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Xinyan Cheng April 7, 2021

How the Authoritarian Government Delivers Messages Through Social Media During the COVID-19 Crisis

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ABSTRACT

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By Xinyan Cheng

During times of public crises, governments must act swiftly to deliver crisis messages effectively to the public; failure to do so will undermine government approval and regime legitimacy. What kind of content does an authoritarian country like to communicate with citizens during a crisis? What are the effects of its strategic messaging behavior? This thesis systematically investigates the Chinese government's communication approaches during the COVID-19 pandemic. It argues that when the domestic crisis is severe, the government will use the international benchmarking strategy to mitigate public discontent of the regime by issuing more negative information about foreign governments. Additionally, this study argues that negative reporting on foreign governments will promote a higher level of citizen engagement than positive information about foreign governments. The thesis uses data from the official account of *People's Daily* – the most authoritative newspaper in China – on Sina Weibo – the most popular microblogging portal in China. By collecting and hand-coding 9,824 social media posts of *People's Daily*, this study finds that when the government performance looks worse, the proportion of negative foreign information increases, but the result is not statistically significant. Surprisingly, the findings show that citizens engage more actively with positive international information rather than negative one. While this paper does not lend substantial support to the international benchmarking theory, these results contribute considerably to political communication and international knowledge in authoritarian regimes as well as shed new light on the authoritarian government's ability to influence public opinion through social media.

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INTRODUCTION

As the Internet has become increasingly prevalent in authoritarian regimes, more and more people are willing to express their opinions via online platforms. In recent years, social media in China has become as vibrant and diverse as those in Western countries, with over 800 million internet users. This amounts to 57.7% of the country's population, compared to the estimated 300 million in the U.S., or 78.2% of its population (Statistics 2020). The growing Internet penetration rate in China has brought both opportunities and challenges for the Chinese Communist Party (CCP)'s efforts to manage information and shape public opinion. The prevalence of the Internet poses a threat to authoritarian rule because it becomes harder for leaders to control information within their borders. However, authoritarian governments seem to embrace most social media, and they even actively post content on these online platforms. By disseminating information through the state-controlled social media, governments can inform citizens, enhance regime legitimacy, and cultivate approval.

Governments try to manage the flow of information through multiple techniques, such as content censorship, firewall, attention distraction, and selective dialogue. Existing studies point out that these strategies help governments manage public opinion and signal strength (Roberts 2018a). Chinese social media companies can censor individual posts or filter them out before they appear on websites. The so-called Great Firewall of China blocks citizens' access to foreign websites such as Facebook and YouTube. To stop discussions of controversial issues and influence public opinion, the government also fabricates and posts about 448 million social media comments a year (King et al. 2017). Previous research has realized that official propaganda in China today have played a diminishing role since the Maoist era (Shambaugh 2007). However, recent studies suggest that the government now engages in selective dialogue

with its audiences and their criticisms, featuring those views in its own storytelling (Repnikova 2020). Selective dialogue is regarded as a way of state-controlled media to enable leaders to put pro-government narratives in foreground while limiting criticism of official policies and actions. It is reasonable that governments have the motive to systematically employ selective reporting – to spotlight the bad news of foreign governments and good news of domestic governments. With various information control techniques, an authoritarian regime can improve governance and influence public opinions without breeding discontent among citizens.

Crisis creates serious tests of a government's ability to manage public opinion. During times of crisis, authoritarian regimes can become more vulnerable to criticism from the public. Authoritarian governments build legitimacy on popular beliefs in their benevolent caretaking abilities. Unmanageable crises threaten the perception of citizens to their governments (Rubin 2016). Crises also affect governments' capacity to deploy messaging strategies to influence public opinion. Banning the access to information will exacerbate the threat to regime legitimacy (Roberts 2018a). The use of selective reporting intensifies during times of crisis (Liu and Xu 2019). On the other hand, relief and reconstruction efforts can also strengthen civil society in China because they create trust and participation of governments, volunteers, and stakeholders. Teets (2009) finds that earthquake relief efforts increased local government's capacity to interact with citizens. Besides, shifts in citizen attention to the crisis can expedite the law-making process. For instance, food safety incidents in China raised public concern, which helped prompt the government to make quick responses and pass a more robust law (Truex 2018). These cases illustrate how authoritarian governments respond to a crisis.

The COVID-19 pandemic is another crisis that heightens attention from citizens. Like past shocks, COVID-19 creates instability to the regime and propels the government to respond

effectively. In mid-December 2019, patients in Wuhan hospitals began having flu-like symptoms. A Chinese lab alerted health authorities on December 27, but the information was buried. On December 30, doctors started warning about the disease on social media. Dr. Li Wenliang shared a lab report indicating that the pathogen resembles a SARS virus. However, Dr. Li was punished by the police and his superiors for "spreading rumors" the next day. The Chinese Center for Disease Control and Prevention (CDC) obtained the sequence of the virus on January 3, 2020. Although China reported the outbreak to the World Health Organization (WHO) immediately and held internal meetings to order emergency preparations for a pandemic, Chinese authorities downplayed the virus's ability to infect in public. Since the human-to-human transmission was confirmed on January 20, China's propaganda apparatus has been in high gear just as what Chinese President Xi Jinping said in a Novel Coronavirus Response that "we should lead the way and build up positivity online" (Qstheory 2020). The death of Dr. Li on February 6 gave rise to a widespread outburst of grief and public anger over the government for not sharing information earlier and for silencing whistle-blowers. Recognizing the magnitude of public emotion, the government even dispatched a team to investigate issues involving Dr. Li. Since then, the Party has released a high density of authoritative information on the state-owned digital platforms to inform citizens and tell moving stories of this crisis. And Xi Jinping set the tone for an official narrative of "winning the people's war." Epidemics possess traits that make secrecy difficult, creating an external demand for credible and timely epidemic intelligence. Since COVID-19 is transmitted among humans, different levels of governments are required to trace all the infected cases. The COVID-19 crisis thus increases the Chinese government's sensitivity to citizen demands and efforts to redirect public discourse.

In addition, COVID-19 also opens up a unique opportunity for the domestic government to compare its performance to that of other nations. Recent studies show people often use information about other countries' performance to judge their own government (Huang 2015; Huang and Yeh 2017). They find that Chinese citizens who overestimate foreign socioeconomic conditions have a more negative evaluation of China. International information may also affect citizens' opinion of the Chinese government in the context of the pandemic. COVID-19 is a global crisis that affects countries across the world. By knowing what other countries are like, citizens can better understand how their own government behaves during COVID-19. Thus, the government media has the incentive to leverage the COVID-19 situations in other countries to showcase its effective management of the crisis.

In this project, I investigate the following question: has the current COVID crisis led the Chinese government to engage in strategic messaging - in the form of external comparisons? With additional information, citizens can benchmark the performance of domestic governments against that of foreign governments (Huang and Yeh 2017). Large discrepancies in performance between domestic and foreign nations can presumably make autocrats appear more competent (Huang 2015). Consequently, the government is incentivized to manage its image through its posting behavior. However, international benchmarking can only work if citizens actually respond to these messages. This leads to the second question: Is the government successful in using strategic reporting to engage with citizens? Therefore, the first question is to investigate the government's strategy to managing public opinion, and the second question is to examine whether this strategy "works" – in the sense that the messaging engages the public.

In this paper, I argue that an authoritarian government will choose to selectively report negative information about foreign governments during the crisis. By doing this, a government

can engage with citizens and indirectly improve its image. I use 9,824 social media posts between January and June 2020 by *People's Daily* (Chinese: 人民日报), the largest state-owned media news outlet in China, as my data. To answer my first question about what leads the government to expand citizens' knowledge of foreign countries, I analyze whether the changing severity of the COVID crisis in China and elsewhere influences the Chinese government's posts about foreign governments. To address my second question, I classify posts into different content types and sentiments to examine whether citizens display more engagement with negative posts about foreign countries than positive ones.

My findings show a correlation between worsening pandemic conditions in China and an increasing volume of negative reporting about foreign governments, although the result does not reach conventional levels of statistical significance. Regarding the second question, contrary to expectations, I find that citizens engage more with positive than negative reporting about foreign countries. They are more likely to like, comment on, or share the *People's Daily* positive posts about other countries, and this positive correlation is statistically significant.

This project contributes to the literature on state propaganda (Geddes and Zaller 1989; Huang 2015; Rozenas and Stukal 2019) by focusing on selective reporting and international information. I intend to show how a government can strategically deliver messages to mitigate blame for early mishandling and to cultivate citizen approval of crisis management. Moreover, there is little understanding about how authoritarian rhetoric can shape mass reactions in an international crisis. Few studies have investigated the domestic pressures that authoritarian leaders face and whether they can effectively use propaganda to shape popular sentiment during an international crisis (Weiss and Dafoe 2019). In addition, this thesis also contributes to the literature on Chinese state media's information manipulation on online social media platforms.

Most studies on Chinese microblogs focus on censorship of citizens' posts (King, Pan, and Roberts 2017). I look beyond censorship to better understand the supply side by the state media.

In order to study these questions, it is important to first understand the background and development of social media in China, strategies for authoritarian governments to manage public opinion, and theories regarding international benchmarking and citizen engagement. Then, I illustrate my hypotheses and test my arguments using my data of social media posts. Finally, I discuss the implications of my findings, make suggestions for future research, and provide concluding remarks.

BACKGROUND ON THE DEVELOPMENT OF SOCIAL MEDIA IN CHINA

By the first quarter of 2020, there were 904 million Chinese Internet users, accounting for approximately 64.5 percent of the Chinese population (China Internet Watch 2020). Of China's Internet users, 42.3 percent use microblogging in 2018, which refers to social media outlets that focus on short messages, individual images, or video links (Statista 2020). In China, 70 percent of social media users are under the age of 35 (30 percent are between 26 and 30) (Jamie 2020). While social media is thriving, traditional media is declining in China, sharing only 20 percent of the market.

Chinese people first became aware of Twitter when it was created in 2006. One year later, major Chinese counterparts – Fanfou, Digu, and Jiwai – were launched. After the Urumqi riots in July 2009, the Chinese government not only blocked Twitter and Facebook but also shut down domestic microblog services because they failed to stop sensitive information from spreading. With a better ability to comply with Internet censorship in China, Sina Weibo appeared in August 2009, and NetEase, Sohu, and Tencent followed in 2010. In 2011, Sina

Weibo took the lead over its competitors with 56.5 percent of China's microblogging market based on active users, and 86.6 percent based on browsing time (iResearch 2011).

Sina Weibo borrows many features from Twitter. A post on Sina Weibo is called “weibo” (Chinese: “微博”, meaning microblog), which is the counterpart of a tweet. Users on Sina Weibo can author weibos and read weibos. For each post, Weibo users can type up to 2000 Chinese characters, an increase from the earlier limitation of 140 Chinese characters. However, when users view a weibo, only the first 140 Chinese characters are displayed, with a link allowing the rest of the text to be viewed. Weibo can mention other users by “@,” mark a term in a weibo as a topic by “#,” include URLs, embed images or videos, and add emoticons. A user’s timeline lists all weibos posted by the user account from the beginning. Like Twitter, Weibo users can also like, comment on, or share the post.

Over time, the Chinese central government grew more nervous about the political ramifications of Weibo. In the wake of the Arab Spring in 2011, Wang Cheng, deputy director of the Central Propaganda Department, encouraged local propaganda units to “occupy Weibo.” Government microblogs fulfill many public security and social management functions, placing a great emphasis on collecting information for decision-making, promoting positive news, and maintaining social stability during crises. On Weibo, governments at different levels also hire internet trolls, nicknamed “the 50-cent party” because some are paid at a piece-rate of 50 cents per post. Some commentators, at the behest of local politicians, may post fake positive reviews about the politicians or the regions under their administration (Schlæger and Jiang 2014; King et al. 2017).

The number of government microblog accounts verified by Sina was 138,253 by December 2018, including government departments at all levels, yet most of them were local

governments of provinces and municipalities. The traditional government-leading media, like *People's Daily*, *China Central Television*, and *Xinhua News*, are the top three media accounts with more than 30 million followers of each (Weibo Data Center 2018). Governments affect public debates and sentiments on social media by actively posting their own content. Meanwhile, Weibo is forcing governments to integrate new forms of media, such as adding non-political content on Weibo and posting real-time commentary of social affairs. Due to the highly interactive nature of new social media and its convergence with traditional media, governments are increasingly facing the supervision of public opinion.

To illustrate how traditional government media use Weibo to serve their purposes, I choose *People's Daily*, the largest newspaper group in China established on 15th of June 1948. Since the 1st of August 1949, *People's Daily* has served as an organ of the CCP. As the official mouthpiece for the CCP, *People's Daily* published articles and editorials that would usually be considered authoritative statements of government policy. Therefore, some scholars argue that media in China mainly aim to "guide" public attitudes rather than to reflect them (Tang and Sampson 2012). *People's Daily* opened its Sina Weibo account in 2011. So far, it has near 129 million followers and over 130 thousand weibos. *@People's Daily* (the Weibo of *People's Daily*) tends to adopt "frame of value" on its concept dimension, "frame of society" on its agenda dimension, and "interactive frame of social problems" on its narrative dimension (Li 2017). This means that *@People's Daily* attempts to attach great significance to social responsibility and conversation with its followers rather than direct propaganda.

Overall, Chinese state media and local government microblogging are experimenting with innovative ways to engage with their microblog audience, which in turn enhance governance. In addition, the interactive nature of social media platforms enables official

microblogs to morph from service providers to service predictors, strengthening the regime's capacities to address public concerns and manage social issues.

LITERATURE REVIEW

STRATEGIES FOR AUTHORITARIAN GOVERNMENTS TO MANAGE PUBLIC OPINION

All authoritarian governments attempt to manage the flow of news and political information to the public (Geddes and Zaller 1989). Negative information about the government can be dangerous to authoritarian regimes. It can dissuade citizens from supporting the government, undermine policies, and facilitate collective action that threatens the regime's survival. Authoritarian governments can effectively prohibit and punish the expression of ideas critical to the regime. For instance, printed materials need to receive approval from the government before being published. After the information is disseminated, agents of governments can remove messages such as deleting social media posts (King, Pan, and Roberts 2013). States can even induce private media firms to censor speech. As an example, *TV Dozhd*, an independent national television news channel in Russia, was removed by several privately-owned Russian television service providers. They claimed that censoring *TV Dozhd* was to avoid sanctioning from the Putin regime, which had criticized *TV Dozhd* for being too critical of the regime. Thus, authoritarian regimes have many avenues to effectively constrain the free flow of information.

State censorship has some downsides, however, resulting in a trade-off for dictators between the benefits and the costs of media control (Wintrobe 1998, 20; Francisco 2005; Dickson 2016). First, extensive censorship is either not feasible or highly costly in modern times. With the expansion of the Internet, the cost of citizens to seek out hidden information has been decreasing tremendously. If the state continues burying all the negative information, leaders need

to acquire capable bureaucracy to ban the access of information. Second, censorship may hurt the government's ability to monitor the performance of local agents and bureaucrats and local conditions more generally. Studying the SARS epidemic in China, Egorov et al. (2009) find that the tight control over media restricts leaders from improving the bureaucratic performance. Additional sources of information can provide incentives for the bureaucracy of dictators. Especially in resource-poor countries, bureaucracy is more important for the dictator; hence, media freedom is more likely to emerge. While the prevalence of uncontrollable information may encourage an authoritarian regime to reduce the level of media freedom, the regime also benefits from permitting investigative reporting (Lorentzen 2013). Third, censorship may backfire, incentivizing citizens to seek out information that the authority is trying to hide (Roberts 2018c). When dictators try to hinder the public's access to information, Internet users are more likely to be aware of censorship. Hobbs and Roberts (2018) find that expansions in censorship to previously uncensored websites can encourage citizens to adopt censorship-evasion networks that allow them to consume the information they did not have access to before. Therefore, censorship may result in many unintended consequences that undermine authoritarians' control over the regime.

While granting citizens access to information can increase the legitimacy of the regime and ease governance, this effect is more notable during times of crisis. Salient issues heighten the public's demand for more information (Ball-Rokeach and DeFleur 1976). Since authoritarian governments take control of independent media outlets, one of the most frequent sources that citizens under authoritarian regimes seek is the state-controlled media even though they tend to be biased. For instance, the public health emergency is a salient issue that is likely to be of the highest concern to the public. In 2003, China encountered Severe Acute Respiratory Syndrome

(SARS). Official secrecy caused public rumors of this disease to spread quickly. In contrast, as secrecy exacerbated the threat that the SARS crisis posed to the regime, Chinese authorities became more open during the H1N1 influenza epidemic (Baekkeskov and Rubin 2017). Therefore, autocrats need to provide transparent information to a certain degree as it positively and significantly affects the quality of government. Because censorship has its downsides, governments are also turning to other strategies, including flooding, information falsification, and selective attribution. I discuss each of these strategies in turn.

Under the information age, dictators are likely to adopt the strategy of flooding, which means that information serves as dilution and confusion. It requires citizens to take time and effort to tease out important information from irrelevant ones. For instance, eight hours after the earthquake hit Yunnan province in China in 2014, the state media began posting coordinated stories not about the earthquake, but a long-forgotten scandal of an online celebrity Guo Meimei (Roberts 2018b). First, flooding works because the central government understands that the public can be so overwhelmed by available information that they could not evaluate its truth. Second, citizens in authoritarian regimes are more likely to seek out information that confirms the government's viewpoint because they know they cannot publicly oppose the government (Geddes and Zaller 1989, 327-341). Third, flooding least likely causes backlash from citizens because people hardly notice it. For instance, Chinese state media outlets apply flooding through building trust in their sources of media and discrediting alternative sources such as Western media. In return, citizens are more likely to turn to government sources for information. Even when citizens are aware of flooding, it hardly brings attention directly to the information that the authority is trying to conceal (Roberts 2018, 89). Via social media platforms, governments can also conduct more secretive and extensive operations like "astroturfing". Governments can post a

large number of fabricated comments on social media as if they are the authentic opinions of ordinary Chinese citizens. Gary, Pan, and Roberts (2017) show that the government hires millions of secretive Internet commentators to form a 50-cent party. This massive group sends fabricated cheerleading posts for the state, symbols of the regime, or the revolutionary history of the CCP. In turn, this group can reduce the likelihood of collective action, grievances, or general negativity towards the regime, and so forth.

False information is another common strategy to manage public opinions towards own governments. For instance, Chinese local and national leaders can manipulate economic statistics such as gross domestic product (GDP) figures. Wallace (2015) suggests that falsified data can help the government survive an economic crisis if the falsification is not revealed to the public. He demonstrates a correlation between China's GDP falsification and leadership turnover on the local level. His findings show that local officials have an incentive to manipulate information for greater political rewards. Even though the high-level officials are aware of the inflation of GDP figures, the local official might still signal to the center of her strength in local networks. A huge implication of this work is that scholars studying nondemocracies should be aware of the possibility of data manipulation during politically sensitive moments and for politically sensitive indicators.

Another strategy is selective attribution: the government can attempt to shift blame for poor performance and magnify its role in generating good performance. Existing work finds that governments - in democracies and autocracies - often strategically frame economic facts to serve their political ends. Research of nine prime ministers in Europe shows that they try to shift the blame to banks, Greece, and the Troika when the domestic unemployment rate increases (Traber, Schoonvelde, and Schumacher 2020). Such a strategy also occurs in authoritarian regimes. For

instance, the state-owned media in Russia manipulates economic information by selectively attributing the responsibility for bad news to external economic and political causes and good news to domestic political elites, especially President Vladimir Putin (Rozenas and Stukal 2019). Their results imply that autocrats are more concerned about how certain facts are reported than whether those facts are reported. They suggest that autocrats who effectively manage to shift the blame for domestic economic underperformance on external actors will better stabilize the regime.

THEORETICAL FRAMEWORK

MANIPULATING THE BELIEFS OF GOVERNMENT PERFORMANCE

This paper intends to explore another strategy beyond distorting or hiding negative information of governments. As authoritarian regimes allow news about foreign countries in the public sphere, citizens can benchmark the performance of the domestic government against that of foreign governments. The strategy of using knowledge and information about foreign countries to affect people's evaluation of domestic situations is called international benchmarking. I argue that the media in authoritarian governments can manipulate citizens' evaluation of governments by ways in which they frame information about performance in domestic and foreign countries.

International benchmarking studies in democracies find evidence of voters' cross-national concerns. Voters reward incumbents for domestic outcomes that outperform an international comparison (Kayser and Peress 2012). Scholars studying European countries also find that the economic performance of neighboring countries may serve such a benchmarking role for domestic voters to evaluate the domestic economy. For instance, Hansen et al. (2015)

find that Danish voters are very concerned about not falling behind neighboring Sweden in terms of relative wealth.

Given that voters form opinions and make decisions partly by making comparisons with other jurisdictions, governments have incentives to address topics strategically. According to issue engagement theory, governments address publicly salient topics, thereby signaling that they are responding to their voters' needs and concerns. For instance, when the domestic economy is in decline relative to a salient comparison economy (i.e., the European Union), prime ministers are more likely to address economic topics (Traber, Schoonvelde, and Schumacher 2020). However, parties tend to selectively emphasize issues on which they have a comparative advantage and avoid issues on which they are perceived as weak. The rationale behind these studies is that when the economy in a single country contracts, voters often punish the government; when many economies contract, voters would turn against their governments much less frequently.

Nonetheless, not much extant study has examined how authoritarian governments adapt the international benchmarking to enhance their accountability. Although voting is less consequential in non-democracies, autocrats still care about public opinion. Low support or high discontent within the population can lead to protest which requires costly measures to address and risks the overthrow of the government. According to the benchmarking theory, citizens acquire relevant information to make comparisons and evaluate their governments. The performance of neighboring or comparable states may serve a benchmarking role because citizens can compare the domestic government's performance against the performance of comparison states. Thus, in an increasingly interconnected world, an authoritarian has incentives to use Western democracies as a benchmark.

I examine this argument in the context of the COVID pandemic in China where political leaders shifted from an initial strategy of secrecy to one of greater transparency. But forced to exhibit greater transparency, the government has incentives to engage in international benchmarking in the way I have outlined. When the crisis first started off in China in January, not many COVID-19 incidents were discovered in other countries. However, as COVID-19 soon blew over to Europe and the U.S. in March, foreign governments began accusing China of its initial delays in responding that failed to contain its spreading within the borders. At the same time, Chinese governments' decisive measures to control the epidemic have worked to flatten the curve. In response to these criticisms and to bolster citizen support, Chinese governments are motivated to portray the increasing caseloads in foreign countries as their leaders' own mismanagement and underperformance. Thus, the Chinese government has strong incentives to strategically use media when reporting its benchmarked performance in handling the crisis.

While the previous discussion relies on issue engagement and benchmarking, I have not yet addressed the types of content in those government posts about foreign nations. To display an effective benchmark in the context of crisis, domestic governments want to make themselves relatively competent compared to foreign governments. This logic incentivizes the state media to increase negativity towards foreign governments rather than positivity. Here I assume that the Chinese government wants to depict an unfavorable image of foreign governments in all aspects, not just the handling of COVID-19 exclusively. The other underlying assumption of my theory is that citizens are less likely to develop negative impressions of their own government amid a crisis if they see that other governments are also doing poorly. Thus, when the domestic media deliver information about foreign countries during the crisis, we expect the sentiment to be correlated with objective conditions such that the domestic government tries to highlight the poor

performance of others when there is poor performance. Therefore, with the global prevalence of COVID-19, benchmarking actions of the domestic government against the underperformance of foreign countries during the crisis may be seen as a strategic response to discredit criticisms and to maintain popular support.

Hypothesis 1: Government-owned social media are more likely to post negative information on foreign governments in general as China's situation gets worse in comparison to other countries during the crisis.

CITIZEN ENGAGEMENT WITH THE INTERNATIONAL BENCHMARKING STRATEGY

The preceding hypothesis has dealt with how autocrats manipulate citizens' evaluation of government performance during the crisis, but how effective is the international benchmarking strategy? This study also seeks to increase the understanding of online citizen engagement among Chinese nationals within the context of COVID-19 and help governments identify the types of content most likely to appeal to citizens.

Throughout the world, social media has become an important mechanism for citizens to express their attitudes and show their governance concerns. By viewing messages delivered by the new media, citizens can learn and share information, increase their understanding of present situations, and express their attitudes and opinions through liking, commenting, and reposting. Simply put, citizen engagement means that when the government asks a question, someone will answer it; when the government posts a picture, someone will give it a thumb-up. Liking is indicative of an endorsement of the government while commenting and reposting could be either approval or disapproval. If citizens comment on a post, it means that they have taken time to react to the content of a post. When people repost, it usually means they think the content of a post is useful, therefore they believe it would also benefit their followers. Although these three

types of responses can be interpreted in several different ways, they reflect citizens' engagement with the information posted by governments.

Empirical evidence has suggested a link between uses of social media and political participation. For instance, in democracies, Internet users can follow political candidates, post content associated with political issues, and comment on those issues on social media platforms (Smith, Schlozman, Verba, and Brady 2009). Moreover, studies indicate that informational uses of social media increase users' participation in political activities (Ekström and Shehata 2018; Knoll, Matthes, and Heiss 2018). For instance, news consumption through the Internet and social network sites is significantly associated with both offline and online civic engagement and political knowledge among young people in Singapore (Hao, Wen, and George 2014).

In authoritarian regimes, the uses of social media can also foster citizen engagement through improving issue awareness and regime support. For instance, Placek (2019) finds that social network service users in Russia are more likely to support the current regime over a return to the Soviet system than non-users. Although a more active use of social media associates with lower trust in regime institutions, users tend to be more economically and politically satisfied, which likely contributes to the stability of the regime (Placek 2019).

Some studies have investigated the impact of selective media exposure on citizens in authoritarian contexts. Huang (2015) uses survey and experimental data to find that Chinese citizens who hold more positive perceptions of foreign countries are more likely to view the Chinese government negatively. He also highlights that more awareness of foreign political crises and social unrest is associated with more positive evaluations of China. Huang and Yeh (2017) conduct a survey experiment of Chinese Internet users to show that citizens often evaluate their governments using Western democracies as a benchmark. They find that citizens who self-

select to read relatively positive foreign media content about foreign countries improve rather than worsen their evaluations of the domestic government. Huang and Yeh (2017) argue that people who self-select to view foreign media news tend to correct their overestimation of foreign countries because Chinese news coverage about foreign countries is exceedingly favorable. According to their reasoning, however, it is more likely to find the opposite results now as the current narratives present more negative images of foreign countries than those in the past. Nonetheless, their research is particularly relevant to this project because they suggest people use information about other countries' performance to judge their own government. Based on these results, I expect to see that negative reporting on foreign governments is positively correlated with citizen engagement.

Recent studies show that authoritarian rhetoric not only engages citizens but also has an impact on citizen approval of government performance. Weiss and Dafoe (2019) show that popular support increases when the Chinese government appeals to nationalism. Specifically, narratives that make tough but vague threats, invoke future success to justify present restraint and emphasize a shared history of injustice at the hands of foreign powers increase popular support of the state. However, not all government messaging works effectively. Huang (2015) finds that simple and quasi-official rumor rebuttals fail to increase the public's trust. To recover people's political trust, he suggests governments engage well-evidenced, vivid rumor rebuttals from an independent source. Huang (2015) also points out that consumption of mainstream news does not affect respondents' political trust. During the COVID-19 crisis, the Chinese government also delivered messages of these kinds on social media. Although I cannot test the correlation between citizen engagement and people's evaluations of China for this study, citizen engagement could still be a good measure to suggest the effectiveness of government messages.

In normal times, citizens who more actively seek information on social media are more likely to engage with governments. This could cause selection bias because those citizens are more likely to believe the governments' messages or approve of them in the first place. Social media users have certain typical characteristics such that they tend to be more educated, younger, and more urban. But in the context of a crisis, a biased sample is less of a concern. Studies highlight that citizens care about information delivered by governments during crises. People who are being exposed to danger demand timely and accurate information from authoritative sources to make sure that they are safe (Fu et al. 2011, 2). According to the media dependency theory, there is a heightened media need when a society is undergoing a crisis. Ball-Rokeach and DeFleur (1976) put forward that the more unstable a society is, the more the audience depends on the media. Therefore, looking at citizen engagement with the government through social media during a crisis is more likely to produce a selected sample based on affinity for the government.

Specifically, there are three types of effects that result from an audience's dependency on the media: cognitive, affective, and behavioral. Cognitively, an audience would believe the media's role in agenda setting. Affective effects include, for example, the development of feelings of assurance and positiveness as a result of exposure to uplifting news such as relief or progress. An example of a behavioral effect is that individuals would do certain things because they had been exposed to certain messages from the media (Lin 2015). Thus, applying these theories into the government's strategic use of social media, one can infer that the content of media posts on social networking sites plays an essential role in engaging citizens.

Since the idea of my second hypothesis is that negative posts about foreign countries by the government are designed to make China look better. Thus ideally, we would have a measure

of people's evaluations of China after they view negative posts about foreign governments. However, those data are not easy to collect and were not available for this project. As for an intermediate, more tractable approach, I argue that we can look at citizen engagement with the posts about foreign governments. For the posts to affect people's evaluation of the Chinese government, people need to have read the posts about foreign governments. And engagement with the posts - liking, commenting, sharing - is likely positively correlated with reading the post. If negative posts about foreign governments are to have any effect on evaluations of the Chinese government, domestic evaluations should, at least, be correlated with more citizen engagement.

Therefore, I argue that the state media are tasked with gauging and guiding public opinion to improve state legitimacy. To realize this goal, the media deliberately report foreign governments' performance as a powerful supplementary source of information to reshape citizens' perceptions. I propose that this mechanism can generate a benchmarking effect on the audience, shifting their views about the state of affairs through the increased engagement with negative information about foreign governments' performance.

Hypothesis 2: Negative information on foreign governments during the crisis will lead to a higher level of citizen engagement than positive information on foreign governments.

DATA: POSTS FROM *PEOPLE'S DAILY*

POSTS IN GENERAL

The followers of *@People's Daily* are likely to read its posts on Sina Weibo, but any Weibo user can read its posts without following the account. As touched upon in the background section, rather than direct political propaganda, *@People's Daily* focuses on conversation with

its followers and "delivers positive energy of society."[1] Seventy percent of its followers are ages of 17 and 35, so the posting language is vivid. In normal times, the content of *@People's Daily* can be divided into four categories: *Planning*, *Instant News*, *Comments*, and *Social Interaction*. Among them, *Planning* includes "Good Morning Posts," "Hello Tomorrow" series, celebrity quotes, health knowledge, life skills, cooking tutorials, etc. *Comments* section consists of opinions of *People's Daily* on news and social events to guide public opinion. Posts regarding *Social Interaction* mainly conduct surveys and polls to initiate dialogues between officials and netizens. During the COVID-19 outbreak, *Planning* posts were mostly trimmed to only include "Hello Tomorrow" series that focused on confidence building (e.g., encouraging citizens and party members to bravely rise to difficulties). The number of *Instant News* posts surged: *People's Daily* updated COVID-19 situations (contact tracing information, local case numbers, clips of press conferences, etc.) about 20 minutes on average. Topics in *Comments* category mainly covered responses to public concerns of governments' management of COVID-19. *Social interaction* posts asked viewers to root for epicenters in China and monitor the construction work such as makeshift hospitals. For this project, I classify the content types of *People's Daily*'s weibos into seven categories: latest news, information about own government, information about foreign government, guidance for stakeholders, appreciation to ordinary people, and cheerleading, and other.

To test these two hypotheses, I employ the case of the COVID-19 pandemic in China and collect data from *@People's Daily*. I use both quantitative and qualitative methods to examine the weibos of *People's Daily* within a specific time frame. China's official lockdown period was

[1] "Positive energy" (Chinese: 正能量) is a popular Chinese slang, which means a positive attitude of being socially responsible and supportive of others.

declared between January 23, 2020 (the starting date of the lockdown in Wuhan and other cities in Hubei to quarantine the center of an outbreak) and April 8, 2020 (the time when the Wuhan lockdown was officially ended). The crisis period lasted two months, two weeks and two days. In line with the length of the crisis period, April 9 till June 22, 2020 is categorized as the postcrisis stage.

Here I offer a first look of the 9,824 social media posts of *People's Daily*. I do this by plotting a daily time series of counts of these posts in Figure 1. This graph shows that the posts are not randomly or uniformly distributed, instead being decreasing over time. The number of the posts soared to the maximum at the beginning of the lockdown, and the number dropped to the lowest in early May. The burst of posts in late May indicates Two Sessions, which refers to the annual meetings of the Chinese People's Political Consultative Conference (CPPCC) and the National People's Congress. Normally, the Two Sessions are held in March, but this year they were delayed to May 22 because of COVID-19.

Figure 1. Time Series of 9,824 Social Media Posts

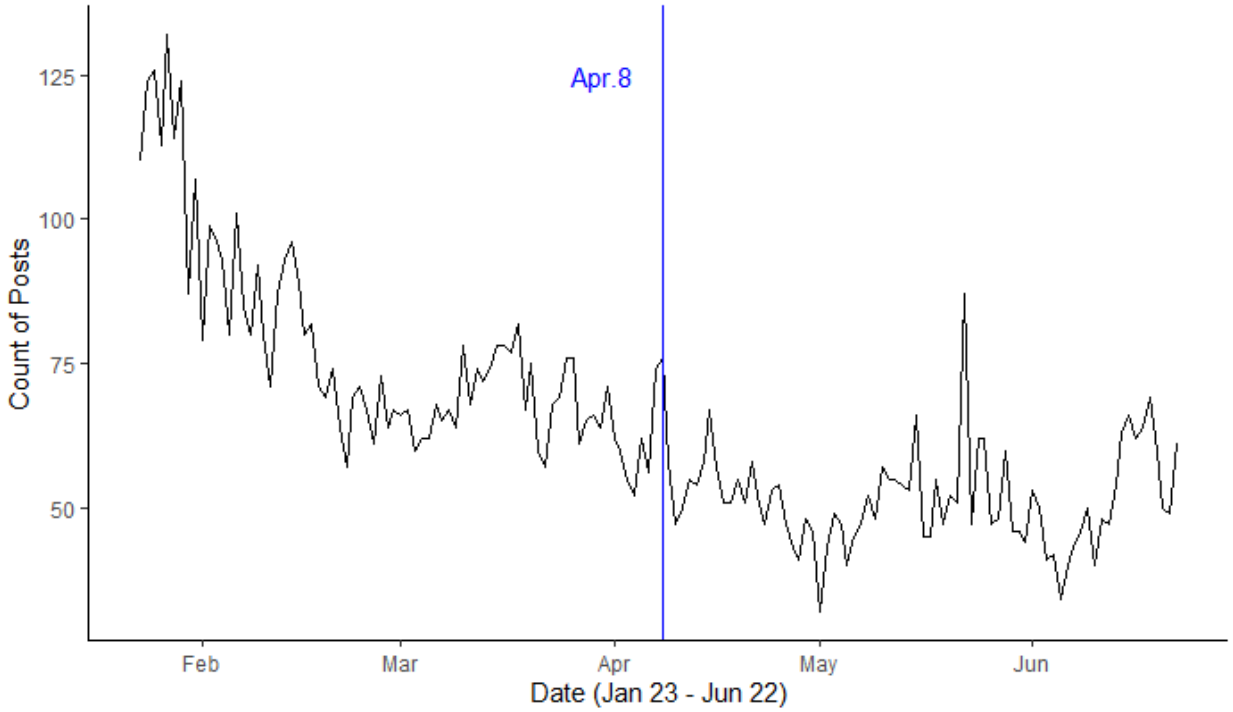
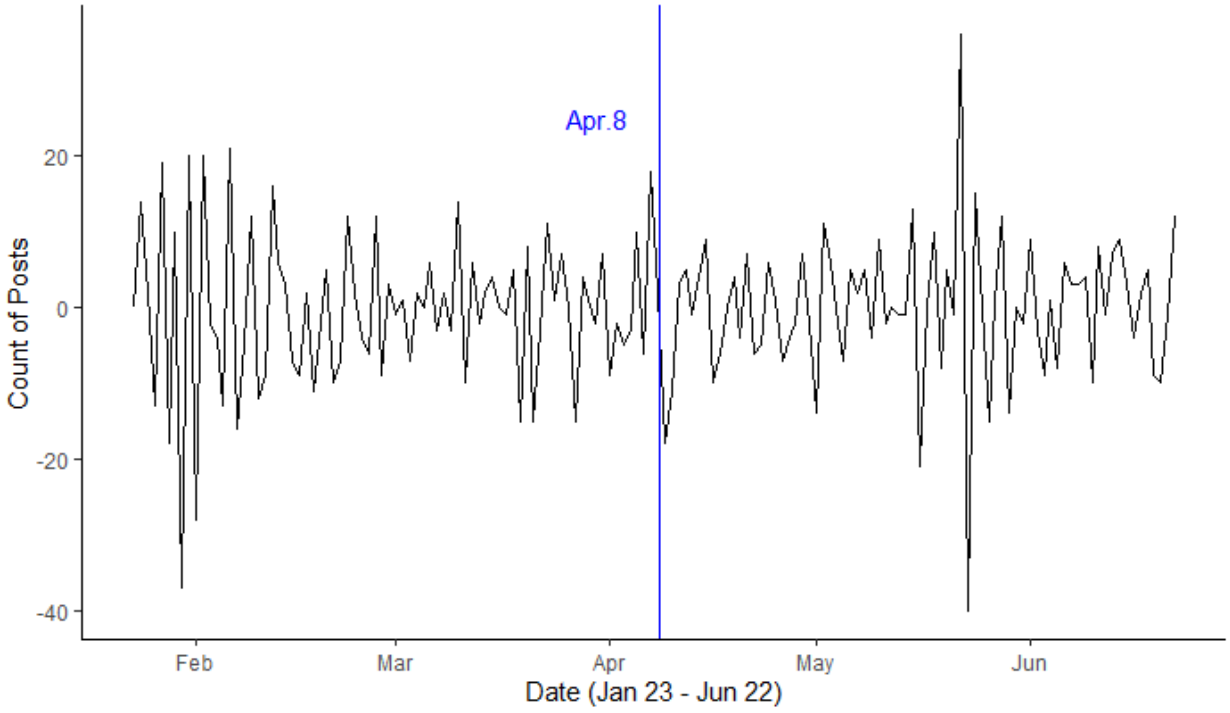


Figure 2 shows the time series of the change of social media posts from previous day. The number of posts experienced some wild fluctuations at the beginning of the lockdown and during Two Sessions in late May. On average, the Chinese government decreases 0.32 number of posts every day, but the variation is large, with a minimum of 40 posts reduction and a maximum of 36 posts increase in a day.

Figure 2. Time Series of 9,824 Social Media Posts Change



POSTS ABOUT COVID-19

In addition to information on foreign governments, the Chinese state media also delivers other types of messages to manage the crisis. There are at least six elements to China's endeavors in trying to communicate with the public during the crisis: it updated daily caseloads at the national and provincial levels, emphasized the central government's decisive efforts in controlling transmission, paid tribute to frontline emergency services, provided guidance to stakeholders, released information about other countries' performance, and cheered for China's ultimate victory. Since I do not subject these types of messages to my hypothesis testing, I describe them to supplement main findings.

As a native Mandarin-speaker, I read and code posts by hand. To systemize this informative and qualitative data source, I use posts in the first ten days to establish the coding norms. After going through the coding practice, I refine the scheme and determine the number of

categories. The coding involves the following steps: First, I summarize the key information of each post in the "Content text" column and categorize each post in one of seven content categories – *News*, *Appreciation*, *Domestic Government*, *Foreign Government*, *Cheer*, *Guidance*, and *Other*. Then, I record the number of likes, comments, reposts and the sum of these three indicators as citizen engagement. Thereafter, I tag the emotional expression of each post. Next, I mark whether the post is issued during COVID and whether it is relevant to COVID. Finally, I tract the date and the time a weibo is posted and the web page number that allows for revisiting the posts.

I specifically classify the content types of the posts for these criteria. For the *News* category, I include reporting and live broadcast on new infections, recovered cases, epidemic situation, and other newly received information. The *Appreciation* category captures posts that express appreciation to someone who has done something praiseworthy. The *Domestic Government* category includes announcements, progress, evaluations, and the outcomes of the government's policies. The *Foreign Government* category is information related to foreign governments. The *Cheer* category includes posts in praise or encouragement without any substantive content of anyone or any government. The *Guidance* category is advice, information, and prediction provided by public health experts or authorities. The *Other* category includes posts fitting none of the other categories such as advertisements and cooking videos. Table 1 illustrates the six main categories of the posts issued by *@People's Daily* during the crisis:

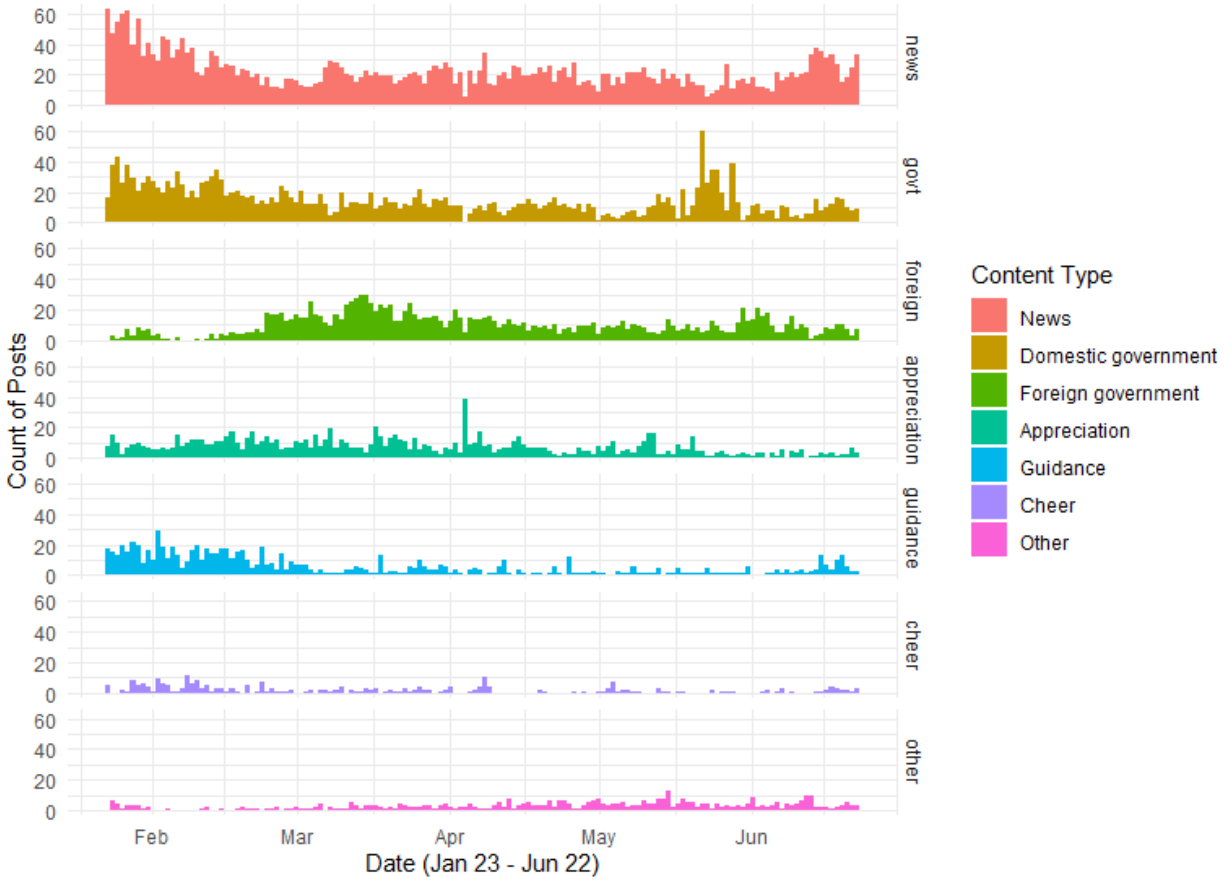
Table 1. Content Category of Posts and Example Posts (About COVID) [2]

Categories	Example posts
Latest news about the COVID-19 crisis	[#1982 new cases nationwide#] According to the official website of the National Health Commission, from 0 to 24 on Jan. 30, 31 provinces reported newly confirmed diagnoses of 1982 cases, 157 new severe cases, 43 new deaths, 47 new cured and discharged cases, and 4812 new suspected cases...
Appreciation to frontline workers	[#These are our soldiers in the face of the epidemic#] "Keep in mind the purpose of the People's Army, act upon orders, bravely carry heavy burdens, dare to fight tough battles, and actively support local epidemic prevention and control." …
Guidance for stakeholders	[Obedient! #Zhong Nanshan gives you 9 protective suggestions#] How can ordinary people prevent it best? How to do personal protection after returning? Zhong Nanshan's suggestion↓↓↓Quickly transfer to family and friends
Information about domestic government	[Secretary of the Hubei Provincial Party Committee: #Hubei has a single-day testing capacity of approximately 4000 samples#] Hubei Provincial Party Committee Secretary Jiang Chaoliang said at a press conference on the 30th that the current single-day sample detection capacity in Hubei has increased from 200 to about 4,000, and the speed of diagnosis has been greatly accelerated.
Information about foreign governments	[#The first human-to-human transmission case in the US#] At noon on the 30th, Eastern Time, the Centers for Disease Control and Prevention confirmed that a new case of new coronavirus infection in Illinois, the first case of human-to-human transmission in the US...
Cheer	[Reposted as #Go for Wuhan#! Let the people of Wuhan know that the people of the whole country are with you!] Thank the people of Wuhan for their tremendous contribution, it is not easy for you! Come on, Wuhan, let's win this epidemic prevention and control war together!

[2] Here I only provide example posts relevant to COVID-19. I have a table in the Appendix (I) that illustrates example posts not relevant to COVID-19.

Figure 3 shows the daily variation of posts by content type. *News* takes the largest proportion. The proportion of *Foreign Government* is lower than the proportion of *Domestic Government*. *Other* is the smallest proportion.

Figure 3. Time Series of 9,824 Social Media Posts by Content Type



POSITIVE, NEGATIVE, AND NEUTRAL CATEGORIES OF COVID-19

I label all the posts as either positive, neutral, or negative emotion. Positive weibos on foreign governments are information that can elicit positive feelings of the viewers, including joy, gratitude, hope, satisfaction, etc. Negative weibos on foreign governments are information that elicits negative feelings of the viewers, including hate, anger, sadness, contempt, etc. Neutral weibos offer plain facts and expert advice and consequently, are not expected to trigger any emotional response in the audience. I use the first ten days since the lockdown as my "training

set" and come up with standards to classify each emotion. I examine the texts, sentence by sentence, to form concepts and categories of emotional expressions. All the words in a post (including adjectives, verbs, adverbs, nouns, etc.) are used for evaluation. For instance, lexicons such as spectacular and beautiful (Chinese: 壮观绝美 adj.), encourage mutually (Chinese: 共勉 v.), achievement (Chinese: 成就 n.), etc. are all classified as positive emotion. Example lexicons of negative emotion include fake (Chinese: 虚假的 adj.), seek after glory by selling out Hong Kong (Chinese: 卖港求荣 v.), dead pig (Chinese: 死猪 n.), etc. For neutral emotion, I include lexicons such as hope you all know (Chinese: 望周知 v.), reminder (Chinese: 提醒 n.), Q&A (Chinese: 问答 n.), etc. I do not collect a list of emotion words as seed words and then search for synonyms or antonyms of these seed words to determine emotion because the word bank method is not entirely suitable for all the contexts. For instance, one sentence in one post reads, "If you are often annoyed by your lack of self-confidence, it's time to make a change" (Chinese: 如果你常因为不自信感到懊恼，是时候做出改变了). Words like "annoyed" and "lack of self-confidence" indicate negative emotion, but the holistic reviewing suggests that it is a cheerleading post. After checking my categorization scheme of the posts in the first ten days, I apply my criteria to the rest of the data. I count every post only in one emotion category. Classifying these weibos allows me to show the distribution of posts by emotion.

My sentiment categories are 1 as "Negative," 0 as "Positive," and -1 as "Neutral." For instance, I classify reporting on COVID-19 statistics as "Negative News". Since most of *Guidance* posts are expert advice and rumor rebuttals, I classify them as "Neutral." But there are few exceptions as some *Guidance* posts make optimistic or pessimistic predictions of the epidemic prevention and control. A post of in the *Appreciation* category with negative emotion

means that it expresses deep condolences to people who sacrifice on duty. I read only the original post text to gauge the sentiment that *People's Daily* intends to deliver.

In the column of *COVID Period*, I assign 1 representing a post released during the COVID-19 period and 0 otherwise. In the column of *About COVID*, I assign 1 representing a post related to the epidemic and 0 otherwise.

I illustrate here the meaning of some interactions between content types and other control variables. A post captured in both *Appreciation* and *About COVID* categories means that it is related to the appreciation of frontline emergency services. If a post is in both *Domestic* and *About COVID* categories, it issues information about the domestic government's handling of the COVID-19 crisis. If a post is in both *Foreign* and *About COVID* categories, it means that the post contains information about foreign governments' handling of the COVID-19 crisis.

As Figure 3 shows the overall changes in social media posts by content type, Figure 4 only focuses on information about domestic and foreign governments and divides each type by emotion. *@People's Daily* mostly posts positive information about own government, while most posts about foreign governments are negative. There was a peak of negative information about domestic government at the beginning of the Wuhan lockdown, while negative information about foreign governments surged in mid-March and early June. In mid-March, many foreign countries began discovering confirmed COVID-19 cases and undertaking measures. The spike between late May and early June can be explained by the killing of George Floyd. After Floyd died on May 25, *@People's Daily* had an extensive coverage of protests that erupted in cities across the U.S. In late May when Two Session were held, the number of positive information about domestic government reached a climax.

Figure 4. Time Series of Social Media Posts About Domestic and Foreign Governments by Emotion

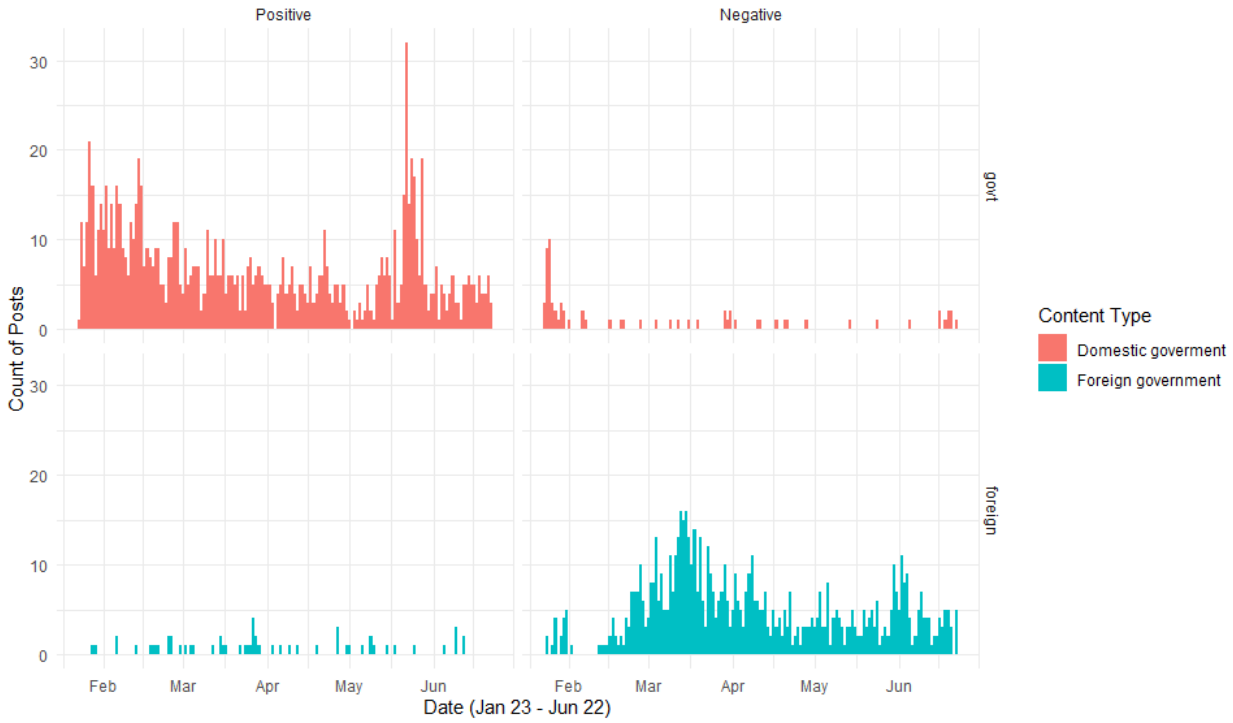


Table 2 provides example posts of information about domestic government and foreign governments grouped by positive, neutral, and negative emotions:

Table 2. Emotion Category of Posts and Example Posts

Categories	Example posts
Positive information about domestic government	[The central government allocates 60.33 billion yuan to support epidemic prevention#] On the 27th, the Ministry of Finance and the National Health Commission issued 9.95 billion yuan in 2020 basic public health services and grassroots epidemic prevention and control subsidies, plus 50.38 billion yuan that has been issued in advance.
Neutral information about domestic government	Comrade Gong Zheng served as member, standing committee and deputy secretary of the Shanghai Municipal Party Committee
Negative information about domestic government	[#The deputy head of Qingshan District of Wuhan City was examined by Commission for Discipline Inspection#]…
Positive information about foreign governments	[#WHO expert team arrived in Italy# said #80% of cases in Italy are asymptomatic or mild#]…
Neutral information about foreign governments	[#The President of Mongolia Battulga will visit China#] According to Xinhua News Agency, Foreign Ministry spokesperson Hua Chunying announced on the 27th that the President of Mongolia Khaltmaagiin Battulga will visit China on February 27.
Negative information about foreign governments	[#A total of 2,337 cases of new COVID-19 have been diagnosed in South Korea#, #South Korea's new COVID-19 cases increase by 571 cases a day#]…

In the next section, I demonstrate my test for each hypothesis, descriptive findings, and results from linear regression and negative binomial models by using RStudio software Version 1.2.5033.

TESTING H1: THE GOVERNMENT'S STRATEGY

MODEL

The first hypothesis posits that the government social media are more likely to post negative information on foreign governments as China's situation gets worse compared with circumstances in other countries. Thus, I expect to see that a larger proportion of weibos about foreign governments is issued when domestic situation is relatively worse. The model for H1 is:

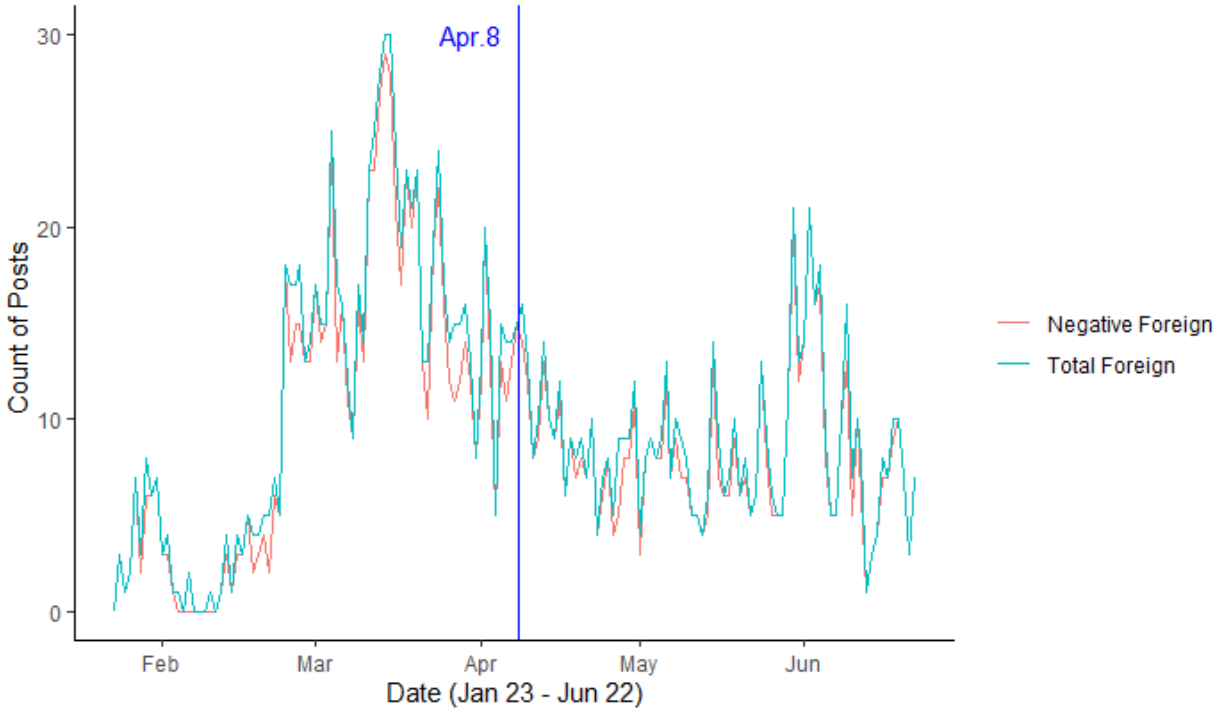
$$PercentChangeNegativePostsForeignGovt_t = \beta_0 + \beta_1 ChangeChinaIncidentRate_t + \beta_2 COVIDPeriodDummy_t + \beta_3 ChangeChinaIncidentRate_t * COVIDPeriodDummy_t + \beta X_t + \epsilon_t$$

As shown by the equation, I run an OLS regression model. *t* stands for the unit of analysis of each day, and X stands for control variables. Given H1, the coefficient of interest is β_3, and I expect it to be positive, meaning that increasing rate of COVID in China leads to more negative reporting on foreign governments during the crisis.

VARIABLES

In my first model, the dependent variable is the change in the proportion of negative weibos mentioning foreign governments of total weibos. Before calculating the proportion, it is useful to first check the daily time series of counts of negative weibos about foreign governments. Figure 5 indicates that most of the posts related to foreign governments are negative because the time series of weibos about foreign governments ($\mu = 10$, sd = 6.6) and negative weibos about foreign governments ($\mu = 9.3$, sd = 6.3) are overlapping. Surprisingly, *People's Daily* reported zero negative foreign post in several days at the beginning of the lockdown. Negative reporting about foreign governments was most extensive in March, and the number reached maximum in mid-March.

Figure 5. Time Series of Social Media Posts About Foreign Governments



Then, I calculate the percentage of negative posts related to foreign government of all the posts ($\mu = 16\%$, sd = 0.1) and plotted time series in Figure 6. Figure 6 has a distribution similar to Figure 5, but early June instead of March was the time when the proportion of negative foreign reporting topped.

Figure 6. The Percentage of Negative Weibos About Foreign Governments of Total Weibos

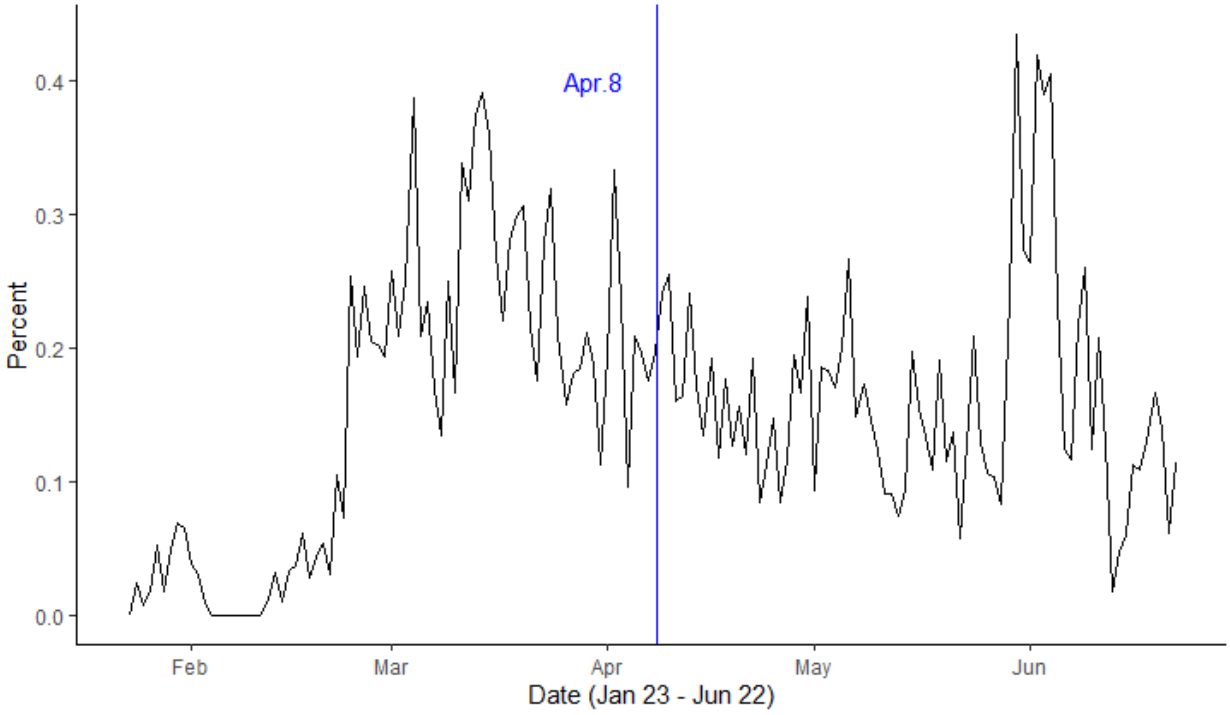
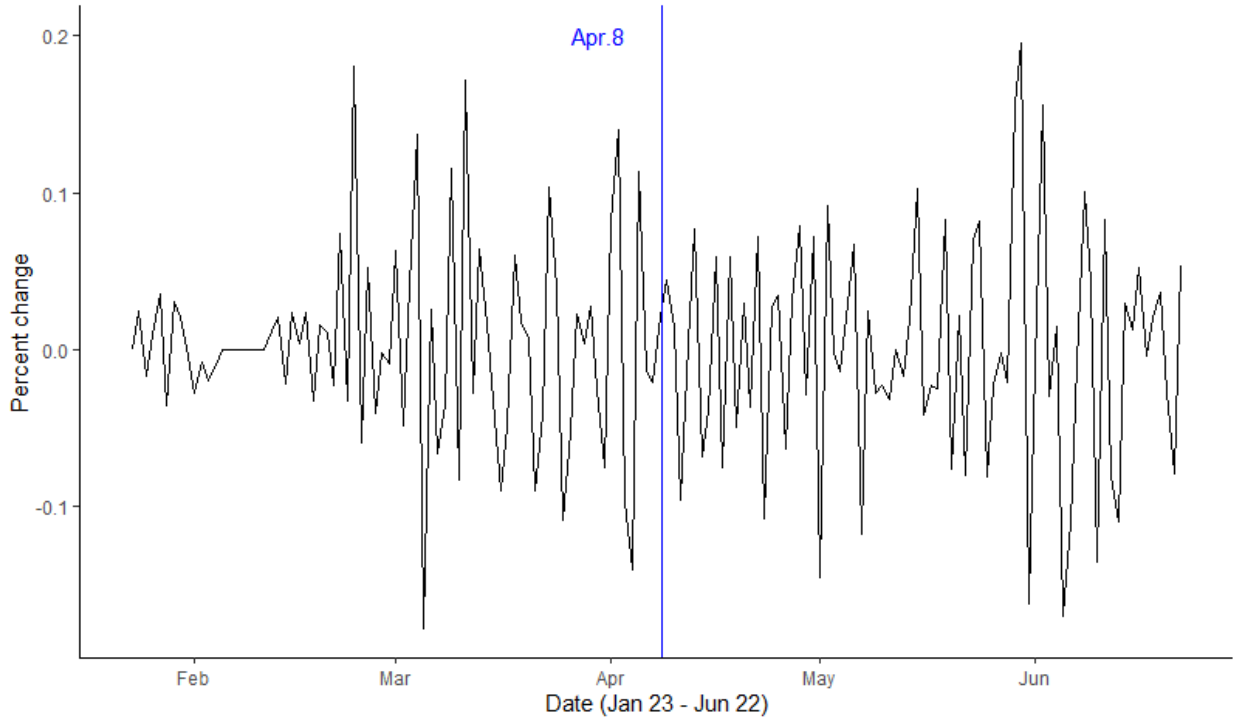


Figure 7 is a graph of the percentage change of negative weibos about foreign governments of total weibos. The change was relatively slight at the beginning of the lockdown, but the change became substantial between late February and early April. For the change of the proportion, there is an average of 0.076% increase in negative reporting on foreign government every day (sd = 0.069), with a minimum of 18% reduction and a maximum of 20% increase. During the crisis stage, change in the percentage of negative reporting on foreign government is positive ($\mu = 0.0023$, sd = 0.064), while the percentage change is slightly negative after the crisis is over ($\mu = -0.0008$, sd = 0.074). These numbers indicate that the Chinese state media increases 0.23% negative reporting on foreign governments during the crisis and decreases 0.08% negative reporting on foreign governments after the crisis on average.

Figure 7. The Percentage Change of Negative Weibos About Foreign Governments of Total Weibos



The independent variable is the change in the COVID-19 incident rate in China. I collect newly confirmed COVID-19 cases in China from my original data set because *@People's Daily* reported new cases nationwide every day from January 23 to June 22. Since my independent variable in H1 is about whether China is improving, it means to compare China's current performance with its past, so I look at the change in China's COVID-19 infection rate as my independent variable. Both dependent and independent variables are continuous variables.

Other variables that may affect the number of posts on foreign governments are: whether a post is issued during the crisis stage (*COVID Period*), whether a post talks about COVID (*About COVID*), and the change in other countries' COVID incident rates. For the *COVID Period* variable, I code the day within the outbreak between 23 January 2020 and 7 April 2020 with 1 and the day after the outbreak from 8 April 2020 to 22 June 2020 with 0. Since I expect that a positive correlation between the change in China's COVID-19 infection rate and negative

posts about other countries exists during the outbreak period, I interact my independent variable with the dummy indicator *COVID Period*.

For the control variable of COVID rate change in other countries, I collect the COVID-19 incident rate of the United States and also subtract the previous day's rate from the rate of the day to measure the change. I choose the U.S. as the only foreign country for two reasons. First, reporting on the U.S.' COVID-19 situation is much more extensive than reporting on any other country on *@People's Daily* (see Appendix II) and the Chinese social media. I can obtain a significant number of posts about the U.S. from my data set. Second, the data on the daily number of COVID-19 cases in the U.S. are available throughout the period of China's crisis.

To collect this control variable, I download the data from the U.S. Centers for Disease Control and Prevention (CDC). I choose not to collect the 7-day moving average data because the U.S. CDC reported no case from January 22 to February 28 based on the 7-day moving average. Moreover, new cases also more accurately reflect how Chinese citizens know the U.S. COVID-19 situation because my data set indicates that *@People's Daily* reported new cases in the U.S. almost every day based on the number updated on previous day rather than based on the 7-day moving average.

To make COVID incidence comparable across geographies, I calculate daily new COVID cases for every 100,000 people as follows:

*Incident rate = (New daily cases / population) *100,000*

Figure 8 shows a large difference in the COVID-19 incident rate of China ($\mu = 0.038$, sd = 0.11) and the U.S. ($\mu = 4.59$, sd = 3.9). This means that 0.038 cases per 100,000 people are confirmed in China while 4.59 cases per 100,000 people are confirmed in U.S. every day on average. The average daily number of cases in the U.S. is about 120 times more than that of

China. Figure 8 depicts that the lockdown had successfully flattened the COVID-19 curve in China by late February. During more than half of the crisis period, the U.S. was virtually virus free. Till the beginning of March, the incident rate in the U.S. was zero or negligible. However, by the beginning of April, the rate had surged in the U.S. while in China it dropped to negligible extent.

Figure 8. Time Series of COVID-19 Incident Rate by Country

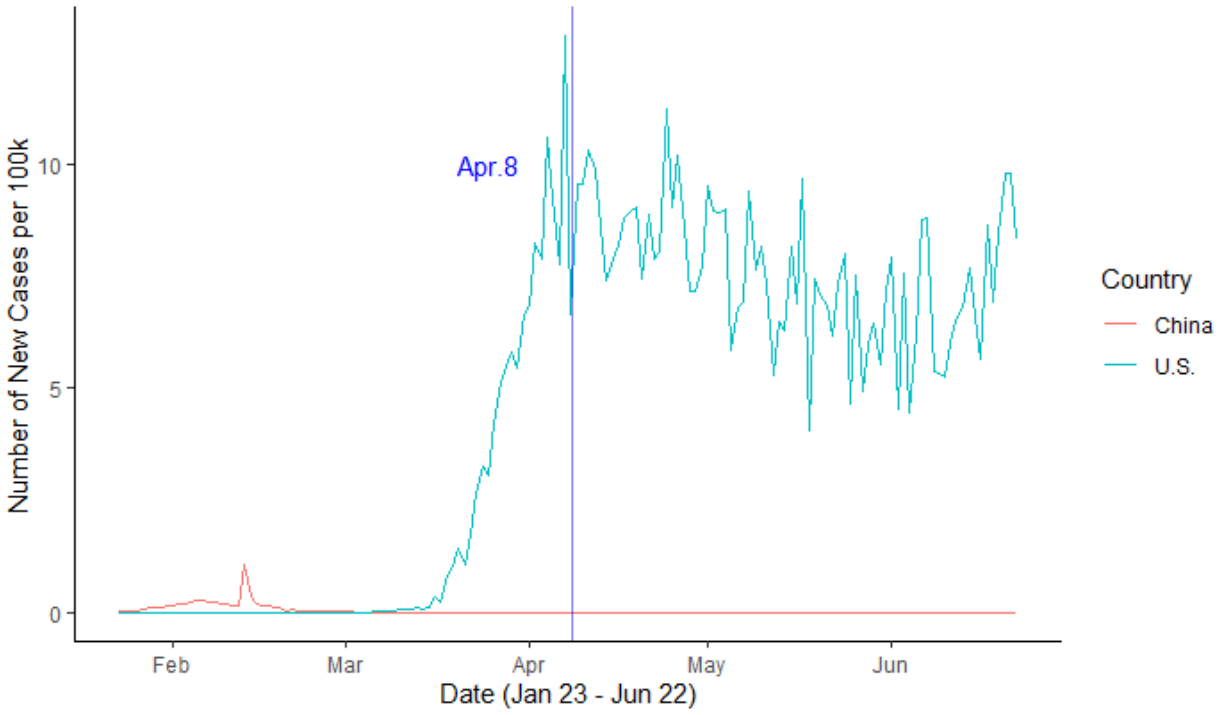
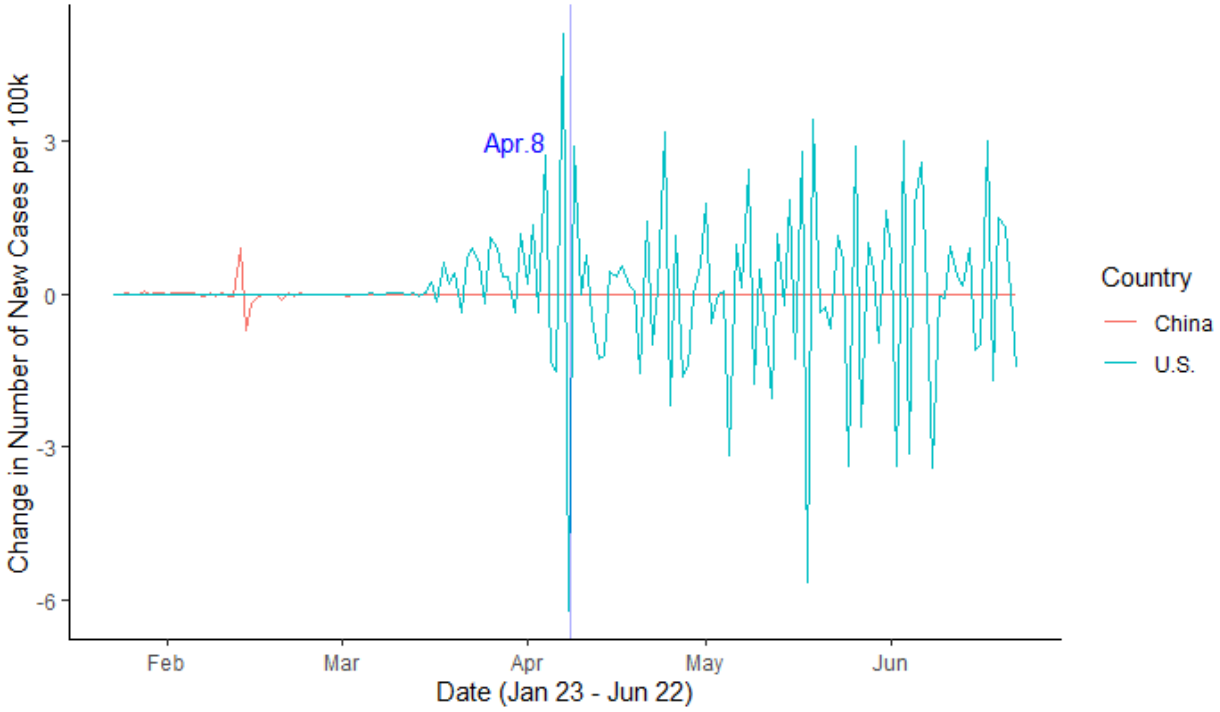


Figure 9 shows the change in COVID incident rate of China (μ = -0.00025, sd = 0.1) and the U.S. (μ = 0.055, sd = 1.5). This means that 0.00025 cases per 100,000 people decrease every day on average in China, and 0.055 cases per 100,000 people increase every day in the U.S. on average. The change in the average daily number of cases in the U.S. is about 220 times more than that of China. Figure 9 depicts that the change in China COVID rate was sizeable in mid-February when the U.S. only had a negligible change rate. However, when China's incident

change rate declined to a negligible level in April, the U.S.' incident change rate peaked. For the U.S., the most drastic changes happened in early April and mid-May.

Figure 9. Time Series of COVID-19 Incident Rate Change by Country



As shown by the model, China's COVID-19 situation is measured by the change of the COVID-19 incident rate. Since China was initially secretive during the SARS outbreak and censored some whistleblowers as COVID-19 spread, people may wonder whether they can trust China's released statistics about infection and death numbers. But there is reason to believe the country's figures are reliable. In China, the National Health Commission (NHC) has been aggregating all of the COVID-19 information on its website since February 3 on a daily basis (Daily Briefing 2020). Scholars point out five pieces of evidence that suggest China's COVID-19 numbers have been trustworthy since President Xi publicly ordered "resolute efforts" to bring the outbreak under control on January 20. First, the fatality rate outside the China's epicenter Hubei province matches that of South Korea with less than 1 percent. Second, the Hubei

province has been releasing daily caseloads and death numbers online at a predictable time every day throughout the pandemic. Third, although China has changed its counting methods few times, this was done transparently. Fourth, the members of World Health Organization (WHO) have visited China for nine days to explore the situation on the ground and released a comprehensive report with the Chinese CDC on February 28. Lastly, Chinese government reported the COVID-19 outbreak to the WHO within days of the clustering cases found in Wuhan. And Chinese researchers also shared the genetic sequence of the coronavirus to the world within weeks of the first incident (Woodward 2020).

It is also reasonable to assume that the U.S. statistics is reliable. The U.S. CDC is the official source of timely and comprehensive information on COVID-19 cases. Under state disease reporting laws, hospitals, healthcare providers, and laboratories are required to report COVID-19 cases to state or local health departments. Using the National Notifiable Diseases Surveillance System, health departments then send cases to CDC (CDC 2020).

Table 3 depicts the descriptive statistics of the dependent variable, change in the proportion of weibos about foreign government, the independent variable, change in China COVID-19 incident rate, and other related variables such as the U.S. COVID-19 incident rate. In the sample, the total number of observations is 9,824, and the overall average number of posts issued every day is 65 (sd = 19), with a minimum of 32 posts and a maximum of 132 posts.

Table 3. Overall Descriptive Statistics of Selective Variables

Statistic	Mean	St. Dev.	Min	Max	Sum
Number of Weibos	65	19	32	132	9824
Number of Weibos Change	-0.32	10	-40	36	/
China COVID Incident Rate	0.038	0.1	0	1.053	/
China COVID Incident Rate Change	-0.00025	0.096	-0.7	0.91	/
U.S. COVID Incident Rate	4.59	3.9	0	12.87	/
U.S. COVID Incident Rate Change	0.055	1.5	-6.2	5.1	/
Number of Weibos about Foreign Governments	10.08	6.6	0	30	1552
Number of Weibos about Foreign Governments Change	0.046	4.2	-10	13	/
Number of Negative Weibos about Foreign Governments	9.28	6.3	0	29	1429
Number of Negative Weibos about Foreign Governments Change	0.046	4.1	-11	13	/
Percentage of Negative Weibos about Foreign Governments	0.1562	0.1	0	0.43	/
Percentage of Negative Weibos about Foreign Governments Change	0.00076	0.069	-0.18	0.2	/

Table 4 depicts the descriptive statistics of the dependent, independent and control variables during the COVID-19 crisis and after. About fifty percent more posts were released during the COVID-19 crisis ($\mu = 77$, sd = 18) than after the lockdown ($\mu = 52$, sd = 9). China COVID incident rate is 63 times more during the crisis period ($\mu = 0.756$, sd = 0.1414) than postcrisis ($\mu = 0.0012$, sd = 0.0016). The U.S. COVID incident rate is 5 times more after China's crisis period ($\mu = 7.6$, sd = 1.6) than during the crisis ($\mu = 1.5$, sd = 2.9).

Table 4. Descriptive Statistics of Selective Variables During and After the COVID Period

	During COVID		After COVID	
Statistic (Day)	Mean	St. Dev.	Mean	St. Dev.
Number of Weibos	77	18.1	52	9.1
China COVID Incident Rate	0.0756	0.1414	0.0012	0.0016
China COVID Incident Rate Change	-0.000493	0.1359	-0.000012	0.0009
U.S. COVID Incident Rate	1.5	2.9	7.6	1.6
U.S. COVID Incident Rate Change	0.17	0.76	-0.06	1.91
Number of Weibos about Foreign Governments	11.3	8.4	8.9	4.0
Number of Weibos about Foreign Governments Change	0.184	4.3	-0.092	4.1
Number of Negative Weibos about Foreign Governments	10.3	8.1	8.3	3.8
Number of Negative Weibos about Foreign Governments Change	0.171	4.4	-0.079	3.8
Percentage of Negative Weibos about Foreign Governments	0.15	0.118	0.16	0.081
Percentage of Negative Weibos about Foreign Governments Change	0.0023	0.064	-0.0008	0.074

Table 5 details the variation in the number of posts by content type and emotion. Among the 9,824 posts collected, 3391 (34.5%) were related to the latest news, followed by information about the domestic government (22.8%, n = 2240), information about foreign governments (15.6%, n = 1537), appreciation (11.2%, n = 1098), guidance to stakeholders (9%, n = 881), as well as cheer (2.6%, n = 260).

Table 5. Descriptive Statistics of Number of Social Media Posts by Content Type and Emotion

Content Type	Negative	Positive	Total	Percent
News	1712	1679	3391	0.345
Domestic Government	159	2081	2240	0.228
Foreign Government	1415	122	1537	0.156
Appreciation	94	1004	1098	0.112
Guidance	30	851	881	0.09
Cheer	1	259	260	0.026
Other	7	410	425	0.043

RESULTS FOR H1

My first hypothesis is that the government-owned social media are more likely to post negative information on foreign nations in general as China's situation gets worse in comparison to other countries during the crisis. To evaluate this hypothesis, I begin my regression analysis by testing the relationship between the change in China's COVID-19 incident rate and the change in the proportion of negative reporting on foreign governments. Based on international benchmarking theory, I expect the change in China's COVID-19 incident rate to have a positive association with the change in the percentage of negative reporting on foreign governments. I include the change in the U.S.' COVID-19 incident rate and the dummy variable *COVID Period* as my control variables.

Table 6 displays the results of the linear regression analysis of the first hypothesis. Unfortunately, my regression shows no evidence that the change in China's COVID-19 incident rate is significantly associated with the change in the percentage of negative information about foreign governments. The first model illustrates that the change in the COVID-19 incident rate in China has a small positive effect on negative reporting with a standard error of 0.058. In the second model, the coefficient of the interaction term becomes negative, suggesting that when China's COVID situation worsens during the crisis, the change in the percentage of negative reporting on foreign governments decreases. One possible explanation for this counter-intuitive result is that as shown in Figure 9, the significant change in China's COVID-19 incident rate occurred at the beginning of the lockdown, where the percentage change of negative weibos about foreign governments was relatively slight (see Figure 7). The other problem is that the independent variable *China COVID Incident Rate Change* is based on the comparison between China's performance of today and that of yesterday. It is likely that Chinese government may

still consider the domestic situation as devastating when China COVID incident rate only slightly decreases, mitigating the positive relationship between the COVID-19 severity in China and the amount of negative international information.

Interestingly, in both models, the change in the U.S. COVID-19 incident rate has a negative effect on negative reporting on foreign governments. Table 6 indicates that as the U.S. COVID incident rate increases more, the proportion of negative reporting on foreign governments decreases by 0.7%. This means that when the COVID-19 situation in the U.S. worsens, Chinese state media report less negative news about foreign governments. External factors such as the George Floyd case may have a significant impact on the amount of international information.

Table 6. Effect of COVID-19 Incident Rate Change on the Change in the Proportion of Negative Reporting on Foreign Governments

	Change in % of Negative Foreign Govt Weibos	
	Model 1	Model 2
	(1)	(2)
China COVID Incident Rate Change	0.014	3.500
	(0.058)	(8.800)
COVID Period	0.005	0.005
	(0.011)	(0.011)
U.S. COVID Incident Rate Change	-0.007*	-0.007*
	(0.004)	(0.004)
China COVID Incident Rate Change*COVID Period		-3.500
		(8.800)
Constant	-0.001	-0.001
	(0.008)	(0.008)
N	152	152
R^2	0.022	0.023
Adjusted R^2	0.002	-0.004
Residual Std. Error	0.069 (df = 148)	0.069 (df = 147)
F Statistic	1.100 (df = 3; 148)	0.860 (df = 4; 147)

Notes:
***Significant at the 1 percent level.
**Significant at the 5 percent level.
*Significant at the 10 percent level.

TESTING H2: CITIZEN ENGAGEMENT

MODEL

My second hypothesis is to test citizen engagement to information on foreign governments. If the Chinese government's strategic messaging works, we expect to see citizens engage more actively with negative reporting on foreign governments than positive information. The model for H2 is:

$$CitizenEngagement_i = exp\,(\beta_0 + \beta_1 NegativeEmotionDummy_i + \beta_2 COVIDPeriodDummy_i + \beta_3 NegativeEmotionDummy_i * COVIDPeriodDummy_i + \beta X_i + \epsilon_i)$$

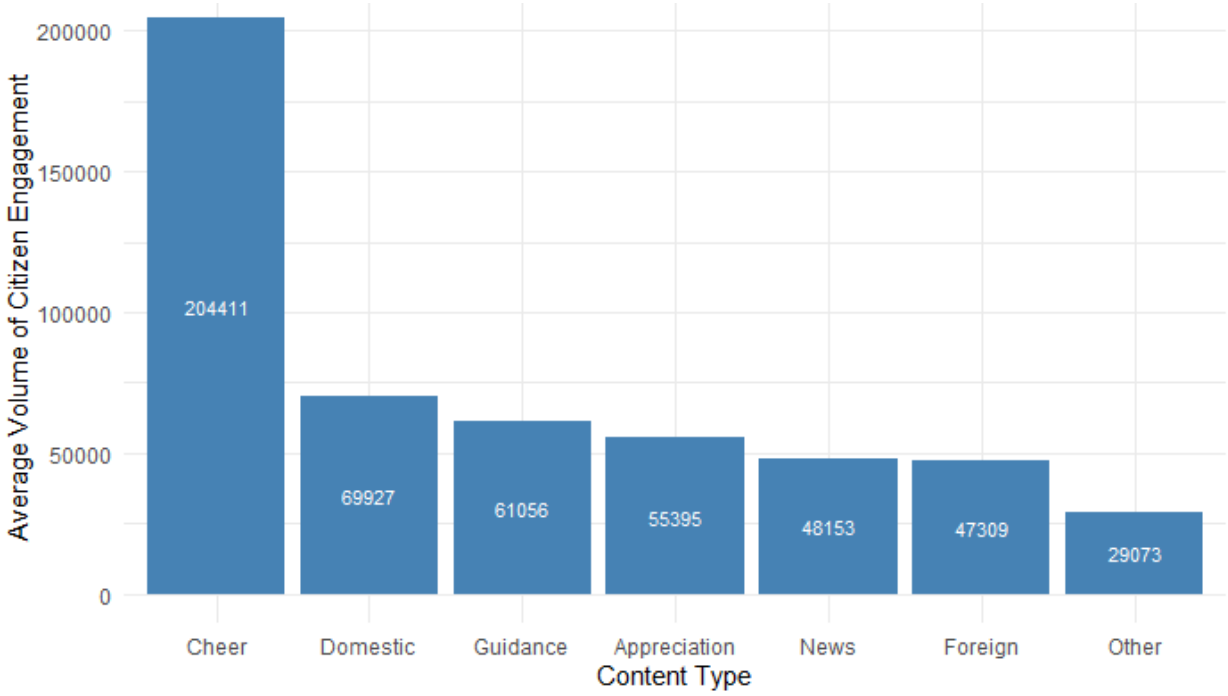
To test H2, I run a negative binomial regression model predicting citizen engagement through the government social media. *i* stands for the unit of analysis of each post, and *X* stands for control variables. I calculate the variance and the mean value of citizen engagement, and the division (1,513,422) suggests that over-dispersion is present. As the level of citizen engagement violates the assumption of normal distribution, a negative binomial model would be appropriate. Thus, negative binomial regression is appropriate, and I measure coefficients in terms of incidence rate ratio. Given H2, the coefficient of interest is β_3, and I expect it to be greater than one, meaning that compared to positive information about foreign governments, negative information will cause larger citizen engagement.

VARIABLES

In my second model, the dependent variable is citizen engagement, which is the sum of the number of likes, comments, and shares for each post. In communication literature on Twitter and Weibo, scholars have used the number of likes, comments, and reposts or retweets to measure citizen engagement on social media content and suggest that the public uses social media for important social conversation and action (Keib, Himelboim, and Han 2018; Chen et al. 2020; Wang and Yang 2020). As this measure has become a representative standard for communication scholars to evaluate citizen engagement on social media, my dependent variable also follows the same practice. I decide to sum up the number of likes, comments, and reposts as total volume of citizen engagement rather than weighing these numbers because it is not necessarily true that liking always shows a minimal level of engagement. (For instance, on Twitter, people who are angry with someone's post are more likely to comment. People may be equally affected by a positive post, but they are far less likely to comment on it. Liking is also a way to bookmark a tweet.)

Figure 10 portrays the average volume of citizen engagement by content type in order. On average, cheer receives the highest level of citizen engagement (μ = 204,411) while information on foreign governments and other information receive the least, μ = 47,309 and μ = 29,073, respectively. Since cheerleading posts are often associated with celebrities with huge and devoted fan bases on social media, it is more often the celebrity effect rather than the content that causes tremendous citizen engagement.

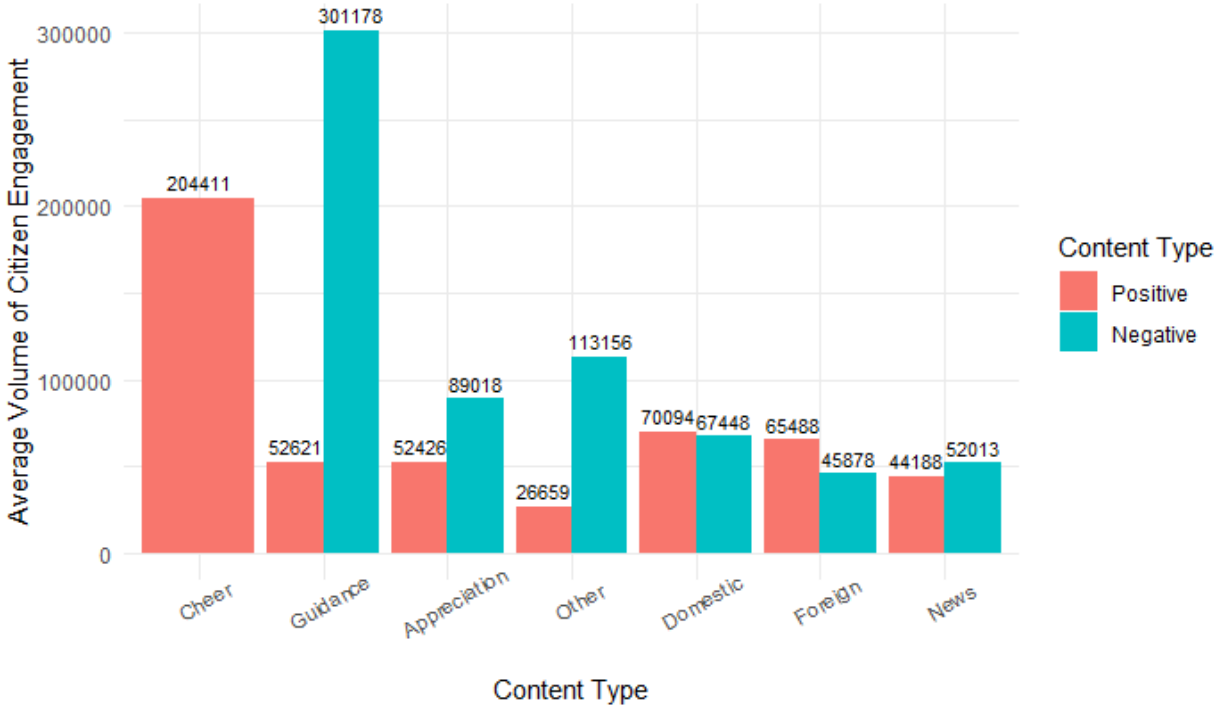
Figure 10. Average Volume of Citizen Engagement by Content Type



The independent variable is the negative reporting on foreign countries. I set positive reporting on foreign governments as my reference group and sort all neutral posts into positive posts. After sorting all the posts, 65 percent (n = 6,406) are positive, while 35 percent of posts (n = 3,418) are negative. Positive posts receive higher level of citizen engagement (μ = 69,862) than negative posts (μ = 57,630). Figure 11 depicts the average volume of citizen engagement grouped by content type and emotion. Figure 11 indicates that positive foreign information on average receives 45,878 number of citizen engagement, which is lower than its negative

counterpart (μ = 65,488). While negative information of *Guidance*, *Appreciation* and *News* receive higher level of citizen engagement than their positive counterparts on average, positive information of governments has more citizen engagement than negative information on average, whether it be domestic or foreign.

Figure 11. Average Volume of Citizen Engagement by Content Type and Emotion



Next, I enter *COVID Period* as an interaction variable into the negative binomial model. I expect the coefficient of the interaction term between negative reporting on foreign governments and *COVID Period* to be greater than one, meaning that negative foreign posts issued during the crisis engage citizens more than positive foreign posts during the crisis. I include *About COVID* as my control variable in my model. This is to see if posts relevant to COVID-19 have larger effect on citizen engagement than posts not about the crisis.

Table 7 depicts the descriptive statistics of citizen engagement by disaggregating this indicator into likes, comments, and shares in terms of each content type and emotion. Consistent

with Figure 11, negative posts of *News*, *Appreciation*, and *Guidance* receive higher volume of engagement in likes, comments, and shares than their positive counterparts. It is interesting to note that different from the average total engagement of information about domestic government, citizens are more likely to comment on negative posts (μ = 4,890) rather than positive ones (μ = 3,843). For *Foreign Government*, citizens are more likely to like, comment, and share positive information than negative information.

Table 7. Descriptive Statistics of Citizen Engagement by Content Type and Emotion

	Average Like		**Average Comment**		**Average Share**		**Average Total**	
Content Type	Negative	Positive	Negative	Positive	Negative	Positive	Negative	Positive
News	45,229	38,907	3,202	3,101	3,582	2,181	52,013	44,188
Domestic Government	59,789	63,459	4,890	3,843	2,769	2,791	67,448	70,094
Foreign Government	42,134	60,979	2,431	2,473	1,313	2,036	45,878	65,488
Appreciation	69,597	38,554	5,249	2,279	12,995	11,998	87,841	52,831
Guidance	278,487	46,155	10,069	2,787	12,622	3,679	301,178	52,621
Cheer	/	71,916	/	4,718	/	127,777	/	204,411
Other	97,560	19,676	7,222	1,901	8,374	5,082	113,156	26,659

The 9,824 posts also show a variation of citizen engagement, with 38 percent (n = 3,763) of posts having less than 10,000 total citizen engagement and 0.61 percent (n = 61) of posts having more than 1,000,000 total citizen engagement.

Overall, the summary statistics and graphs show a general level of citizen engagement categorized by different content types and emotional expressions. To go beyond these descriptive statistics, next I predict the effects of negativity towards foreign governments on citizen engagement.

RESULTS FOR H2

My second hypothesis posits that negative information on foreign governments during the crisis will lead to a higher level of citizen engagement than positive information on foreign governments. To test this hypothesis, I subset my original data set to include only posts about foreign governments. My independent variable is the dummy variable emotion, where positive emotion is the reference group. The dependent variable is the total volume of citizen engagement, which is calculated by the sum of likes, comments, and reposts.

Table 8 presents the results of the negative binomial regression analysis of the second hypothesis. My first model is a test between negative emotion and the level of citizen engagement while controlling for posts during COVID and posts about COVID. The second model interacts negative emotion with posts during the COVID crisis. Table 8 displays the estimated negative binomial regression coefficients in terms of incident rate ratios.

Table 8. Predicting Citizen Engagement Through Social Media Posts About Foreign Governments

	Model 1		Model 2	
	IRR	SE	IRR	SE
Negative emotion	0.76*	0.094	0.96*	0.193
COVID Period	1.6***	0.117	2.25**	0.556
About COVID	0.7***	0.075	0.7***	0.075
Interaction Effect				
Negative emotion*COVID Period			0.69	0.177
N	1537		1537	

Note: IRR: Incident Rate Ratio; SE: Standard Error; *p < 0.05; **p < 0.01; ***p < 0.001.

Unfortunately, the findings in Table 8 contradict my second hypothesis. Model 1 shows that in comparison to positive posts about foreign governments, a one-unit increase in negative reporting on foreign governments would lead to an increase in the level of citizen engagement by a factor of 0.76 (IRR = 0.76, $p < 0.05$). In other words, a one-unit increase in negative reporting

on foreign governments would result in a 24% decrease in citizen engagement. This contradicts my second hypothesis, which expects the IRR values of negative emotion and the interaction term to be greater than 1. One possible explanation is that Chinese citizens may respond less actively to posts that they have repetitively read about. As indicated in Table 5, the number of negative posts (n = 1415) is about 11.6 times more than the number of positive posts about foreign governments (n = 122). Since positive posts are less frequently seen, viewers may tend to respond to these posts more actively.

However, my results still yield some important implications. The IRR value of COVID period shows that compared to a post after the crisis, a post issued during the crisis would lead to a 60% increase in the level of citizen engagement (IRR = 1.6, $p < 0.001$). This result supports media dependency theory that citizens are more likely to engage with media when a society is undergoing crisis (Ball-Rokeach and Defleur 1976). Compared to a post not about COVID, a post related to COVID would lead to a 30% decrease in the level of citizen engagement (IRR = 0.7, $p < 0.01$). Since the number of weibos related to COVID (n = 7702) is about 3.6 times more than the number of weibos not about COVID (n = 2122), viewers might engage less frequently with posts that they have read too many. The interaction term in the second model is not statistically significant (IRR = 0.69, $p > 0.05$), so we cannot safely conclude that negative reporting on foreign governments during the COVID-19 crisis is associated with lower level of citizen engagement compared to positive reporting.

ROBUSTNESS CHECKS AND ALTERNATIVE EXPLANATIONS

I conduct a series of additional analyses to ensure the robustness of my findings. In Table 9, I code the dependent variable as the change in the number of negative posts about foreign governments. The results are consistent with Table 6: The coefficient of *China COVID Incident*

Rate Change is positive, but the coefficient of the interaction term is negative, suggesting that when China's COVID condition gets worse after the crisis stage, the state media are more likely to report negative information about foreign governments. However, none of the results in Table 10 are statistically significant. More importantly, *Change in # of Negative Foreign Govt Weibos* is a less appropriate dependent variable than *Change in %* because # does not consider the overall change in posts.

Table 9. Effect of COVID-19 Incident Rate Change on the Change in the Number of Negative Reporting on Foreign Governments

	Change in # of Negative Foreign Govt Weibos	
	Model 1	Model 2
	(1)	(2)
China COVID Incident Rate Change	1.400	423.000
	(3.500)	(532.000)
COVID Period	0.330	0.320
	(0.670)	(0.670)
U.S. COVID Incident Rate Change	-0.330	-0.320
	(0.230)	(0.230)
China COVID Incident Rate Change*COVID Period		-421.000
		(532.000)
Constant	-0.099	-0.093
	(0.470)	(0.470)
N	152	152
R^2	0.016	0.020
Adjusted R^2	-0.004	-0.007
Residual Std. Error	4.100 (df = 148)	4.100 (df = 147)
F Statistic	0.790 (df = 3; 148)	0.740 (df = 4; 147)
Notes:		***Significant at the 1 percent level.
		**Significant at the 5 percent level.
		*Significant at the 10 percent level.

Next, I check whether the poor performance of foreign governments is what is driving the Chinese government's posting strategy in Table 10. As shown in Table 6, when the U.S. COVID

incident rate increases more, the proportion of negative reporting on foreign governments decreases by 0.7%. In order to test whether the U.S. COVID incidence during China's COVID period has an effect on government posting behavior, I interact *U.S. COVID Incident Rate Change* with *COVID Period* in Table 10. This time, the coefficient does not show a strong effect on the percentage change in the negative reporting on foreign governments. However, the first model continues to support the finding in Table 6 that as the U.S. COVID incident rate increases by one unit, the proportion of negative reporting on foreign governments decreases by 0.7%.

Table 10. Effect of COVID-19 Incident Rate Change on the Change in the Proportion of Negative Reporting on Foreign Governments

	Change in % of Negative Foreign Govt Weibos	
	Model 1	Model 2
	(1)	(2)
China COVID Incident Rate Change	0.014	0.014
	(0.058)	(0.059)
COVID Period	0.005	0.005
	(0.011)	(0.011)
U.S. COVID Incident Rate Change	-0.007*	-0.007
	(0.004)	(0.004)
U.S. COVID Incident Rate Change*COVID Period		-0.001
		(0.011)
Constant	-0.001	-0.001
	(0.008)	(0.008)
N	152	152
R^2	0.022	0.022
Adjusted R^2	0.002	-0.005
Residual Std. Error	0.069 (df = 148)	0.069 (df = 147)
F Statistic	1.100 (df = 3; 148)	0.820 (df = 4; 147)
Notes:	***Significant at the 1 percent level.	
	**Significant at the 5 percent level.	
	*Significant at the 10 percent level.	

Table 11 tests if change in China COVID incident rate has a significant effect on the amount of international information only during the crisis stage. The subset has 76 observations. I run *Change in # of Negative Foreign Govt Weibos* as the dependent variable in the first model and *Change in %* in the second model. The coefficient in Model 2 is 0.014, meaning that the change in negative foreign government reporting will increase by 1.4% for a unit increase in the change of China COVID incident rate. However, the results are not statistically significant.

Table 11. Effect of COVID-19 Incident Rate Change on Negative Reporting on Foreign Governments During COVID-19

	Change in # of Negative Foreign Govt Weibos	Change in % of Negative Foreign Govt Weibos
	Model 1	Model 2
	(1)	(2)
China COVID Incident Rate Change	1.400	0.014
	(3.800)	(0.055)
U.S. COVID Incident Rate Change	0.014	-0.008
	(0.680)	(0.010)
Constant	0.170	0.004
	(0.520)	(0.008)
N	76	76
R^2	0.002	0.009
Adjusted R^2	-0.026	-0.018
Residual Std. Error (df = 73)	4.500	0.064
F Statistic (df = 2; 73)	0.064	0.340

Notes:

***Significant at the 1 percent level.
**Significant at the 5 percent level.
*Significant at the 10 percent level.

Different from Table 11, Table 12 only includes data during the postcrisis stage to see how the change in China COVID incident rate influences the amount of international information. Table 12 also has 76 observations. Applying the same regression, I run *Change in # of Negative Foreign Govt Weibos* as the dependent variable in the first model and *Change in %* in the second model. In Model 2, the coefficient is 3.5, meaning that the change in negative foreign government reporting will increase by 350% for a unit increase in the change of China COVID incident rate. Once again, the results are not statistically significant.

Table 12. Effect of COVID-19 Incident Rate Change on Negative Reporting on Foreign Governments After COVID-19

	Change in # of Negative Foreign Govt Weibos	Change in % of Negative Foreign Govt Weibos
	Model 1	Model 2
	(1)	(2)
China COVID Incident Rate Change	416.000	3.500
	(490.000)	(9.500)
U.S. COVID Incident Rate Change	-0.380	-0.007
	(0.230)	(0.004)
Constant	-0.097	-0.001
	(0.440)	(0.008)
N	76	76
R^2	0.047	0.032
Adjusted R^2	0.021	0.006
Residual Std. Error (df = 73)	3.800	0.073
F Statistic (df = 2; 73)	1.800	1.200

Notes:

***Significant at the 1 percent level.

**Significant at the 5 percent level.

*Significant at the 10 percent level.

Table 13 checks one concern for my second hypothesis that repetitive exposure of the same emotion in one content type may discourage readers' engagement. I choose negative reporting on domestic government (n = 159) as my independent variable with positive reporting (n = 2081) as the reference group. I expect the coefficient to be greater than one if the idea that repetitive exposure diminishes engagement holds. I run the same negative binomial regression model in Table 8 again in Table 13. Although the result in Model 1 (Table 13) is not statistically significant, it suggests that negative reporting on domestic government would lead to a 7.3% increase in citizen engagement (IRR = 1.073, $p > 0.05$). The dominant quantity of posts in one sentiment may affect citizen engagement to that specific content type.

Table 13. Predicting Citizen Engagement Through Social Media Posts About Domestic Government

	Model 1		Model 2	
	IRR	SE	IRR	SE
Negative emotion	1.073	0.1239	1.138	0.249
COVID Period	4.1331***	0.314	4.155***	0.321
About COVID	0.606***	0.054	0.606***	0.054
Interaction Effect				
Negative emotion*COVID Period			0.922	0.237
N	2240		2240	

Note: IRR: Incident Rate Ratio; SE: Standard Error; *p < 0.05; **p < 0.01; ***p < 0.001.

ADDITIONAL OBSERVATIONS

While Table 8 suggests that negative foreign information receives less citizen engagement than its positive counterpart, one may be interested in whether negative reporting on foreign governments is more effective than other messaging strategies presented in the data such as appealing to patriotism and demonstrating transparency. Since posts about foreign governments only consist of 15.6% of the entire sample, I use the following section to compare between citizen engagement of foreign information and that of other content types. These observations do not test international benchmarking theory specifically; however, they are directly related to the differentiated effects of various government messaging strategies.

Given that content type is a categorical variable, posts about domestic government is treated as the reference group. Under the negative binomial regression model, Model 1 (Table 14) shows that cheer (IRR = 1.769, $p < 0.001$), negative posts (IRR = 1.276, $p < 0.001$), and posts delivered during the crisis (IRR = 2.635, $p < 0.001$) positively predict the citizen engagement volume. That means, in comparison to domestic government information, cheerleading posts would lead to 76.9% increase in the level of citizen engagement, while negative posts and posts delivered during the crisis result in a 27.6% and 163.5% increase,

respectively. However, compared with domestic government information, foreign government information (IRR = 0.57, $p < 0.001$) would lead to a 43% decrease in the level of citizen engagement. In Model 2 (Table 14), I explore the conditional influence of citizen engagement by interacting all the content types with negative emotion. The significant result of the interaction between *Negative* and *Appreciation* (IRR = 2.701, $p < 0.01$) indicates that mourning the sacrifices of ordinary people would result in a 170% increase in citizen engagement. This finding is consistent with the main role of Chinese media that is to promote good values like heroism and patriotism as well as to educate the people morally. A pessimistic expert warning (IRR = 3.699, $p < 0.01$) would lead to a 270% increase in citizen engagement. This result supports Huang (2017)'s study that citizens trust well-evidenced information from professional sources more than thinly evidenced rebuttals by the government. However, the relationship between negative reporting on foreign governments and a lower level of citizen engagement is not found significant this time (IRR = 0.723, $p > 0.05$).

Table 14. Predicting Citizen Engagement Through Social Media Posts

	Model 1		Model 2	
	IRR	SE	IRR	SE
Main effect				
Content Type (reference group: Domestic government)				
News	0.52***	0.021	0.536***	0.023
Foreign government	0.57***	0.031	0.844	0.105
Appreciation	0.9*	0.045	0.796***	0.041
Guidance	0.681***	0.036	0.628***	0.034
Cheer	1.769***	0.155	1.755***	0.154
Other	0.551***	0.042	0.544***	0.041
Negative Emotion	1.276***	0.049	1.122	0.123
COVID Period	2.635***	0.084	2.553***	0.081
About COVID	0.642***	0.026	0.654***	0.027
Interaction effect				
Negative*News			1.03	0.122
Negative*Foreign			0.723	0.121
Negative*Appreciation			2.701***	0.489
Negative*Guidance			3.699***	1.002
Negative*Cheer			0.073	0.097
Negative*Other			1.281	0.666
N	9823		9823	

Note: IRR: Incident Rate Ratio; SE: Standard Error; *p < 0.05; **p < 0.01; ***p < 0.001.

DISCUSSION

The Chinese state media's negative references to foreign countries are ubiquitous nowadays, and yet there have been inadequate studies about its political motivations and effects, perhaps due to the difficulty of collecting and studying a massive amount of text. The spread of the Internet and especially social media, which the state media increasingly rely on to spread news and reach a larger audience, offers an opportunity to study this important phenomenon.

This section discusses some concerns about my project. The most obvious concern about the relationship between the Chinese COVID-19 situation and the negative reporting on foreign governments would be that the theory of international benchmarking does not hold in this case.

One could argue that the Chinese state media do not need to contrast its performance with that of foreign countries to cultivate citizen approval of the central government. However, international benchmarking is especially hard to capture in this case because additional factors may also affect the posting behaviors of the Chinese government. First, when China's COVID-19 infections increased rapidly, the Chinese government spent most resources reporting the domestic situation to build transparency and accountability. This messaging approach could crowd out the space for the state media to report foreign news. Second, unlike an economic crisis that affects several countries almost simultaneously, the COVID-19 crisis did not hit the U.S. until mid-April (see Figure 3), when China had entered into the post-crisis stage. During the crisis stage, the state media had no "bad" news about the COVID-19 infections in foreign countries because not many cases were found there. In addition, extensive reporting on sporadic cases in foreign countries would only shed negative light on the performance of the Chinese government. Several posts in the early stage of the lockdown revealed that some Chinese travelers with COVID-19 violated travel restrictions to enter other countries and caused infections in communities abroad. Taking these factors into consideration, the state media was better to focus on domestic conditions than foreign nations during the early period of the COVID-19 crisis.

Another concern one may have is about the relationship between positive references to foreign governments and increased citizen engagement. One may argue that the state media's attempt to use foreign performance as a benchmark to enhance positive evaluations of domestic performance has failed based on this result. Indeed, Guan et al. (2020) conduct analysis with Weibo data and find that the Chinese hold generally positive views of the U.S., but more qualitative study needs to be done to confirm this conclusion. Although I find that the U.S. is mentioned most frequently among all foreign nations in both 123 positive posts and 1,537

negative posts (see Appendix II), I have not examined the relationship between positive posts about the U.S. exclusively and citizen engagement. More importantly, my finding does not precisely investigate the effects of international benchmarking. In my study, measuring citizen engagement of posts about foreign governments is a more direct test of how citizens view foreign countries rather than how posts about foreign governments affect Chinese citizens' views about their own government. Ideally, I should measure citizen engagement of a post about the domestic government based on people's updated knowledge about foreign countries. However, there are some technical difficulties of testing domestic evaluation through Weibo. Given the timeline algorithm of Sina Weibo, Weibo users receive weibos in an order based on a variety of factors, including the recency of weibos, overall engagement of weibos, the connection between the user and the author of the weibo, etc. Without a controlled experiment, it is impossible to tell how negative information about foreign governments affects engagement with a particular piece of information regarding the domestic government performance.

Some may also be concerned about the representativeness of this research's sample. Indeed, there are some limitations of my data. Chinese Weibo users tend to come from the ranks of the well-educated, young, and upper-middle class, so my data may not reflect the population perfectly. Forty percent of users are between the ages of 23 and 30 (Weibo Data Center 2018). Self-censorship and inattentiveness may also affect citizen engagement on social media platforms. This means that citizens may tend to express positive emotions on Weibo to avoid punishment, or they may not respond to these posts at all even though these posts affect their perception of their own government and foreign governments.

Despite these concerns, there are several reasons why Weibo users rather than a nationally representative sample are used in this research. First, this project is one of the first to

study the relationship between the amount of international knowledge and citizen engagement with its own domestic government. Huang (2015) uses student and online samples to measure how international information affects their domestic opinion. Huang (2015) acknowledges that his samples of students and anonymous online samples are younger than the Chinese population in general, but he explains that the young also tend to be more politically active. Since Weibo users are younger and more politically active, they merit more attention from the state media. Second, a nationally representative survey with stratified sampling is not feasible as it would involve face-to-face interviews with the respondents. Given that evaluating government performance in the COVID-19 crisis is a politically sensitive topic, it would be difficult to conduct interviews to gauge domestic opinion.

Lastly, one may be concerned about choosing only the U.S. incident rate as the control variable. Indeed, the Chinese government could have tried to internationally benchmark against other states in the region. This may still be true because the content text in the data set indicates that posts tagged with negative emotion also often mention other foreign countries such as Italy, South Korea, Britain, etc. (see Appendix II). However, it is difficult to obtain comprehensive and reliable data on COVID-19 incident rates in these countries between January and June 2020.

FUTURE RESEARCH

Since I only analyze the data covering a six-month time period, it is useful to revisit the analyses above or conduct new ones in future work to answer the concerns mentioned above. As discussed, the pandemic does not affect countries across the world at the same time. The benchmarking effect may be more obvious if researchers can find an overlapping time period when countries experience the same type of crisis. Future scholars could choose other crisis types such as natural disasters and economic crises. For instance, the performance of neighboring

economies serves a benchmarking role for voters in democracies to compare the domestic economy against a neighboring economy (Hansen, Olsen, and Bech 2015; Kayser and Peress 2012; Traber, Schoonvelde, and Schumacher 2020). Given the various waves of COVID infections around the world, it may be possible to examine a set of countries that experience a wave of infections at the same time.

Nevertheless, the research design of this paper can work as a foundation for future research to build upon. I use only one official account of a government state media outlet on Sina Weibo; a future study could add additional state media accounts on Sina Weibo. To gather more Weibo posts without manually coding them, researchers can use Crimson Hexagon, a social media analytics company developed by Hopkins and King (2010) in 2007, for analyses similar to this.

In my first study, it is interesting to find that the state media outlet reports negative information about foreign governments less frequently when the U.S. is under an unfavorable circumstance. Although I do not know how to solve this puzzle now, future work can incorporate additional factors not identified in my regression models to explain the state media's posting pattern of foreign countries.

In the second study, one may wonder why Chinese netizens engage more actively with positive information about foreign governments than negative information. Conventional wisdom suggests that Chinese citizens in general hold a rosy view of Western countries, including the U.S., as a result of misinformation on the Chinese online environment about foreign countries (Lorentzen 2014; Huang 2015; Huang and Yeh 2017; Huang 2017; Guan et al. 2020). It is a fruitful direction for future research to investigate the change in citizens' perception of domestic government and foreign governments after the COVID-19 pandemic. I think an

experimental study may generate some relevant evidence to explain the effects of international benchmarking. Specifically, researchers can gauge domestic opinion after asking respondents in three randomly assigned groups to read posts that discuss China without mentioning the U.S., posts that discuss China and negative information about the U.S., and posts that discuss China and positive information about the U.S.

Last but not least, to evaluate the volume of citizen engagement, I choose the sum of likes, retweets or reposts, and comments of a post. Although these quantitative indicators have become representative standards for communication scholars to evaluate citizen engagement on social media, they may indicate something else in authoritarian societies. Future research can break down those indicators to disentangle the relationship between citizen engagement and citizens' views of government. Apart from dividing these indicators, my initial sentiment classification of posts is simply positive, neutral, and negative. Using the sentiment analysis method such as the Sentiment Lexicon with python, researchers could identify more nuanced emotional valence in posts (Chen et al. 2020). Finally, more qualitative analyses of citizens' knowledge and perceptions about foreign countries and domestic government, conducted through interviews, may complement this paper's findings.

CONCLUSION

The COVID-19 pandemic puts authoritarian governments in a tight spot. With the COVID-19 caseload growth and the necessary heavy-handed measures, popular discontent with the government rises, yet the spread of cases does not allow for extensive censorship to control public opinion and to deter collective actions. Governments have few other effective options to engage with citizens than to use strategic communication. In this article, I have explored international benchmarking as a way of strategic communication by the Chinese government

during the COVID-19 pandemic. Analyzing 9,824 social media posts of the biggest Chinese state media news outlet between January 2020 and June 2020, I investigate when the government communicates with the public and its effects on citizen engagement.

My first study focuses on strategic messaging. To begin with, I hand-code each post by content type and emotion. Then, I aggregate posts by day to measure the proportion of posts mentioning negative information about foreign governments every day and calculate the daily change. Next, I measure the COVID-19 incident rate in China and the U.S. and also calculate the change of each day. I argue that the Chinese government has more incentives to benchmark its performance against the poorer performance of foreign countries such as the U.S. during the crisis than after the crisis. Following this hypothesis, I expect a greater proportion change of negative international information when China's COVID incident rate change increases, but my result is not supported. It finds that the proportion of negative reporting on foreign governments increases at a higher rate as China's COVID infection rate grows more rapidly. However, the result is not statistically significant. When I interact China's COVID incident rate with the crisis stage, the proportion change of negative foreign posts decreases. One possible explanation for this is the "crowding out" effect. When China's COVID situation was severe during late January and mid-February, Chinese social media were operating at their maximum capacity to communicate domestic conditions with citizens. This messaging priority constrained their resources to report international information.

In my second study, I analyze the citizen engagement of posts issued by the state-owned media outlet. If negative international knowledge affects citizens' perceptions of the Chinese government, people will at least read these negative posts, so I assume a correlation between domestic evaluation and citizen engagement. I expect that negative references to foreign

governments would engage citizens more than positive references. Surprisingly, my findings indicate that negativity towards foreign governments in fact predicts a lower level of citizen engagement than positivity. This contradictory result suggests an unintended consequence of the "repetitive exposure" effect – citizens get accustomed to negative international information while being more stimulated to positive performance appraisals of foreign countries that are rarely seen. The finding questions the effectiveness of the international benchmarking messaging strategy and implies the need to study the connection between citizen engagement and political trust. Based on these conclusions, the authoritarian government should consider that presenting content seemingly unfavorable to the government may foster more political satisfaction and trust in the state media as demonstrated by a high volume of citizen engagement.

The subject of my current research design considers Sina Weibo as a communication medium; however, the representativeness of the Sina Weibo users to the Chinese population is not elaborated on in this thesis. According to the 2020 Weibo User Development Report, the younger population (ages 30 and below) was overrepresented, accounting for nearly 80 percent of all Weibo users. However, according to the age distribution of China's population in 2019, approximately 70.6 percent of the population were between 15 and 64 years old. Retirees aged 65 years and above consisted of 12.6 percent of the population. Future studies could investigate whether younger audiences in China are more susceptible to state reporting, more politically active, or less trusting of official news outlets than older adults. Collecting data on news sources other than social media sites can counterbalance the sampling bias of this study. Older Chinese citizens consume official news from other common sources, including television, news website, print newspapers, and newspapers, more frequently than the younger population. Moreover, to better understand the international benchmarking effect, future scholars can supplement this

study with a survey experiment that recruits participants from diverse socio-demographic backgrounds. If the key dimensions of respondents are comparable to those of the Chinese population, the findings from the survey experiment can be generalized to a wider scope.

Overall, this research speaks to a broad literature about political communication and international knowledge in authoritarian regimes. It extends international benchmarking to authoritarian contexts, uses empirical evidence on social media to test a novel public opinion management strategy, and updates government crisis communications during the most recent public health emergency. The state-owned social media account provides a richly informative source of the authoritarian government's messaging strategies. Studying citizen engagement on social media can reveal subtle yet vital aspects of public opinion in authoritarian countries that may be difficult to assess in experimental studies and public opinion surveys.

APPENDIX (I) SOCIAL MEDIA POSTS NOT ABOUT COVID-19

Table 15. Content Category of Posts and Example Posts (Not About COVID-19)

Categories	Example posts
Latest news	[#Suspect for beating and scolding online car-hailing driver was detained#]…
Appreciation to ordinary people	[Use #wind and sand as face mask#, witness the most beautiful youth, these female soldiers are so cool!] They are fighters of a composite brigade under the portable missile platoon of the 77th Army…
Guidance for stakeholders	[Don't forget the tax refund! #The tax year calculation ends today#, forward reminder!] The annual settlement and payment of comprehensive individual tax income for 2019 will end today. Should you refund or make up your tax? How to use the tax refund app?
Information on domestic government	[Full vote passed! #The Hong Kong National Security Law passed by vote#] The Thirteenth National People's Congress Standing Committee voted to pass the Hong Kong Special Administrative Region National Security Law.
Information on foreign governments	The U.S. attempts to use so-called sanctions to prevent China from advancing Hong Kong's national security legislation? This kind of conspiracy will never succeed! Tell the U.S. in one sentence: #China is not scared#
Cheer	20 days countdown to #2020 college entrance examination#: forward these special blessings, come on, juveniles!

APPENDIX (II) WORD CLOUD OF WEIBO POSTS ABOUT FOREIGN GOVERNMENTS

Figure 12. Word Cloud of Negative Posting About Foreign Governments

Figure 13. Top 15 Most Frequent Words of Negative Posting About Foreign Governments

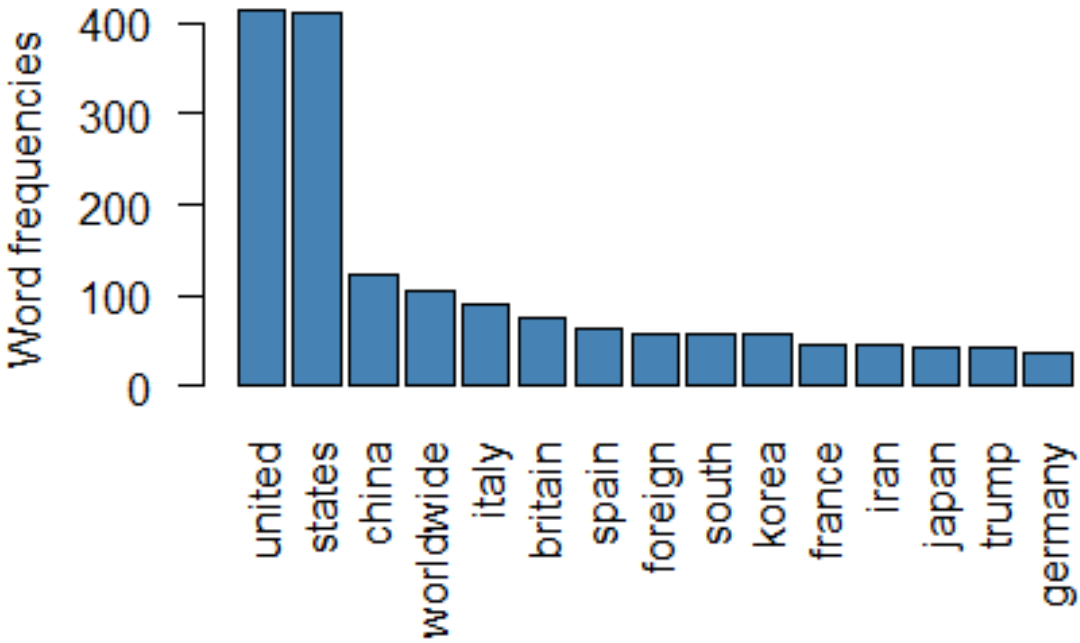
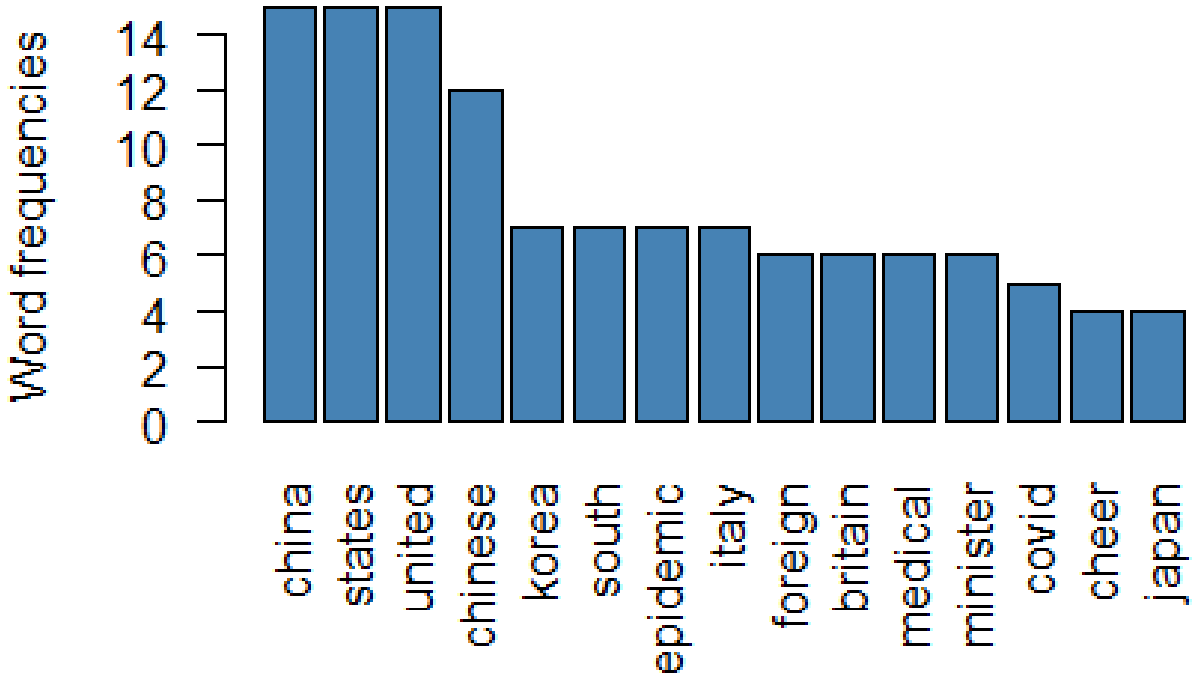


Figure 14. Word Cloud of Positive Posting About Foreign Governments

Figure 15. Top 15 Most Frequent Words of Positive Posting About Foreign Governments



REFERENCES

Baekkeskov, Erik, and Olivier Rubin. 2017. "Information Dilemmas and Blame-Avoidance Strategies: From Secrecy to Lightning Rods in Chinese Health Crises." *Governance* 30(3): 425–43.

Ball-Rokeach, S.J., and M.L. DeFleur. 1976. "A Dependency Model of Mass-Media Effects." *Communication Research* 3(1): 3–21.

Bolter, J. David, and Richard A. Grusin. 1999. *Remediation: Understanding New Media*. Cambridge, Mass: MIT Press.

CDC. 2020a. "Cases, Data, and Surveillance." *Centers for Disease Control and Prevention*. https://www.cdc.gov/coronavirus/2019-ncov/covid-data/faq-surveillance.html (February 18, 2021).

———. 2020b. "COVID Data Tracker." *Centers for Disease Control and Prevention*. https://covid.cdc.gov/covid-data-tracker (February 18, 2021).

Chen, Jidong, and Yiqing Xu. 2017. "Why Do Authoritarian Regimes Allow Citizens to Voice Opinions Publicly?" *The Journal of Politics* 79(3): 792–803.

Chen, Qiang et al. 2020. "Unpacking the Black Box: How to Promote Citizen Engagement through Government Social Media during the COVID-19 Crisis." *Computers in Human Behavior* 110: 106380.

China Internet Watch. "Weibo (Sina Weibo) Stats & Insights in China." *China Internet Watch*. https://www.chinainternetwatch.com/tag/weibo/ (October 8, 2020).

China Internet Watch Statistics. 2020. "Statistics: China Internet Users." *China Internet Watch*. https://www.chinainternetwatch.com/statistics/china-internet-users/ (October 14, 2020).

Chinese Journalist Magazine. 2018. "Media Weibo Operation Strategy Innovation and Effect Analysis." *Xinhua News Agency*. http://www.xinhuanet.com/newmedia/2018-07/24/c_1123168471.htm (September 30, 2020).

Crabtree, Charles, Christopher J. Fariss, and Holger L. Kern. 2015. *Truth Replaced by Silence: A Field Experiment on Private Censorship in Russia*. Rochester, NY: Social Science Research Network. SSRN Scholarly Paper. https://papers.ssrn.com/abstract=2708274 (February 12, 2021).

Egorov, Georgy, Sergei Guriev, and Konstantin Sonin. 2009. "Why Resource-Poor Dictators Allow Freer Media: A Theory and Evidence from Panel Data." *American Political Science Review* 103(4): 645–68.

Ekström, Mats, and Adam Shehata. 2018. "Social Media, Porous Boundaries, and the Development of Online Political Engagement among Young Citizens." *New Media & Society* 20(2): 740–59.

Fredman, Rachel. 2012. *The Dictator's Dilemma and the Politics of Telecommunications in Cuba: A Case Study*. Rochester, NY: Social Science Research Network. SSRN Scholarly Paper. https://papers.ssrn.com/abstract=2043679 (October 8, 2020).

Fu, Diana. “China Has a Playbook for Managing Coronavirus Chaos.” *Foreign Policy*. https://foreignpolicy.com/2020/05/05/china-coronavirus-chaos-playbook-stability/ (September 24, 2020).

Geddes, Barbara, and John Zaller. 1989. “Sources of Popular Support for Authoritarian Regimes.” *American Journal of Political Science* 33(2): 319–47.

Gehlbach, Scott. “Government Control of the Media.” : 36.

Guan, Yichen et al. 2020. “Chinese Views of the United States: Evidence from Weibo.” *International Relations of the Asia-Pacific* 20(1): 1–30.

Guriev, Sergei, and Daniel Treisman. 2019. “Informational Autocrats.” *Journal of Economic Perspectives* 33(4): 100–127.

Hansen, Kasper M., Asmus L. Olsen, and Mickael Bech. 2015. “Cross-National Yardstick Comparisons: A Choice Experiment on a Forgotten Voter Heuristic.” *Political Behavior* 37(4): 767–89.

Hao, Xiaoming, Nainan Wen, and Cherian George. 2014. “News Consumption and Political and Civic Engagement among Young People.” *Journal of Youth Studies* 17(9): 1221–38.

Heinkelmann-Wild, Tim, and Bernhard Zangl. 2020. “Multilevel Blame Games: Blame-Shifting in the European Union.” *Governance* 33(4): 953–69.

Hobbs, William R., and Margaret E. Roberts. 2018. “How Sudden Censorship Can Increase Access to Information.” *American Political Science Review* 112(3): 621–36.

Hopkins, Daniel J., and Gary King. 2010. “A Method of Automated Nonparametric Content Analysis for Social Science.” *American Journal of Political Science* 54(1): 229–47.

Huang, Haifeng. 2015a. “International Knowledge and Domestic Evaluations in a Changing Society: The Case of China.” *American Political Science Review* 109(3): 613–34.

———. 2015b. “Propaganda as Signaling.” *Comparative Politics* 47(4): 419–37.

———. 2017. “A War of (Mis)Information: The Political Effects of Rumors and Rumor Rebuttals in an Authoritarian Country.” *British Journal of Political Science* 47(2): 283–311.

———. “Analysis | China Is Also Relying on Propaganda to Tackle the Covid-19 Crisis.” *Washington Post*. https://www.washingtonpost.com/politics/2020/03/11/china-is-also-relying-propaganda-tackle-covid-19-crisis/ (September 24, 2020a).

———. “What’s the Official Line in China on the Coronavirus Effort? - The Washington Post.” https://www.washingtonpost.com/politics/2020/03/11/china-is-also-relying-propaganda-tackle-covid-19-crisis/?utm_medium=social&utm_source=twitter&utm_campaign=wp_monkeycage (October 15, 2020b).

Huang, Haifeng, and Yao-Yuan Yeh. 2019. “Information from Abroad: Foreign Media, Selective Exposure and Political Support in China.” *British Journal of Political Science* 49(2): 611–36.

Jamie. 2020. “2021 Chinese Social Media Statistics And Trends Infographic.” *Make A Website Hub*. https://makeawebsitehub.com/chinese-social-media-statistics/ (March 13, 2021).

Jenkins, Henry. 2004. “The Cultural Logic of Media Convergence.” *International Journal of Cultural Studies* 7(1): 33–43.

Ji, Yi Grace, Zifei Fay Chen, Weiting Tao, and Zongchao Cathy Li. 2018. “Functional and Emotional Traits of Corporate Social Media Message Strategies: Behavioral Insights from S&P 500 Facebook Data.” *Public Relations Review*. https://miami.pure.elsevier.com/en/publications/functional-and-emotional-traits-of-corporate-social-media-message (September 20, 2020).

Kayser, Mark Andreas, and Michael Peress. 2012. “Benchmarking across Borders: Electoral Accountability and the Necessity of Comparison.” *The American Political Science Review* 106(3): 661–84.

Keib, Kate, Itai Himelboim, and Jeong-Yeob Han. 2018. “Important Tweets Matter: Predicting Retweets in the #BlackLivesMatter Talk on Twitter.” *Computers in Human Behavior* 85: 106–15.

King, Gary, Jennifer Pan, and Margaret E. Roberts. 2017. “How the Chinese Government Fabricates Social Media Posts for Strategic Distraction, Not Engaged Argument.” *American Political Science Review* 111(3): 484–501.

Knoll, Johannes, Jörg Matthes, and Raffael Heiss. 2020. “The Social Media Political Participation Model: A Goal Systems Theory Perspective.” *Convergence: The International Journal of Research into New Media Technologies* 26(1): 135–56.

Li, Runyang. “宣传 2.0：《人民日报》在微博场域中新闻框架的转变——以农民工议题报道为例 [Propaganda 2.0: The Transformation of the News Framework of People’s Daily in the Weibo Field - Taking Migrant Workers’ Issue Reports as an Example"].” *people.cn*. http://media.people.com.cn/n1/2017/0111/c409679-29015889.html (October 8, 2020).

Lin, Yang. 2015. “Media Dependency Theory | Communications.” *Encyclopedia Britannica*. https://www.britannica.com/topic/media-dependency-theory (September 30, 2020).

Liu, Chuyu, and Xiao Ma. 2018. “Popular Threats and Nationalistic Propaganda: Political Logic of China’s Patriotic Campaign.” *Security Studies* 27(4): 633–64.

Liu, Wenlin, and Weiai Xu. 2019. “Tweeting to (Selectively) Engage: How Government Agencies Target Stakeholders on Twitter during Hurricane Harvey.” *International Journal of Communication*: 4917–39.

Lorentzen, Peter. 2014. “China’s Strategic Censorship.” *American Journal of Political Science* 58(2): 402–14.

Men, Linjuan Rita, Wan-Hsiu Sunny Tsai, Zifei Fay Chen, and Yi Grace Ji. 2018. “Social Presence and Digital Dialogic Communication: Engagement Lessons from Top Social CEOs.” *Journal of Public Relations Research* 30(3): 83–99.

“Microblogging in China.” 2020. *Wikipedia*. https://en.wikipedia.org/w/index.php?title=Microblogging_in_China&oldid=971334182 (October 14, 2020).

Molter, Vanessa, and Renee DiResta. 2020. “Pandemics & Propaganda: How Chinese State Media Creates and Propagates CCP Coronavirus Narratives.” *Harvard Kennedy School Misinformation Review* 1(3). https://misinforeview.hks.harvard.edu/article/pandemics-propaganda-how-chinese-state-media-creates-and-propagates-ccp-coronavirus-narratives/ (October 6, 2020).

National Health Commission of the People’s Republic of China. “Daily Briefing.” http://en.nhc.gov.cn/DailyBriefing_3.html (November 16, 2020).

Placek, Matthew. 2019. “Social Media and Regime Support in Russia: Does It Matter Which Website Is Used?” *East European Politics* 35(4): 496–516.

Repnikova, Maria, and Kecheng Fang. 2018. “Authoritarian Participatory Persuasion 2.0: Netizens as Thought Work Collaborators in China.” *Journal of Contemporary China* 27(113): 763–79.

Roberts, Margaret E. 2018a. “A Theory of Censorship.” In *Censored*, Distraction and Diversion Inside China’s Great Firewall, Princeton University Press, 21–92. http://www.jstor.org/stable/j.ctvc77b21.5 (September 20, 2020).

———. 2018b. “Implications for a DigitalWorld.” In *Censored*, Distraction and Diversion Inside China’s Great Firewall, Princeton University Press, 223–36. http://www.jstor.org/stable/j.ctvc77b21.10 (September 20, 2020).

———. 2018c. “Information Flooding:: Coordination as Censorship.” In *Censored*, Distraction and Diversion Inside China’s Great Firewall, Princeton University Press, 190–222. http://www.jstor.org/stable/j.ctvc77b21.9 (September 20, 2020).

———. 2018d. “Introduction.” In *Censored*, Distraction and Diversion Inside China’s Great Firewall, Princeton University Press, 1–20. http://www.jstor.org/stable/j.ctvc77b21.4 (September 20, 2020).

Rose-Ackerman, Susan. 1978. *Corruption: A Study in Political Economy*. New York: Academic Press.

Rozenas, Arturas, and Denis Stukal. 2019. “How Autocrats Manipulate Economic News: Evidence from Russia’s State-Controlled Television.” *The Journal of Politics* 81(3): 982–96.

Schlæger, Jesper, and Min Jiang. 2014. “Official Microblogging and Social Management by Local Governments in China.” *China Information* 28(2): 189–213.

Schlozman, Kay Lehman, Sidney Verba, and Henry E. Brady. 2010. “Weapon of the Strong? Participatory Inequality and the Internet.” *Perspectives on Politics* 8(2): 487–509.

Shambaugh, David. 2007. “China’s Propaganda System: Institutions, Processes and Efficacy.” *The China Journal* (57): 25–58.

Sina Finance. “微博月活跃用户达 5.5 亿 营收超华尔街预期 [Weibo Monthly Active Users Reach 550 Million, Revenue Exceeds Wall Street Expectations"].” https://finance.sina.com.cn/stock/usstock/c/2020-05-19/doc-iircuyvi3963989.shtml (March 28, 2021).

Sina Technology. 2021. “微博 2020 用户发展报告：用户群体继续呈现年轻化趋势 [Weibo User Development Report 2020: The User Group Continues to Show a Younger Trend].” https://finance.sina.com.cn/tech/2021-03-12/doc-ikkntiak9143019.shtml (April 2, 2021).

Stiglitz, Joseph E. 2002. “Information and the Change in the Paradigm in Economics.” *American Economic Review* 92(3): 460–501.

Tang, XiaoBo, Shixuan Li, Na Gu, and MingLiang Tan. 2019. “Exploring Repost Features of Police-Generated Microblogs through Topic and Sentiment Analysis.” *The Electronic Library* 37(4): 607–23.

Teets, Jessica C. 2009. “Post-Earthquake Relief and Reconstruction Efforts: The Emergence of Civil Society in China?*.” *The China Quarterly* 198: 330–47.

Textor, C. “China: Age Distribution 2019.” *Statista*. https://www.statista.com/statistics/270163/age-distribution-in-china/ (April 2, 2021).

Thomala, Lai Lin. “China: Microblogging Penetration Rate 2018 | Statista.” https://www.statista.com/statistics/446192/penetration-rate-of-microblogging-in-china/ (October 14, 2020).

Traber, Denise, Martijn Schoonvelde, and Gijs Schumacher. 2020. “Errors Have Been Made, Others Will Be Blamed: Issue Engagement and Blame Shifting in Prime Minister Speeches during the Economic Crisis in Europe.” *European Journal of Political Research* 59(1): 45–67.

Truex, Rory. 2020. “Authoritarian Gridlock? Understanding Delay in the Chinese Legislative System.” *Comparative Political Studies* 53(9): 1455–92.

Walker, Christopher, and Robert W. Orttung. 2014. “Breaking the News: The Role of State-Run Media.” *Journal of Democracy* 25(1): 71–85.

Wallace, Jeremy L. 2016. “Juking the Stats? Authoritarian Information Problems in China.” *British Journal of Political Science* 46(1): 11–29.

Wang, Yuan, and Yiyi Yang. 2020. “Dialogic Communication on Social Media: How Organizations Use Twitter to Build Dialogic Relationships with Their Publics.” *Computers in Human Behavior* 104: 106183.

“Weibo and Public Political Participation | Center for Mobile Communication Studies.” *Boston University College of Communication Center for Mobile Communication Studies*. https://sites.bu.edu/cmcs/2018/12/08/weibo-and-public-political-participation-in-china/ (October 14, 2020).

Weiss, Jessica Chen, and Allan Dafoe. 2019. “Authoritarian Audiences, Rhetoric, and Propaganda in International Crises: Evidence from China.” *International Studies Quarterly* 63(4): 963–73.

Wintrobe, Ronald. 1998. *The Political Economy of Dictatorship*. Cambridge, UK; New York, NY: Cambridge University Press. https://doi.org/10.1017/CBO9781139174916 (September 20, 2020).

Woodward, Aylin. 2020. “China Censored People Who Spoke out about the Coronavirus, but There’s Reason to Believe the Country’s Numbers Are Still Trustworthy.” *Business Insider*.

https://www.businessinsider.com/reasons-china-coronavirus-data-may-be-trustworthy-2020-3 (November 16, 2020).

Xi, Jinping. 2020. “在中央政治局常委会会议研究应对新型冠状病毒肺炎疫情工作时的讲话 [Speech at the Meeting of the Standing Committee of the Political Bureau of the CPC Central Committee to Study the Response to the COVID-19 Epidemic].” *Qstheory.cn*. http://www.qstheory.cn/dukan/qs/2020-02/15/c_1125572832.htm (October 28, 2020).

Xinhua News Agency. “中国发布新冠肺炎疫情信息、推进疫情防控国际合作纪事 [Chronicle of China’s Release of the COVID-19 Epidemic Information and Promotion of International Cooperation in Epidemic Prevention and Control].” http://www.gov.cn/xinwen/2020-04/06/content_5499625.htm (September 30, 2020).

Xue, Weiwei. “A Comparative Analysis of Sina Weibo and the People’s Daily in the Coverage of Social Emergencies in China.” : 104.

Zavattaro, Staci M., P. Edward French, and Somya D. Mohanty. 2015. “A Sentiment Analysis of U.S. Local Government Tweets: The Connection between Tone and Citizen Involvement.” *Government Information Quarterly* 32(3): 333–41.

Zhao, Weibin. “基于社交媒体的党报话语力再造——探析人民日报法人微博日常策划 [Reconstruction of the Discourse Power of Party Newspapers Based on Social Media - An Analysis of the Daily Planning of the People’s Daily Legal Person Weibo].” http://d.wanfangdata.com.cn.proxy.library.emory.edu/periodical/cmlt202022007 (November 11, 2020).