

# Celebrating COVID Tragedy as “Protective Disguise” to Act?: A Computational Text Study of Chinese Foundations’ COVID Response

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## 1 Background and Research Questions

Although a large body of computational social science literature has surveyed the online public opinion of individual netizens during the pandemic, less is known about the voices and actions of civil society groups who are supposed to represent citizens’ collective voices and mobilize public resources during the crisis (Lang 2012; Teegen, Doh, and Vachani 2004). As the world confronts the global crisis of COVID-19 disrupting offline interactions, important questions arise regarding how those organizational actors such as those civil society groups present themselves in the online world, serve their communities, and frame their actions? In particular, existing studies often focus on democratic contexts, taking free speech and freedom of associations for granted both at the online and offline settings (Fisher 1997; Kövér 2021; Yiqi Li et al. 2021). Nonetheless, we know less how those civil society groups respond to the same crisis in authoritarian states, maneuvering the public health crisis and the political uncertainty while providing support to their communities.

We have chosen China as our empirical case due to its authoritarian approach to its crisis management. During the period when the COVID-19 outbreak was developing rapidly, the Chinese government relaxed its control over speech and allowed more critical voices to be heard (Repnikova 2020). Controversial figures and public events, such as the death of whistleblower Dr. Li Wenliang and the improper allocation of resources by the Wuhan government-appointed Red Cross, sparked a significant amount of criticism on Chinese social media (Q. Chen et al. 2020; Y. Lu, Pan, and Xu 2021). At times, even critical voices of the party-state dominated public opinion (Shen et al. 2021; Wei, Yao, and Zhang 2023; Xue et al. 2020; Yu et al. 2022; Zhao and Wu 2020). However, such an optimistic view was drawn from the perspective of individual netizens on social media. There appears to be a visible absence of collective voices and advocacy work coming from organizational actors such as civil society groups who are supposed to hold the government accountable and advocate for marginalized populations in the face of crisis (Chaney and Jones 2022).

Some scholars claim that civil society groups have played an indisputably crucial role in combating the fallout of

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COVID in China (Hu and Sidel 2020). Resident self-organization and mutual aid, as well as volunteer and community organizations, have greatly alleviated the challenging personal living situations and thorny social conflicts resulting from stringent anti-epidemic policies Cai et al. (2021); cheng2020coproducing; Miao, S. Schwarz, and G. Schwarz (2021); Yiran Li et al. (2020); Zhao and Wu (2020); Lai and Wang (2022). In contrast, other scholars contend that Chinese civil society groups have been marginalized in the pandemic response in the authoritarian context (Yang 2022; Zhao and Wu 2020; Dong and J. Lu 2020). The inconclusive statements are probably resulting from a lack of nuance analysis of different types of organizational actors. For example, despite being crucial actors in civil society who enjoy the legal status to mobilize public resources and foster collaborations, philanthropic organizations such as the Red Cross and foundations' role in the pandemic response remains largely unknown. Additionally, it is still unclear about the important differences that exist in the discourse and actions within those Chinese philanthropic groups during the pandemic on social media.

## 2 Methodology

To understand the collective voices among civil society actors and their actions, we first investigate the overall sentiment patterns of Chinese philanthropic organizations on social media during the pandemic. We collected and analyzed 5,403 online articles by a random sample of 554 philanthropic organizations on WeChat between January and July 2020. We randomly selected and manually coded 1,993 articles. We trained student research assistants in manual coding and at least two research assistants coded the same article. The intercoder reliability is around 85%. Based on the manual coding of emotional appeals and non-informational activities texts, we trained our sentiment and action classifiers using two XGBoost classifiers: the XGBoost emotion classifier and the XGBoost action classifier (T. Chen and Guestrin 2016). We used the two models to predict the emotion and non-informational activities of all remaining unencoded text. The XGBoost emotion classifier reported F1 score of 83% and XGBoost action classifier F1 score of 80%. In addition to our use of the Latent Dirichlet Allocation (LDA) model for topic modeling in our study (Blei, Ng, and Jordan 2003; Grimmer and Stewart 2013), we also employed a more sophisticated method called BERTopic. This was done to address concerns about the setting of expected topics, and to further validate our findings about the homogeneity of NGOs' article topics (Grootendorst 2022).

We furthered our analysis by merging organizational level data from the official annual reports by those philanthropic organizations to the big data set and examine the differences in discourse and specific actions among philanthropic organizations with different government backgrounds and resources. Existing literature suggests that organizational size and ties with the government significantly affect different civil society groups' mobilizing capacity and legitimacy to operate in China (Xiaoguang and Heng 2008; Chan 2010; Zhan and Tang 2013). We have differentiated citizen-organized grassroots philanthropic organizations with those large philanthropic organizations backed by the government. We then conducted Sentence Embedding analysis using BERT sentence embedding to study how evaluative words relate to different social groups and actors (Matsui and Ferrara 2022; Garg et al. 2018). Sentence Embeddings can capture more semantic information and context than word embeddings, which is useful for tasks that require understanding the meaning of sentences (Reimers and Gurevych 2019; Reimers and Gurevych 2020). We also use Named entity identification (NEI) to identify important social actors in the epidemic to see how

grassroots philanthropic organizations avoid mentioning figures that are controversial for the party-state.

### **3 Results**

#### **3.1 Overwhelmingly Positive Sentiment among NGOs**

Based on the XGBoost sentiment classifier, we have obtained the emotional results of all articles. fig. 1 (see Supporting Materials) depicts the proportion of non-positive to positive articles between January and July 2020. Throughout this period, NGOs were predominantly positive, with only a few instances of slightly more negative sentiment expressed on April 2nd, April 5th, June 16th, and June 25th. In fact, even at these four time points, the number of articles expressing different emotions remained relatively balanced. In many other studies, negative sentiment is common and even dominant (Zhao and Wu 2020; Y. Lu, Pan, and Xu 2021; Wei, Yao, and Zhang 2023; Yu et al. 2022; Xue et al. 2020; Shen et al. 2021). However, our results differ significantly from their conclusions.

Moreover, in addition to the changes of sentiment over time, according to the results in tbl. 1 (see Supporting Materials), we found overwhelmingly positive sentiment across almost all topics. In our coding process, each article was marked if it contained a specific topic. As shown in the results, positive sentiment dominates each primary topic, including the “narrative framework” and “state mission”.

#### **3.2 Discourse of Grassroots and Government-Backed NGOs**

##### **3.2.1 Similar Topics**

tbl. 2 and tbl. 4 present the topic modeling results of BERTopic. They indicate that despite differences in the number of topics found in articles from small grassroots NGOs and large government-supported NGOs, their themes are all related to disaster relief, home health advice, policy information dissemination, and the latest epidemic developments. Similarly, when the expected number of topics in LDA topic modeling was set to 10, 15, and 20, the results in tbl. 6, tbl. 8, and tbl. 10 still demonstrate a high degree of homogeneity in the discussion topics of these two types of NGOs.

##### **3.2.2 When Being Positive Isn’t Enough: Excessive positivity of Grassroots NGOs**

By observing NGOs with different governmental backgrounds and resources, we have found in our results displayed in tbl. 12 that small grassroots NGOs consistently exhibit significantly more positive sentiment than large government-funded NGOs. The p-values for this observation are all at the 99% level of statistical significance, with a value of 0.00.

Secondly, we consider the government, political party, medical professionals, nurses, and women as key social actors. By comparing the average sentence embedding vectors and the vectors of evaluative words that mention these key actors, we obtain the cosine similarity results shown in tbl. 13. The results indicate that, in articles from small grassroots organizations, these important actors are semantically closer to positive evaluative words and farther from negative evaluative words, compared to those from large government NGOs. Therefore, grassroots

organizations assign more positive value judgments to the Party, Chinese government and general medical staff than other organizations having government ties do.

### **3.3 Grassroots NGOs Avoiding Controversial Figures for the Party-State**

Upon examining the frequency of mentions of controversial entities in tbl. 14, it becomes evident that small grassroots NGOs deliberately avoid discussing them. With the exception of “Fang Fang”, we observe that the word frequency of grassroots NGOs in regards to controversial social actors and entities, including “overseas”, “United States”, “Li Wenliang”, “Tedros Adhanom”, “Zhang Wenhong”, “Trump”, and “the West”, is much lower compared to that of large government NGOs. In regards to less controversial individuals, such as “Zhong Nanshan”, there is no notable difference between the two types of organizations.

### **3.4 Grassroots NGOs Lead the Way: Accomplishing More Actions**

As shown in tbl. 15, the results indicate that small grassroots NGOs are significantly more active than those with more advantages in government background and resources. The p-values for all variables at the 99% level of significance are 0.00. This suggests that despite having less resources, small grassroots NGOs are more effective in their actions.

## **4 Findings and Conclusion**

First, using computational methods including sentiment analysis, named entity recognition, topic modeling, and sentence embedding, we found that, first, in contrast to previous studies that identified critical voices during the pandemic, our results showed that Chinese philanthropic organizations displayed overwhelmingly positive discourse on the various topics revolving around the pandemic including party action.

Second, when comparing the discourse of different types of philanthropic organizations, we found that small grassroots philanthropic organizations did not have any substantive differences in the topics discussed compared to large government-backed philanthropic organizations, but grassroots philanthropic organizations displayed much more positive emotions. Apart from sentiment, the computation results of sentence embedding and entity recognition showed that grassroots organizations gave more positive value judgments to the party, government, and general medical personnel. However, grassroots organizations deliberately avoided discussing controversial figures such as whistleblower Dr. Li Wenliang. Third, in terms of action, small grassroots philanthropic organizations were significantly more likely to take action than larger government-backed philanthropic organizations (p-values at 99% level of significance are 0.00).

This paper contributes two original insights to the existing literature. Firstly, while previous Chinese NGO literature has tended to suggest that philanthropic organizations only play a peripheral role, the empirical evidence on the pandemic further supports this conclusion (Yang 2022; Zhao and Wu 2020; Dong and J. Lu 2020). However, we add a more nuanced view of the crucial distinction to this homogenized view of Chinese philanthropic organizations. The results show that grassroots philanthropic organizations are significantly more active compared to more

capable philanthropic organizations with government backing and more resources. Secondly, by analyzing the sentiment exhibited by Chinese philanthropic organizations as a whole, we offer a contrasting result to the literature on public opinion in social media during the pandemic. We find that Chinese philanthropic organizations have almost never displayed critical discourse throughout the pandemic. Notably, grassroots philanthropic organizations are even more positive in their discourse compared to larger and capable philanthropic organizations while avoiding controversial entities. We hypothesized that grassroots philanthropic organizations deliberately adopted celebratory frames as protective disguise to gain legitimacy to take action during a politically uncertain period. Paradoxically by sacrificing advocacy, the protective disguise strategy has aided the party-state to reshape the narrative of pandemic victory, boosting state legitimacy.

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