo_Rumour – play an important role in amplifying the visibility of debunking messages posted by police and media. In this graph, nodes (Weibo accounts) are sized according to the number of edges (reposts) they receive, and clusters were calculated and coloured through the modularity algorithm, using the default modularity resolution of 1.0 (Blondel, Guillaume, Lambiotte, & Lefebvre, 2008). Modularity is a scalar value that quantifies the quality of partitions by comparing the density of links from inside the module (e.g., community, cluster) with that in a random network structure (Newman, 2006). Blondel et al.’s (2008) algorithm serves to identify high modularity partitions, wherein nodes belonging to one module are densely connected with each other, but sparsely connected with nodes in different modules. Different colours were then used to differentiate the seven major clusters identified by the algorithm.

Table 2. Comment themes.

| Category | Themes | Police | | Media | | Individuals | |
|----------|---|--------|-----|-------|-----|-------------|-----|
| Positive | Criticism of those who spread rumours | 156 | 10% | 169 | 12% | 83 | 21% |
| | Providing external source in support of the debunking message | 27 | 2% | 99 | 7% | 78 | 20% |
| Negative | Questioning the validity of the debunking post | 604 | 38% | 558 | 40% | 62 | 16% |
| | Asking for more information | 495 | 31% | 73 | 5% | 10 | 3% |
| | Providing external source that provides oppositional views | 122 | 8% | 160 | 11% | 24 | 6% |
| Other | Pointing to other issues | 150 | 9% | 242 | 17% | 118 | 30% |
| | Emoji | 13 | 1% | 25 | 2% | 2 | 1% |
| | Commercial spam | 9 | 1% | 12 | 1% | 7 | 2% |
| | Unclear | 24 | 2% | 62 | 4% | 16 | 4% |
| Total | | 1600 | | 1400 | | 400 | |

The name of the most reposted account in each cluster is also shown in the graph. A manual review of the profiles of nodes in each cluster reveals that the purple cluster in the centre is formed mostly by the Weibo platform's official accounts, which have an average of over 120 million followers. This cluster is surrounded by two green clusters of police accounts, a black cluster of police accounts, an orange cluster of state media and a black cluster of commercial media. At the left most edge of the graph is a brown cluster formed around the accounts of @Doctor_BYSM and @Doctor_Hao. On the right, a pink repost cluster centres on @Blogger_NZ_Tianjin.

As the network graph shows, @Weibo_Rumour and other platform accounts are at the centre of the reposting network, but they mostly share posts from media and police accounts. The Weibo platform accounts' large follower base suggests that their sharing can significantly increase a Weibo post's visibility; however, even with amplification from these official Weibo accounts, police and media still received a lower average of reposts, indicating the greater influence of the three individual accounts. This shows that individual accounts can potentially surpass government and media organisations to become more effective actors in debunking rumours. More evidence for this phenomenon is discussed in the following section, examining user comments on rumour messages.

Verifying official messages. Our second research question investigates how citizens verified rumour-debunking messages from official sources, which in the case of Tianjin blasts include police and media organisations. To do so, we examined 3400 user comments. As explained in section 'Methods', multi-step coding was used to identify the themes and categories of Weibo users' responses to these rumour-debunking posts. The final codebook is available in Appendix 1, and the result is summarised in Table 2.

The results of this qualitative reading of user comments have two key implications. First, official debunking messages from media and police receive more criticism and questions from Weibo users; 69% of comments received by police either criticise the validity of their statements or ask them to provide more information to prove their point; 45% of comments on media accounts' rumour-debunking messages also fall into this category, but only 19% of comments received by individual accounts include such criticism. This further supports the observation that rumour-debunking information from individual users is better received than media and police messages.

For example, in response to widespread speculation on the Internet about the number of casualties caused by the blasts, the Tianjin Online Security Department posted 'only use official reports



Figure 6. Screenshot of user comments on Tianjin Online Security's post.

on casualties of the explosions as reference. All unofficial figures are rumours, and do not share. We have zero tolerance for people who spread rumour'. The first page of public comments in response to this post is shown in Figure 6.

As shown in the screenshot, the majority of comments received by Tianjin's online police questions the credibility of the police department as a fact-checking authority. As introduced earlier, the police force is a leading rumour-debunking agency in the state-sponsored anti-rumour campaign. However, as a government body itself, the police force's objectivity and credibility in verifying rumours become questionable, especially in the case of rumours related to the interests of government authorities. But such negative responses are not unique to the police. Even the debunking messages from the most official media outlets, such as China Central Television (CCTV), are a common target of criticism. For example, after the explosion, photos of scores of dead fish in Tianjin were widely disseminated on social media, together with rumours about water contamination caused by the explosion. @CCTV_News attempted to debunk the rumour with the statement that 'according to experts' investigations, the fish died because of a lack of oxygen. This Weibo post did not convince many readers on Weibo, but backfired as a large number of users mocked the statement (Figure 7).

The second key finding from the content analysis of user comments is how Weibo users provide Western sources as evidence to either support or challenge the official narrative. In the sample of comments, 15% of comments ($N=510$) cite external sources. A qualitative study of these external references revealed that Chinese Internet users often use foreign media and organisations' reports as reference to verify claims from Chinese state media or governmental bodies. The discursive contestation around a so-called 'burn-down principle' can be used as an example for this. As the whole country was grieving for the 21 firefighters who died in the explosion, a Weibo post claiming that the firefighters' deaths could have been avoided if



Figure 7. One page of comments on @CCTV_News' rumour-refuting message.



Figure 8. Weibo post on the 'burn-down principle'.

authorities had followed the 'burn-down principle' went viral (Figure 8). According to the post, the burn-down principle refers to a rule in firefighting, which dictates that in the event of a large chemical explosion, firefighters should not be allowed to enter the site until everything is burnt down.



Figure 9. Example of Weibo user sharing foreign news.

Claims about the burn-down principle were quickly labelled as ‘false rumour’ by state media and police on Weibo. For instance, the party-run newspaper *People’s Daily* used Weibo to argue that term ‘burn-down principle’ was made up. To prove this point, *People’s Daily* used Google search results and the *Oxford English Dictionary*. While *People’s Daily* thus attempted to defend the local firefighting authorities by showing that the ‘burn-down’ claim was wrong, Weibo users tried to prove otherwise. In the comments left on *People’s Daily*’s rumour-debunking posts, a number of users provide links to English-language news articles to show the legitimacy of the burn-down principle (Figure 9).

Weibo users did not just use Western media, but also cited Western firefighting experts to prove that *People’s Daily* was wrong. For example, one comment posted in the threads was a link to a thread on Quora, a US-based question-and-answer website. On this Quora page, a Chinese user shared the story about the ‘burn-down principle’ controversy and asked foreign firefighting engineers and firefighters to verify the legitimacy of this principle. Similarly, Weibo users also provided links to Zhihu, China’s equivalent of Quora, where users collected experts’ opinions on the ‘burn-down principle’. For instance, one Zhihu user attached the screenshots of an email asking for explanation of the burn-down principle from the National Fire Protection Association of the United States, the US Fire Administration and the International Association of Fire Fighters (Figure 10). Answers given by foreign experts on both Quora and Zhihu point out that although ‘burn-down principle’ was not a commonly used technical term, the principle behind it was commonly applied.

This practice of self-organised fact-checking demonstrates a form of citizen-centred collective verification. It showcases both the robust verification practices and Chinese Internet users’ civil engagement in keeping the authorities accountable. As shown in the example of Quora and Zhihu users’ curation of information, the grassroots verification practice demonstrates greater sophistication, compared to their mainstream media counterparts. For instance, while China’s most authoritative news outlet, *People’s Daily*, simply used Google search results and the *Oxford English Dictionary* to argue that the burn-down principle does not exist, non-professionals went to the trouble of contacting firefighting engineers and authorities to verify the legitimacy of this principle.

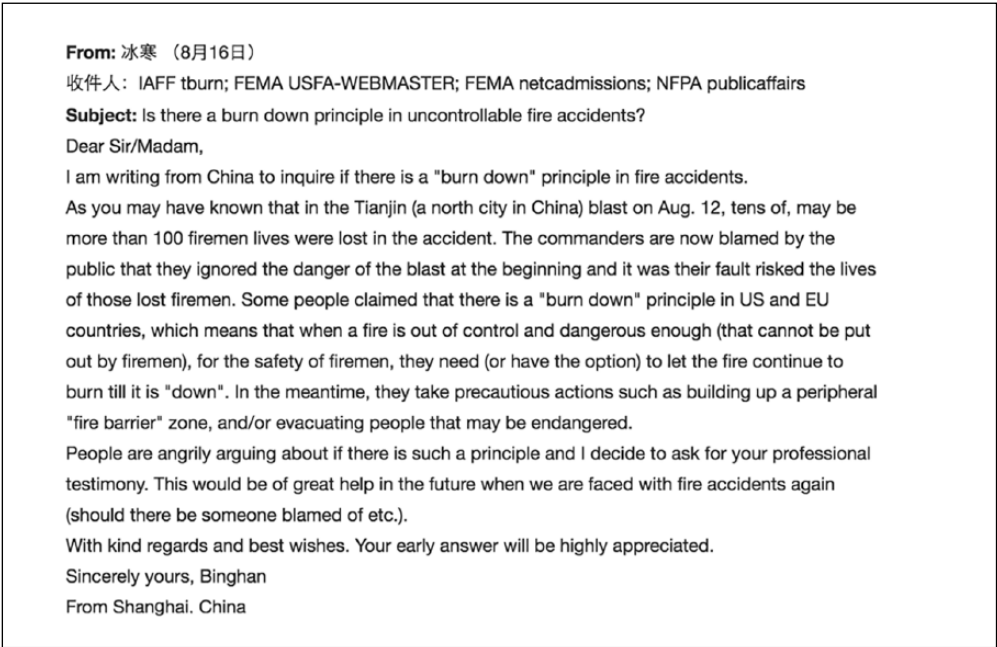


Figure 10. Screenshot of a Zhihu user’s email to foreign experts.

Table 3. Summary of rumour report assessments.

| Rumour content | | | Arbitrator | | | Source of evidence | | |
|----------------|------|------|------------|------|------|--------------------|------|------|
| Casualties | 989 | 97% | Platform | 1020 | 100% | State media | 997 | 98% |
| Blood donation | 12 | 1% | Committee | 0 | 0% | Police | 23 | 2% |
| Missing boy | 19 | 2% | Other | 0 | 0% | Other | 0 | 0% |
| Total | 1020 | 100% | Total | 1020 | 100% | Total | 1020 | 100% |

This example also suggests that Weibo users perceive foreign sources as more trustworthy. They are, therefore, used to prove the falsehood of state media reports, as well as to condemn local authorities for mismanagement. The credibility that Chinese citizens place on Western sources is not unique to this case, as such practices are also observed in other rumour cases. Some other often-cited sources include the US Centers for Disease Control and Prevention (CDC) and CNN.

Community verification. In order to study how the Weibo platform’s community verification system was used to verify rumours related to the Tianjin blasts, 1020 archived case reports were collected from Weibo’s Community Management Centre (社区管理中心). These posts were annotated regarding (1) what the rumour content was, (2) who did the verification (platform or user committee) and (3) what source was used to verify the information. The results are summarised in Table 3.

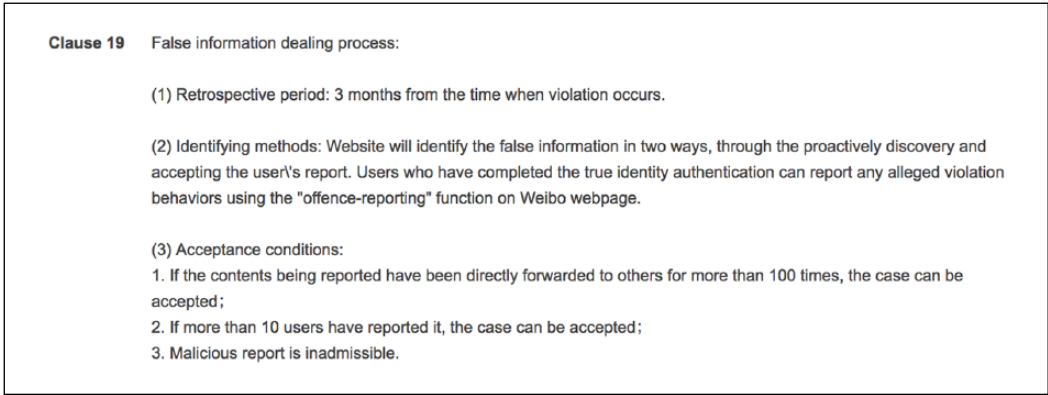


Figure 11. Screenshot of Weibo's English guidelines.

As Table 3 shows, Weibo's community verification focuses almost exclusively on Weibo users' speculation about the casualties caused by the blasts, and Weibo did not use the committee to verify the information but completed the fact-check itself in all 1020 cases. In addition, as shown in the third table segment, Weibo relied mostly on state media as the reference for its fact-checking.

As implied by these results, Weibo's community verification process was misused by the platform itself. According to Weibo's rules regarding reported messages, content should be verified by members from the user committee, and the platform can only bypass the committee to make its own decisions when the reported content is 'obviously false'. However, there is no definition of what constitutes 'obviously false'. Weibo can, therefore, abuse its own system and independently make decisions about which messages should be labelled as false rumours. This was the case following the Tianjin blasts: among all 1020 cases, there is not one case of the platform using the user committee to fact-check reported rumours related to the blasts.

Furthermore, the fact that the vast majority of the cases (97%) were related to casualties suggests that Weibo only selectively responded to users' reports of rumours. This argument is supported by evidence that Weibo accepted users' reports of rumour in contradiction of its own rules. According to Weibo's guidelines (Figure 11), a rumour case will only be accepted after more than 100 people have directly shared the content or more than 10 people have reported it.

However, in the case shown in Figure 12, only six people accused the post of containing false rumour, and the original post was only shared 10 times. The validity of Weibo platform's arbitration statement is also questionable. For instance, in the example shown below, Weibo quoted the accused post as stating that 'over 300 people have been killed'. Based on this quote, Weibo determined that the post was incorrect. However, in the original post from @Shiyizhici,² there is no mention of the figure of 300 victims that is quoted in the case report.

This proactive response to flagged rumour content by the platform exemplifies self-censorship – a common practice by Internet companies to avoid penalties. As noted earlier, Internet companies operating in China are legally liable for user-generated content, including rumours. In circumstances where sensitive and controversial information, such as the casualty numbers of a disaster, goes viral, platforms may choose to mark as many posts as false rumour as they can, in order to avoid penalties.



Figure 12. Example of a reported rumour post and its case page.

As argued previously, Weibo's community verification system has great potential to facilitate how citizens collaboratively verify and debunk rumours. This is particularly true in the case of sensitive news topics, where the public appear to have less trust in state-run media – a finding demonstrated in current and prior studies (Stockmann, 2013). Unfortunately, in reality, the so-called 'community' appear to serve merely as free labour for Weibo in flagging rumours, but do not have any power to arbitrate the cases (as advertised by the platform). It is worth mentioning that, as it is common practice for Weibo users to embed texts in pictures, such human flagging can significantly compensate for Weibo's limited automatic content detection, which still relies largely on matching keywords in post texts.

Discussion

The notion of citizen journalism gained momentum after the 2004 South Asian tsunami, when non-professional reporters' firsthand stories about the event were widely broadcast by mainstream news outlets (Allan, 2013). Several definitions of citizen journalism have been proposed, the most common among these describing the phenomenon as people without professional training engaging in journalistic practices, especially during times of natural disasters and political unrest (Allan & Thorsen, 2009). Using the case of the Tianjin blasts, this article demonstrates Chinese citizens' active engagement in journalistic practices through verifying potentially false information on Weibo.

As noted, the discipline of verification is a core obligation of journalism. However, our analysis illustrates how Chinese citizens challenged mainstream journalism's authority as arbiter of the truth and conducted their own fact-checking following the Tianjin blasts. In existing literature, there are various concepts describing the phenomenon of non-professional actors engaging in curating, verifying and distributing news, such as 'hybrid news system' (Chadwick, 2011), 'participatory journalism' (Domingo et al., 2008) or 'gatewatching' (Bruns & Highfield, 2015). However, given its social and political particularities, the participatory practices of Weibo users in verifying rumours can be, and should be, understood as a distinct form of citizen journalism.

Compared to other, similar concepts, the notion of citizen journalism views amateur reporters' activities more strongly as a form of citizen participation within society (Cottle, 2014). This emphasis on civic engagement makes citizen journalism a powerful conceptual lens for the study of Internet users' participation in journalism in countries where the media environment is more repressive. For instance, as documented in earlier studies, citizen journalism in authoritarian contexts often operates as a practice of political activism against the ruling authority (Reese & Dai, 2009; Wall & El Zahed, 2015).

In China, the political significance of citizen journalism is particularly evident in crisis events. As documented in a number of studies, during times of crisis, local government officials under-report or even hide crisis information from the public in order to minimise the consequences they may face (Ma, 2005; Yang, 2013; Zhao, 2003). This explains why citizen journalism, as well as other forms of unofficial information sources, may be considered to be more credible than official news outlets by the Chinese publics in our case study. In the wake of the Tianjin blasts, official media and government agencies' credibility as authorities for information verification was challenged by Weibo users. Not only did they criticise the official actors' debunking efforts, but they also collectively curated information to fact-check rumour-debunking messages from state media and the police. The significance of their actions against the authorities implies that these individuals should not be understood merely as 'users', 'reporters' or 'content providers'. They are citizens responding to a repressive media and political environment, voicing dissent and demanding truth.

Nevertheless, it is important to point out that the concept of citizen journalism also has its limitations. For instance, Bruns and Highfield (2015) argue that the term 'citizen journalist' can be misleading because

it implies that professional journalists are not also citizens, and – in final consequence – denies the possibility that they may have entered their chosen profession in pursuit of civic ideals at least as much as in pursuit of a career. (p. 326)

Bruns and Highfield's critique is particularly relevant in the case of China, where the boundary between mainstream and citizen journalists is increasingly blurred. As Qiang (2013) points out,

many Chinese journalists are leading double lives – reporters for the state-controlled media by day, bloggers by night. When covering touchy subjects – such as natural disasters, major industrial accidents, or official-corruption cases – print reporters must follow the lead of official sources before conducting interviews and publishing their findings. But journalists can now evade such guidelines by collecting and distributing information online, making it harder for censors to hush up sensitive stories. (p. 241)

Qiang's (2013) remark suggests that Chinese journalists' professional ethics are caught in a dilemma between obeying the party and uncovering injustice in service to the public. As a result, they use social media as an alternative channel where they can play their professional and civic

roles in a relatively more autonomous way. This dual role played by many Chinese journalists means that they may appear as 'ordinary users' to share information anonymously online. One crucial implication of the unique dynamic of Chinese citizen journalism is that researchers should avoid a dichotomous approach to distinguishing mainstream and citizen journalists. Instead of differentiating them by their professional or non-professional status, it is more productive to contextually assess the content and intention of their engagement. For example, in the case of Tianjin blasts, individuals who participated in verifying information may have included journalists disguised as normal users. However, to identify the profession of these users based on their activities is neither feasible nor desirable for this study. What (dis)qualifies an actor as a citizen journalist is not their profession, but their activities and contributions.

Conclusion

This study investigated citizen contributions to verifying information on social media following the 2015 Tianjin blasts, through examining the role Weibo users played in directly debunking rumour on Weibo and assessing how they verified rumour-debunking messages from official sources and used the Weibo community verification system to collectively flag and fact-check rumours. These questions were answered using three different datasets: a dataset of rumour-debunking Weibo posts, a dataset of comments on these posts and a dataset of case reports from Weibo's Community archive, where reported false rumours on Weibo are archived.

Our analysis of rumour-debunking posts has revealed, first, that even though ordinary users' direct engagement in publishing debunking messages was not as visible as that of police and mainstream media, their non-official rumour-debunking practices demonstrate great potential. In terms both of the reposts and the positive comments they received, rumour-debunking posts from individual users appear to have been given more credibility than their official counterparts.

This is further supported by findings from the second research question. Our analysis of user comments demonstrated that the official narratives about the Tianjin blasts were widely challenged, and the credibility of the official rumour-debunking messages was commonly questioned. In order to verify the police's and state-media's rumour-debunking messages, Weibo users exhibited dedication and skill in curating information to accurately fact-check.

As part of Weibo's anti-rumour strategy, the platform launched a community verification system that let users flag and collectively verify potentially false information. Therefore, our third research question examined how this system was used following the 2015 Tianjin blasts. Findings from our analysis of all archived cases related to the event showed that this seemingly progressive feature is largely cosmetic and had limited effects in facilitating the collaborative verification and debunking of rumours. As revealed in our study, in fact-checking reported content relating to the blasts, the platform did not allow the user community to conduct the verification, but made decisions exclusively by itself instead.

The findings from this study have important implications for rumour management strategies in China. As discussed earlier, the Chinese government's approach to managing online rumour relies largely on the substantial presence of official media organisations and police to propagate an 'official truth' on social media and on penalising those deemed responsible for spreading unauthorised rumours. However, the former strategy is only effective when official information is perceived to be credible, which this study shows not to be the case, and the latter can further undermine the public's already tenuous trust in the government. Our findings suggest that increased reliance on non-official actors may be more effective in debunking rumours on social media in China. As discussed previously, official rhetoric in the country often overemphasises the lack of rationality and judgement of Internet users, and this is also

used to justify the country's draconian media policies. Conversely, this study demonstrates that emotion and rationality can co-exist in Chinese Internet users. The public's outrage towards local authorities following the Tianjin blasts was clearly evident; however, at the same time, Weibo users showed their capacity to rationally curate evidence in order to verify official news. Also, as indicated by this study, negative emotions can have positive impacts when they compel the media and authorities to act more transparently and accountably.

Furthermore, our observations of the Weibo community verification system show that the potential for abuse can be considerable when platforms take a direct role in arbitrating rumour and truth. This concern has become particularly relevant recently, with a growing cast of voices advocating for social media platforms beyond China to do more to moderate false information and hate speech (Henley, 2018; Miller, 2017). This article has demonstrated the importance of transparent guidelines on how platforms should manage potentially false information, especially in the wake of acute events. In the absence of such guidelines, there arises the risk of over-censorship and self-censorship by platforms. As shown in the example of Weibo's intervention in the community verification system, social media platforms may choose to proactively moderate controversial content in order to minimise the risk of being punished by state authorities. Therefore, amid a growing trend around the world of making social media platforms liable for user content, policy-makers and scholarly researchers should begin to highlight the importance of establishing and following clear moderation guidelines and protocols.

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Notes

1. The explosion occurred on 12 August, and authorities arrested several individuals held responsible for the explosions on 28 August.
2. Pseudonym.

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Appendix I

| Category | Themes | Example | Translation |
|----------|---|---|--|
| Positive | Criticism of those who spread rumours | ‘在这种时候造谣的人都不得好死’ | ‘Those ones who spread this rumour should go to hell’ |
| | Providing external source in support of the debunking message | ‘我也有看到CNN的Twitter,他们的确 有说那个记者不是被官员攻击,’ | ‘I saw CNN’s Twitter post, yes they have admitted that the reporter wasn’t attacked by officials’ |
| Negative | Questioning the validity of the debunking post | ‘看到这些谣言的其实我还挺怀疑的, 但是官方一辟谣,我是确信无疑了’ | ‘I wasn’t sure if these rumours were true. But now that the government has debunked them, I can finally believe it all.’ |
| | Asking for more information | ‘你要我们相信这是谣言,那请你揭露 一下瑞海的背景好吧?’ | ‘If you want us to believe that these are rumours can you please reveal all background information about Ruihai?’ |
| Other | Providing external source that provides oppositional views | ‘谣言?! 自己看这个视频’ | ‘Rumour?! Watch the video’ |
| | Pointing to other issues | ‘为什么所有的爆炸视频都被删除了?’ | ‘Why were all videos of the explosion removed?’ |
| | Emoji Commercial spam Unclear | | |