



The Domestic Sources of China's Foreign Propaganda: Theory and Empirics

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博 士 学 位 論 文

The Domestic Sources of China's Foreign Propaganda:

Theory and Empirics

中国の対外プロパガンダの国内要因:理論と実証

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Abstract

Recently, the intensified activities of China's foreign propaganda machine have been noted. Conventional wisdom contends that effective propaganda should be well-designed to be persuasive. However, China's foreign propaganda has become increasingly combative and offensive under Xi Jinping. International public opinion polls show that China's aggressive approach to foreign propaganda, which is dubbed "wolf warrior diplomacy," has led to the deterioration of China's global image. Why does China take such a risky and sometimes counterproductive approach to foreign propaganda?

In this dissertation, I argue that China's foreign propaganda is the product of China's domestic institutions. I proposed three mechanisms through which China's authoritarian institutions impact foreign propaganda behaviors: *hard propaganda*, *nationalism and legitimacy*, and *bureaucratic politics*. The hard propaganda theory argues that aggressive foreign propaganda can serve as a credible signal of the ruler's strength to the domestic audience. Thus, a strong ruler can use hostile foreign propaganda to deter resistance from the citizens. The theory of authoritarian legitimacy argues that nationalism

is one of the main sources of regime legitimacy for authoritarian countries. The Chinese government uses nationalist narratives in domestic propaganda and aggressive foreign propaganda is an extension of soaring nationalism at home. The bureaucratic politics approach argues that foreign policy decisions are the results of bargaining among players positioned hierarchically in the government. Following Xi's advocates of "fighting spirit", the Chinese diplomats have tended to engage in "wolf warrior diplomacy" to compete for resources, budgets, and high positions within the government. In this dissertation, I demonstrated the three mechanisms using formal models and computational text analysis.

The findings of this dissertation contribute to the growing literature on authoritarian politics, foreign policy analysis, and foreign influence operations. First, this dissertation offers a fresh perspective on authoritarian foreign propaganda, suggesting that it functions as a signal of the ruler's strength. Second, this dissertation provides new evidence that the Chinese government uses negative foreign news to bolster political legitimacy in times of crisis. Third, this dissertation contributes to a deeper understanding of the impact of authoritarian domestic politics on foreign policy.

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Chapter 1

Introduction

We should enhance our foreign-oriented publicity work through trying methods with new concepts, domains and expressions that are understood by both China and the rest of the world, telling the true story of our country and making our voice heard.

— Xi Jinping, speech at a national meeting on publicity and theoretical work, August 2013

1.1 The Puzzle of Wolf Warrior Diplomacy

In contemporary international politics, soft power, which refers to the ability to get others to do what you would like through attraction rather than coercion (Nye, 2004, p. 5), has become increasingly important for a country

to secure its national interests. The topic of soft power has been the subject of many studies on Chinese foreign policies (e.g. [Edney, 2015](#); [Gill, 2020](#); [Hunter, 2009](#); [Li, 2008](#); [Shambaugh, 2015](#)). As a rising power, China has put considerable effort and resources into building its soft power to shape international perceptions of China's image. However, soft power is difficult to strategize because it is a natural by-product of a country's culture, values, and political principles ([Rawnsley, 2012](#), p. 123). As [Nye \(2013\)](#) pointed out, China's attempts to enhance soft power earned a very limited return since its domestic policies did not match its words.

The Chinese leaders have long been aware of the necessity of promoting China's soft power to the international society. In the early 1990s, China expanded its external propaganda system to coordinate its national image-building efforts ([Shambaugh, 2007](#); [Wang, 2003](#)). The term *soft power* first appeared in China's leadership discourse in 2007, when President Hu Jintao emphasized the importance to enhance China's cultural soft power in his report at the 17th National Congress of the Chinese Communist Party (CCP) ([Hu, 2007](#)). Since assuming the top leadership position in 2012, Xi Jinping has repeatedly stressed the importance of strengthening China's soft power and "telling China's story well" ([People's Daily, 2019](#); [Reuters, 2016](#)). In a Politburo meeting in 2021, Xi asked the CCP cadres to make effort to present an image of a "credible, loveable and respectable China" ([Xinhua, 2021](#)).

However, under Xi Jinping, China has become more closed at home and more assertive abroad ([Baranovitch, 2021](#); [Pei, 2018](#); [Shirk, 2018](#); [Zhao,](#)

2022). China’s foreign propaganda machine, including the Chinese state media and diplomats, has adopted an aggressive approach to international communication. For example, the former Chinese Ambassador to Sweden, Gui Congyou, analogized Swedish media and China to a 48kg lightweight boxer and an 86kg heavyweight boxer in an interview. He warned that the lightweight boxer should never challenge the heavyweight one (Taylor, 2020). This kind of hostile propaganda has received considerable attention from the media and scholars, and many dubbed it “wolf warrior diplomacy” (Martin, 2021; Shumba, 2021; Sullivan & Wang, 2022; Ye, 2020; Zhu, 2020).¹ According to the investigation by Dai and Luqiu (2022), in 2020, 20 percent of Western news reports on China’s diplomacy included the phrase “wolf warrior”.

The effectiveness of wolf warrior diplomacy is dubious. According to Pew Research Center’s international public opinion survey, China has been perceived as a growing threat in many of its neighboring countries since 2017 (Silver et al., 2022). Despite its ineffectiveness, the Chinese leaders are infatuated with this aggressive style of foreign propaganda. In the 20th National Congress of the CCP, Xi called for “three imperatives” to the party members, one of which is that “we must dare to fight and be adept at fighting” (Xi, 2022). China’s wolf warrior diplomacy has been seen as the result of Xi’s

¹Wolf Warrior is a Chinese action film, which tells the story of a People’s Liberation Army Special Operations Forces member named Leng Feng. In its sequel Wolf Warrior 2, Leng protected Chinese medical aid workers from local rebels and Western mercenaries in an African country. In China, Wolf Warrior 2 is popular for its patriotic plot and has become the highest-grossing Chinese film of all time.

request for a “fighting spirit” in foreign policy (Pollard & Baptista, 2022). China’s foreign minister Wang Yi, who has advanced wolf warrior diplomacy on many international occasions, was promoted to a member of the Politburo in the 20th National Congress of the CCP although having exceeded the customary retirement age of 68 (Hadano, 2022).

Why does China adopt an aggressive approach to foreign propaganda even though it is counterproductive in improving China’s image? Conventional wisdom posits that the effectiveness of propaganda depends on the persuasiveness of the propaganda messages (Cull, 2008a; Jowett & O’Donnell, 2018; Kamenica & Gentzkow, 2011; Lasswell, 1927). If propaganda messages are extremely biased, their effectiveness will be limited as people tend to ignore or disbelieve them (Chen & Xu, 2017; Gehlbach & Sonin, 2014). Despite the poor persuasiveness of antagonistic propaganda, China continues to invest significant resources in such propaganda activities. Why does this happen?

1.2 Soft Power, Public Diplomacy, and Foreign Propaganda

Soft power, public diplomacy, and foreign propaganda are the three most widely used concepts to study communication behaviors among nations (Brady, 2015; Gilboa, 2008; Melissen, 2005; Nye, 1990; Van Herpen, 2015). Although some scholars use these terms interchangeably, there are subtle differences between the three concepts.

As defined by Nye (2008), soft power is “the ability to affect others to obtain the outcomes one wants through attraction rather than coercion or payment”. There are three soft power resources for a country: its culture, its political values, and its foreign policies (Nye, 2008, p. 96). Also, a government needs to establish its credibility to effectively generate soft power (Nye, 2008, p. 100). Compared with hard power such as military and economic power, soft power is more difficult to measure and control because of its diversified sources (Fan, 2008).

Public diplomacy is often viewed as the wielding of soft power in international relations (Cull, 2008b; Hayden, 2012; Melissen, 2005). Tuch (1990) defines public diplomacy as “a government’s process of communicating with foreign publics in an attempt to bring about understanding for its nation’s ideas and ideals, its institutions and culture, as well as its national goals and current policies.” Thus, it is problematic that a government conceives public diplomacy “not as a means to engage international publics but rather as a mechanism to impress domestic audiences” (Cull, 2010, p. 13).

Propaganda refers to the deliberate and systematic attempt to manipulate people’s minds in order to achieve a response desired by the propagandist (Jowett & O’Donnell, 2018; Taylor, 2013). This can involve the dissemination of information or opinions, often with a biased or misleading nature, with the intention of influencing public opinion or behavior. Propaganda often lacks credibility, making it counterproductive as public diplomacy (Nye, 2008, p. 101). Nonetheless, public diplomacy can be used for the purposes of

propaganda at home (Cull, 2010; Yang, 2020). It is also noteworthy that propaganda can work either by persuasion or by signaling (Horz, 2018; Little, 2018). In the latter case, propaganda does not necessarily need to be persuasive, but only needs to convey a signal that credibly shapes people’s beliefs about the propagandist.

In this dissertation, I use foreign propaganda to refer to *the systematic attempt by a government to manipulate people’s minds by producing foreign-language messages*. In this working definition, 1) foreign propaganda can work either by persuading people with its content or by changing people’s beliefs of the propagandist; and 2) the targets of foreign propaganda are not only the foreign publics but also the domestic citizens who observe the foreign propaganda messages.

1.3 The Impact of Authoritarian Institutions on Foreign Propaganda

In this dissertation, I argue that China’s foreign propaganda is the product of China’s domestic institutions. Specifically, I propose three mechanisms through which China’s authoritarian institutions impact foreign propaganda behaviors: *hard propaganda*, *nationalism and legitimacy*, and *bureaucratic politics*. I show that although aggressive foreign propaganda is not effective in improving China’s national image in international society, it helps to maintain the CCP’s rule in China.

1.3.1 Hard Propaganda

On 7 December 2022, the Chinese government overhauled its zero-COVID policy after a wave of protests against COVID-19 lockdowns. The sudden relaxation led to a chaotic reopening—a surge in infections, scarce medicines, overrun hospitals, and overflowing crematories (Stevenson & Mueller, 2022). Despite the confusion and frustration among the Chinese citizens, *People's Daily*, the official newspaper of the CCP, published an article titled “three years fighting against the pandemic, we have gone through it in this way” on its front page on December 15. At the beginning of this article, the author writes:

Factory workshops with machines roaring; people bustling in streets and alleys; vehicles shuttling on highways and railways; supermarkets and shopping malls with abundant goods at stable prices; vast fields with lively vitality... As the end of the year of Renyin approaches, the land of China is surging with boundless energy and displaying myriad phenomena.²

This propaganda piece is obviously inconsistent with the facts and it may undermine people's trust in the Chinese government. However, many authoritarian countries are producing this kind of heavy-handed propaganda messages on a daily basis (Huang, 2015).

² “Sannian Kangyi, Women Zheyang Tongxin Zouguo,” *People's Daily*, http://paper.people.com.cn/rmrb/html/2022-12/15/nw.D110000renmrb_20221215_7-01.htm

In recent years, there has been a growing number of publications focusing on the stodgy, didactic, and heavy-handed propaganda style in authoritarian countries (Carter & Carter, 2022; Huang, 2015; 2018; Little, 2017). Compared with the relatively subtle and sleek propaganda messages, the crude and blatantly distorted propaganda messages are called “hard propaganda”. The purpose of hard propaganda is not to convince the citizens, but rather to credibly convey a signal that the government is strong enough to repress political resistance. By observing a high level of hard propaganda, the citizens would know the government is strong and become hesitant to attend a protest. Using a survey experiment, (Huang, 2015) shows that crude and heavy-handed propaganda messages worsened Chinese people’s satisfaction with the government but at the same time reduced citizens’ willingness to protest. In other words, hard propaganda did not persuade the target but made the target believe the government is strong.

In this dissertation, I argue that aggressive foreign propaganda can function as a costly signal for authoritarian leaders because such propaganda damages relationships with other countries and makes the messaging government isolated in the international society. Thus, a strong leader can send a credible signal of his/her repressive capacity to the domestic citizens by showing the ability to afford the cost of such propaganda. The mechanism presented here differentiates from previous hard propaganda theories in two aspects. First, while existing hard propaganda theories assume that the content of such propaganda is hard for its targets, the content of aggressive foreign propaganda

is hard for foreign publics but not necessarily hard for its real target—the domestic citizens. [Mattingly and Yao \(2022\)](#) find that propaganda messages containing nationalist sentiment can effectively persuade Chinese citizens through a series of experiments. Second, while existing research contends that the cost of hard propaganda is the resources put into producing it, I argue that the cost of aggressive foreign propaganda is the potential backfire from the external world. In my theory, the cost to produce propaganda does not change with its content.

To demonstrate the hard propaganda mechanism, I build a signaling model in which an authoritarian leader send signals of his/her type to the citizens by producing different level of hostile foreign propaganda. The results show that under certain circumstances, a strong leader can credibly convey his/her strength to the citizens using the level of hostility in foreign propaganda.

1.3.2 Nationalism and Authoritarian Legitimacy

In March 2021, top US and China officials held their first face-to-face high-level talks since President Joe Biden took office in Anchorage. During the meetings, the two sides offered sharply different views of each other and the world. In response to Blinken’s criticisms on China’s human rights record, Yang Jiechi, who was the Director of the CCP’s Central Foreign Affairs Commission Office—the highest diplomatic position in China, said: “Let me say here that in front of the Chinese side, the United States does not have the qualification to say that it wants to speak to China from a position of strength.

We Chinese people don't buy it." Yang's words quickly went viral in China and a slew of products bearing "we Chinese people don't buy it" (*Zhongguoren buchi zheyitao*) including lighters, T-shirts, hoodies, and bags flooded China's online stores (Yan, 2021). The interaction of wolf warrior diplomacy and nationalism has also been observed in many other cases (Sullivan & Wang, 2022).

Nationalism is a main source of authoritarian legitimacy (Nathan, 2020; Schubert, 2008; Weiss & Wallace, 2021). As Gellner (1983, p. 1) defined, nationalism is "a principle which holds that the political and national unit should be congruent". Oftentimes, nationalism is accompanied by negative views on other nations (Anderson, 1983; Greenfeld, 1992; Hobsbawm, 1990). Mearsheimer (2019, p. 8) regarded nationalism as "the most powerful political ideology on the planet". After the end of the Cold War, the Chinese government accelerated efforts to whip up nationalism to bolster its legitimacy (Zhao, 1998). The CCP promoted a nationwide patriotic education campaign where the West is blamed for China's suffering of "one hundred years of humiliation" (Wang, 2008b). One important narrative of Chinese nationalist propaganda is the foreign interference in China's internal affairs, especially the US sabotage of China's development. During the 2019 Hong Kong protests, Chinese foreign propaganda blamed the West as accomplices of the protesters (Zhang et al., 2021). Although nationalist propaganda triggers backlash in open societies, it works very well in Mainland China (Luqiu, 2018). Mattingly and Yao (2022) show that nationalist propaganda can effectively manipulate

people’s anti-foreign sentiment and behavior through a series of experiments in China.

Aggressive foreign propaganda is not only the product of top-down pressure from the central leadership under Xi Jinping but also the result of bottom-up pressure from grassroots nationalism. Previous studies of Chinese foreign policy have demonstrated that nationalist sentiment played an important role in China’s foreign policy decision-making (Weiss, 2014; Zhao, 2013). Since 2008, Beijing has become more willing to follow the popular nationalist calls to take a hawkish stance against Western countries. Sullivan and Wang (2022) argue that the synergistic interaction between officials and popular nationalism creates bottom-up incentives for wolf warrior diplomacy. It is worth noting that the top-down instructions from the CCP leaders are always superior to the pressure from the grassroots. Empirical studies have shown that after a CCP Politburo collective study session on China’s global communication strategy, the Chinese diplomats moderated their tweets to become slightly friendlier (Brazys et al., 2022).

In this dissertation, I examined the topics covered in China’s foreign propaganda related to COVID-19. The findings indicate that a significant proportion of the propaganda is devoted to nationalist themes, suggesting that the Chinese state media employs a consistent framing strategy across both domestic and foreign propaganda to maintain its credibility with the domestic audience.

1.3.3 Bureaucratic Politics

On December 30, 2022, Qin Gang, the Chinese Ambassador to the United States, was named China's new foreign minister replacing Wang Yi. Qin became famous in China for making sharp comments in defense of China's increasingly assertive foreign policy when he was the spokesman for China's foreign ministry ([Tian & Martina, 2022](#)). During his career, Qin has earned a reputation as a "wolf warrior" through tough talks against the West ([France 24, 2022](#)). Qin's promotion is not the only case where wolf warrior diplomacy has been rewarded by the party leadership. Wolf warrior diplomats such as Zhao Lijian, Hua Chunying, and Wang Yi have been appointed to important positions in China's foreign affairs system.

One of the best well-known models of foreign policy analysis is the bureaucratic politics model. The bureaucratic politics model explains foreign policy decisions as "a result of bargaining among players positioned hierarchically in the government" ([Allison & Halperin, 1972](#), p. 43). Specifically, it argues that the government is not a unitary actor, rather, it consists of competitive bureaucratic agencies and individuals which have their own interests and goals. Each bureaucratic agency seeks greater power and influence within the government, and governmental decisions are the result of compromise amongst various agencies. The bureaucratic politics model was originally proposed to analyze the 1962 Cuban Missile Crisis ([Allison, 1969](#)), but has been widely used in the study of foreign policy decision-making ([Christensen & Redd, 2004](#); [Halperin & Clapp, 1974](#); [Hilsman, 1971](#); [Marsh, 2012](#); [Sebata,](#)

2010).

In the Cold War era, China's top leaders, Mao Zedong and Deng Xiaoping, played a central role in foreign policy decision-making (Gong et al., 2009; Lu, 2000). As China increasingly engaged in global affairs after the end of the Cold War, a growing number of actors have been involved in China's foreign policy decision-making. Scholars have attempted to employ the bureaucratic politics model to the study of Chinese foreign policy (Jakobson & Manuel, 2016; Lai & Kang, 2014). From the viewpoints of bureaucratic politics, foreign policy actors have their own bureaucratic interests, and they bargain with each other for these interests. A caveat to be noted is that since the Chinese government is a functional department of the CCP, Chinese bureaucratic politics is not governmental politics but the CCP's internal politics (Zhang, 2016, p. 441).

In authoritarian countries, the rulers face a loyalty-competence trade-off that competent subordinates could better assist them but are more prone to treason (Egorov & Sonin, 2011; Zakharov, 2016). Thus, dictators often promote incompetent but loyal subordinates rather than more competent but less loyal ones. In China, political loyalty has long been a prerequisite for the CCP cadres (Jia, 2022; Liu, 2019). Under Xi Jinping, the prerequisite has been intensified and the Ministry of Foreign Affairs has also been affected (Loh, 2018; Wang, 2022). In such a situation, Chinese diplomats tend to do whatever they are asked to do regardless of effectiveness (Chang-Liao, 2022). Rather, a strong backlash may even make their display of loyalty to their

leader more credible.

To examine the bureaucratic incentives behind China’s aggressive foreign propaganda, I collected all the tweets of Chinese diplomatic accounts from May 2010 to July 2022. The results of automated content analysis show that Chinese diplomats are more likely to post offensive messages using their personal accounts rather than the official accounts of their institutions. This suggests that Chinese diplomats are likely building a reputation as “wolf warrior” to demonstrate their loyalty to Xi Jinping.

1.4 Structure of the Dissertation

In this dissertation, I examine how the three aforementioned mechanisms shape China’s foreign propaganda practices. The three mechanisms are not mutually exclusive but work together in the process of Chinese foreign propaganda. I argue that China’s aggressive foreign propaganda is not effective in improving China’s national image in international society, however, it can serve as a means to maintain the CCP’s rule in China and as a channel for Chinese diplomats to seek individual promotion. To paraphrase Clausewitz, foreign propaganda is the continuation of domestic politics by other means.

In Chapter 2, I use a game-theoretic approach to demonstrate how aggressive foreign propaganda can credibly convey an authoritarian leader’s strength to the domestic audience. China’s aggressive foreign propaganda is unpersuasive and often backfires, however, it can function as hard propa-

ganda which is not meant to brainwash people with its content but rather to convince the citizens how strong the government is ([Huang, 2015; 2018](#)). While existing literature contends that producing hard propaganda per se is costly, I argue that aggressive foreign propaganda is costly because it increases a country’s international isolation. Thus, strong leaders can use aggressive foreign propaganda to differentiate themselves from weaker leaders and deter domestic revolts.

In Chapter 3, I investigate how the Chinese state media frames the COVID-19 crisis in foreign propaganda by conducting automated content analysis of more than 130,000 articles published during the period from 1 January 2020 to 31 December 2021. The results show that China’s English-language state media covered a variety of topics related to COVID-19, with a focus on China’s success and Western failure in tackling the COVID-19 pandemic. This kind of dichotomous narrative strategy is highly consistent with China’s domestic propaganda on COVID-19 which is designed to incite nationalism and bolster regime legitimacy ([Lemus-Delgado, 2022; Xia et al., 2022](#)).

In Chapter 4, I analyze China’s social media propaganda strategies by applying the structural topic model to the Chinese diplomat tweets. The results show that the individual accounts of Chinese diplomats are more likely to post aggressive topics than the institutional accounts of Chinese embassies, consulates, and missions. This suggests that the motivation behind wolf warrior diplomacy is not to persuade foreign public, but rather that Chinese diplomats are using combative messages to respond to Xi’s call for a “fighting

spirit” so that they could claim credit for future promotion.

The final chapter gives a brief review and critique of the findings of this dissertation.

1.5 Contributions of the Dissertation

By examining the impact of domestic institutions on China’s foreign propaganda, this dissertation contributes to the growing literature on authoritarian politics, foreign policy analysis, and foreign influence operations.

First, this dissertation offers a fresh perspective on authoritarian foreign propaganda that it functions as a signal of a ruler’s strength. Previous literature has suggested that China’s foreign propaganda is constrained by China’s domestic political system (Edney, 2015; Wang, 2011; Yang, 2020). However, existing studies mainly focused on the ineffectiveness of China’s public diplomacy but neglected the hard propaganda mechanism through which aggressive foreign propaganda can work at home. By illustrating this mechanism, this study sheds new light on the interaction between China’s domestic politics and foreign policy.

Second, this dissertation provides new evidence that the Chinese government uses negative foreign news to bolster political legitimacy in times of crisis. Previous research has established that the Chinese government uses a toolkit of information manipulation strategies to maintain regime stability (Brady, 2009a; King et al., 2013; Mattingly & Yao, 2022). However, relatively

little research has been carried out to systematically examine China's foreign propaganda messages. By collecting and analyzing the COVID-19 related articles published by China's foreign-oriented state media, this dissertation adds to the empirical study of Chinese foreign propaganda.

Third, this dissertation contributes to a deeper understanding of the impact of authoritarian domestic politics on foreign policy. Until recent years, China's foreign propaganda policy was directed by the CCP's Foreign Propaganda Leading Small Group and the Ministry of Foreign Affairs only played a marginal role in propaganda activities ([d'Hooghe, 2014](#); [Edney, 2012](#); [Shambaugh, 2007](#)). The growing activities of Chinese diplomats on social media provide a unique opportunity to examine how different governmental departments use foreign propaganda to compete over resources, budget, and high positions in a closed society. The findings of this study extend our knowledge of authoritarian foreign policy-making.

Chapter 2

Wolf Warrior Diplomacy as Hard Propaganda

2.1 Introduction

In recent years, China's propaganda machine has ramped up an aggressive approach to foreign propaganda. Since the outbreak of COVID-19, China's English-language state media as well as Chinese diplomats have spread a large amount of information emphasizing China's success in fighting the coronavirus, reiterating China's COVID aid to other countries, and debuting the Wuhan lab-leak theory ([Bergin, 2021](#); [The Times of India, 2021](#)). Chinese media such as the *Global Times* frequently publish articles contending that the COVID-19 originated from the US ([CGTN, 2021](#); [Global Times, 2021a](#); [2021b](#)), and the spokesperson of the Chinese Foreign Ministry expressed the same opinion

at a regular press conference ([Ministry of Foreign Affairs of the People's Republic of China, 2021](#)). Almost at the same time as the outbreak and wide spread of COVID-19, Chinese diplomats opened their Twitter accounts in droves. Those Chinese diplomats have been actively promoting China's official narratives about COVID-19 and spreading anti-Western content to a global audience ([Brandt & Schafer, 2020](#)).

Despite enormous foreign propaganda efforts, China's national image has not improved among the foreign public. Rather, views of China reached a historic low point in many OECD countries after the COVID-19 outbreak ([Silver et al., 2020](#)). Some argue that China's assertiveness in foreign propaganda has caused its image to deteriorate in foreign countries ([Erlanger, 2020](#); [Kim, 2020](#)). While the offensive and confrontational approach of foreign propaganda employed by Chinese propagandists and diplomats is dubbed "Wolf Warrior" diplomacy ([Ye, 2020](#); [Zhu, 2020](#)), the former Chinese ambassador to the UK, Liu Xiaoming, justified such an approach "because there are wolves in this world" ([Embassy of the People's Republic of China in the United Kingdom of Great Britain and Northern Ireland, 2020](#)).

Why does China take such a risky and sometimes counterproductive approach to foreign propaganda? One strand of literature suggests that Chinese foreign propaganda is an extension of domestic propaganda, whose purpose is to indoctrinate Chinese citizens with the government's official ideology ([Edney, 2014](#); [Sun, 2009](#)). In other words, the changes in foreign propaganda reflect domestic propaganda strategies. A second strand of literature points

out that domestic audiences are as important as foreign audiences for China’s foreign propaganda (Brady, 2015; Jacob, 2020; Shambaugh, 2013). As the former director of the Office of Public Diplomacy within China’s Foreign Ministry, Wei Xin, said in an interview, half their job is to convey China’s foreign policy to internal Chinese audiences and half to external audiences (Shambaugh, 2013, p. 227). However, existing studies still cannot explain why China continues to invest significant resources in these seemingly ineffective foreign propaganda activities. Specifically, if the Chinese government wants to persuade both international and domestic audiences of foreign propaganda, it is irrational to use an aggressive approach because the persuasiveness of such narratives is weak.

Similarly, Russia is spending a large amount of money on foreign propaganda (Nemtsova, 2021; Van Herpen, 2015). Compared with China, Russia is more willing to use foreign propaganda to spread conspiracy theories and to discredit Western democratic values (Brandt, 2021; Gerber & Zavisca, 2016). Since the 2022 Russian invasion of Ukraine, Chinese diplomats and state media have begun to actively spread Russia’s official narratives that NATO and the US are responsible for Russia’s war choice through social media platforms, such as Twitter (Mozur et al., 2022). These propaganda activities have raised concerns from the US government (U.S. Department of State, 2022). Although it is difficult to systematically examine the effectiveness of authoritarian countries’ foreign propaganda, survey data have shown that authoritarian foreign propaganda has very limited effects on the public

opinion of target countries (Bailard, 2016; Chapman & Gerber, 2019; Gerber & Zavisca, 2016; Wasserman & Madrid-Morales, 2018). It has been argued that the necessity of maintaining a unified national identity has undermined authoritarian countries' ability to effectively promote their national images (Edney, 2015; Just, 2016). However, even for domestic propaganda, the content must be well designed to be persuasive.

In this chapter, I argue that aggressive foreign propaganda can function as hard propaganda through which an authoritarian ruler can signal his strength to the citizens. The effectiveness of propaganda is difficult to be empirically tested because it may depend on different political, social, and economic conditions (Horz, 2018). As an alternative, I use the game-theoretic approach to demonstrate the mechanism through which authoritarian foreign propaganda works as hard propaganda. In the following parts of this chapter, I propose a formal model to show that autocrats can use the level of hostility in foreign propaganda to manipulate their own citizens' beliefs. Aggressive propaganda is a costly signal because it damages relationships with other countries and hinders international cooperation. For a country with strong economic ties with other countries such as China, the cost of international isolation can be substantial. By showing the ability to afford such costs, an authoritarian ruler with strong capacity can credibly convey his type to a domestic audience. The findings from this study add to the growing literature on the interaction of domestic politics and international relations and enhance our understanding of authoritarian countries' foreign propaganda practices

such as China’s “Wolf Warrior” diplomacy.

2.2 Related Literature

2.2.1 Propaganda: To Persuade or to Signal

Propaganda is the deliberate and systematic manipulation of information with the hope of shaping the targets’ perceptions to achieve the propagandist’s goal (Jowett & O’Donnell, 2018). A large and growing body of literature has shown that propaganda worked effectively in shaping people’s behavior in important political events such as the rise of Nazis (Adena et al., 2015), the Rwanda genocide (Yanagizawa-Drott, 2014), and the Serbo-Croatian conflict (DellaVigna et al., 2014). However, the mechanisms whereby propaganda works are still a matter of debate.

Conventional wisdom holds that for propaganda to be effective, its content must be persuasive (Brady, 2009b; Martin, 1971; O’Shaughnessy, 2004). In other words, propagandists achieve their goals by changing people’s political attitudes, beliefs, and identities (Dickson & Scheve, 2006; Yu, 2021). Using a difference-in-difference method, Cantoni et al. (2017) found that China’s curriculum reform successfully changed students’ attitudes toward important political issues. For example, students studied under the new curriculum have greater trust in government officials, see China as more democratic, and express more doubtful views of free markets. Scholars have also found that Russian television effectively persuaded Ukrainian voters to support

“pro-Russian” candidates in the 2014 Ukraine elections (Peisakhin & Rozenas, 2018). This effect is particularly large among voters with strong pro-Russian priors. Nonetheless, persuasion is not an easy task. A systematic meta-analysis of 40 field experiments shows that the persuasive effect of political campaigns on Americans’ candidate choices in general elections is zero (Kalla & Broockman, 2018).

Recently, a considerable literature has grown up around the theme of unpersuasive propaganda (Carter & Carter, 2022; Guriev & Treisman, 2020; Huang, 2015; 2018; Little, 2017). This strand of literature contends that authoritarian governments can use propaganda to convey their willingness to use violent repression to deter opposition. Huang (2015, p. 435) defines the “subtle and persuasive” propaganda messages as *soft propaganda* and the “pretentious and dogmatic” propaganda messages as *hard propaganda*. Further, Huang (2018) shows that hard propaganda produced by the Chinese government decreased citizens’ support of the government, but at the same time reduced citizens’ willingness to participate in a protest. Guriev and Treisman (2019) argue that modern autocrats do not use propaganda to impose comprehensive ideologies on their citizens; rather, they only attempt to convince citizens of their competence. By comparing the speeches of modern autocrats with those of traditional dictators and democratic leaders, they find that modern autocrats show a significantly reduced usage of words associated with violence and emphasized economic performance and service provision, similar to their democratic colleagues.

2.2.2 International Propaganda and Public Diplomacy

Despite the increasing presence of authoritarian foreign propaganda, this phenomenon has been neglected by scholars. In contrast, there is a large volume of published studies focusing on authoritarian countries' public diplomacy (e.g. [d'Hooghe, 2014](#); [Heibach, 2021](#); [Rawnsley, 2015b](#); [Simons, 2014](#); [Wastnidge, 2015](#)). [Nye \(2008\)](#) points out that public diplomacy is the practice whereby a government seeks to promote its soft power among foreign publics. According to Nye's definition, public diplomacy cannot work "if the content of a country's culture, values, and policies are not attractive" ([Nye, 2008](#), p. 95). Much previous research has treated public diplomacy as the modern development of international propaganda ([Chang & Lin, 2014](#); [Gilboa, 2008](#); [Melissen, 2005](#)). The key difference between public diplomacy and international propaganda is that the latter often involves blatant manipulation of information, while the technique of the former is more sophisticated ([Chang & Lin, 2014](#)). That is to say, most existing studies have focused on the "soft" aspect of international propaganda but neglected the "hard" aspect of it.

Correspondingly, the great part of the literature on international propaganda or public diplomacy have paid particular attention to how a government promotes its national image to other countries. For example, [Wasserman and Madrid-Morales \(2018\)](#) found that university students in Kenya and South Africa seldom choose Chinese media as news sources and their attitudes toward China are dominantly negative. [Min and Luqiu \(2021\)](#) showed that the persuasive effect of international propaganda varies depending on the

perceived credibility and nationality of the audience. Interestingly, a recent survey experiment shows that propaganda photographs of Kim Jong-un can reduce the negative views on North Korea among Americans with limited political knowledge ([Hellmann & Oppermann, 2022](#)).

As aforementioned, propaganda can work even if it is not persuasive. In this study, I argue that authoritarian rulers can use assertive foreign propaganda as a means to convey their types to domestic audiences with the aim of deterring revolution. It means that the hard propaganda theory works not only on domestic propaganda but also on foreign propaganda. However, different to [Huang \(2015\), 2018](#), I argue that the cost of hard propaganda is not monetary because the price to produce hard propaganda is not much higher than the price to produce soft propaganda. Rather, external hard propaganda is costly because it increases the probability of being isolated from the world market especially the Western developed economies. This could be considerable costly for a country with strong external trade relationships. I propose a signaling model of authoritarian propaganda that illustrates how the ruler can use confrontational foreign propaganda to convey information to the domestic audience.

2.3 Model Setup

Here, I adopt the signaling theory of propaganda, which argues that propaganda works not by persuading the targets but by changing their beliefs

about the propagandist. In authoritarian countries, the citizens can infer the government's type from the content of foreign propaganda.

2.3.1 Players

There are two players in the game: an authoritarian ruler and the citizens.¹ The ruler could be strong ($\theta = 1$) or weak ($\theta = 0$). Here, I use strong and weak in a general sense. A strong ruler is competent, hard-line, and with more power in his/her hands. Let $\bar{\theta}$ be the ex ante probability that the ruler is competent. The ruler knows θ , but the citizens do not.

2.3.2 Foreign Propaganda

I assume that citizens under authoritarian regimes can fully observe the content of foreign propaganda produced by their government. Although the ruler can use censorship to block external information, there are good reasons to make this assumption. First, in most cases, the foreign propaganda apparatus such as state media are also domestic propaganda agencies that send the same messages to domestic audience. Second, it is costly for authoritarian rulers to block their own state media because this would undermine the legitimacy of their propaganda activities. Third, in a world with high population mobility, overseas citizens can easily transmit the foreign propaganda messages to domestic citizens.

¹The foreign public is assumed to be a non-strategic player in this game. If they observe hostile propaganda from other countries, they will place pressure on their government to sanction those countries.

Let h be the level of hostility toward other countries in foreign propaganda and α_θ be the marginal cost of producing hostile foreign propaganda for a θ type ruler. This marginal cost is assumed to be lower for strong rulers than for weak rulers, $\alpha_1 < \alpha_0$. This is because strong rulers are more resilient to backlash, such as economic sanctions, from foreign countries.

2.3.3 Repression

To capture the defining feature of an autocratic regime, I assume that the ruler always uses violent repression when the citizens revolt. In addition, I assume that a strong ruler can successfully suppress the protest with the probability p_1 , and a weak ruler can successfully suppress the protest with the probability p_0 , where $p_1 > p_0$.²

2.3.4 Payoffs

The ruler's payoff is standardized to 1 if he stays in power and 0 if he is overthrown. The citizens' payoff is 0 if they choose to concede, while they can gain a benefit of b if they anticipate a successful protest. Whether the protest is successful or not, the citizens have to pay a cost of c to attend the protest. It is assumed that $c \in [(1 - p_1)b, (1 - p_0)b]$. In other words, the citizens can benefit from protests only when the ruler is weak.

²As with [Huang \(2015\)](#), the cost of repression is incorporated into the probability of surviving the protest.

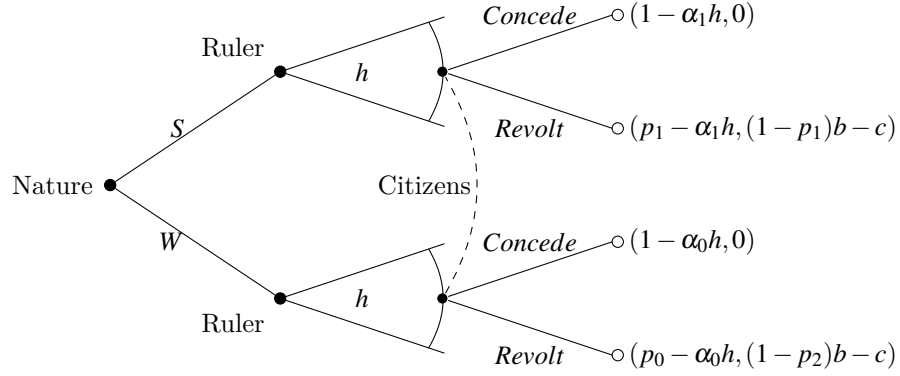


Figure 2.1: Sequence of Moves

2.3.5 Timing

The game proceeds as follows:

1. Nature determines the ruler's type; he is Strong with probability $\bar{\theta}$ and Weak with probability $1 - \bar{\theta}$.
2. The ruler decides the level of hostility towards other countries h in foreign propaganda.
3. The citizens observe the content of foreign propaganda messages and decide whether to revolt. If the citizens revolt, the cost for citizens to attend protests is c .
4. Payoffs are assigned.

Figure 2.1 depicts the sequence of the games.

2.3.6 Solution Concept

The solution concept is perfect Bayesian equilibria in pure strategies: given the ruler's choice of h , the citizens form a posterior belief $\mu(h) = \Pr\{\theta = 1|h\}$ and take an action σ_c .

2.4 Analysis

Before proceeding, let us analyze the decision of the citizens. The citizens' expected payoff is 0 if they choose to concede and $\mu(h)\{(1-p_1)b-c\} + (1-\mu(h))\{(1-p_0)b-c\}$ if they choose to revolt. Therefore, the citizens will revolt if

$$\begin{aligned} \mu(h)\{(1-p_1)b-c\} + (1-\mu(h))\{(1-p_0)b-c\} &> 0, \\ \mu(h) &< \frac{(1-p_0)b-c}{(p_1-p_0)b} \equiv \mu'. \end{aligned}$$

Note that $c \in [(1-p_1)b, (1-p_0)b]$ guarantees $\mu' \in (0, 1]$.

Lemma 1: The citizens will revolt after observing the level of hostility in foreign propaganda if and only if their posterior belief $\mu(h) < \frac{(1-p_0)b-c}{(p_1-p_0)b} \equiv \mu'$.

2.4.1 Separating equilibrium

Suppose there exists a separating equilibrium. Let h_θ denote the level of hostility toward other countries in foreign propaganda when the ruler's type is $\theta \in \{0, 1\}$. In a separating equilibrium, the citizens will know the ruler

is weak when they observe h_0 , $\mu(h_0) = 0$. Because $\mu(h_0) < \mu'$, the citizens will revolt with certainty. In this case, the weak ruler will produce no hostile foreign propaganda ($h_0 = 0$) to maximize his payoff.

What should h_1 be? First, h_1 should be large enough to forbid the weak type ruler to imitate. For the weak ruler, there exists an h_0^* that satisfies

$$1 - \alpha_0 h_0^* = p_0.$$

That is, the level of hostile foreign propaganda h_0^* makes the weak government indifferent between producing no hostile foreign propaganda, which makes the citizens recognize it is weak, and producing that level of hostile foreign propaganda, which misleads the citizens into believing it is strong. To deter citizens from revolting, the strong type ruler should produce hostile foreign propaganda with a level greater than or equal to h_0^* , which implies $h_1 \geq \frac{1-p_0}{\alpha_0}$. Hereafter, suppose $h_1 \geq \frac{1-p_0}{\alpha_0} \equiv h_1^*$ and assume the citizens' posterior beliefs are

$$\mu(h) = \begin{cases} 1 & \text{if } h \geq h_1^*, \\ 0 & \text{if } h < h_1^*. \end{cases}$$

Note that this satisfies the consistency of beliefs and fully specifies off-the-path beliefs. Second, for the strong ruler to adhere to this separating strategy, the cost of hostile foreign propaganda for a strong ruler should not exceed the risk of being overthrown, which requires $h_1 \leq \frac{1-p_1}{\alpha_1}$. When $\frac{1-p_0}{1-p_1} > \frac{\alpha_0}{\alpha_1}$, $\frac{1-p_1}{\alpha_1} < \frac{1-p_0}{\alpha_0}$, so there does not exist an h_1 that satisfies both the two conditions. When

$\frac{1-p_0}{1-p_1} \leq \frac{\alpha_0}{\alpha_1}$, there always exists at least one h_1 that satisfies $\frac{1-p_0}{\alpha_0} \leq h_1 \leq \frac{1-p_1}{\alpha_1}$, where a strong type ruler can use foreign propaganda with hostility level h_1 to signal his type to the citizens. In addition, $h_1 > \frac{1-p_0}{\alpha_0}$ fails the Intuitive Criterion because the strong ruler can always benefit from deviating to $h_1^* = \frac{1-p_0}{\alpha_0}$. Thus, we obtain the following propositions.

Proposition 1: When $\frac{1-p_0}{1-p_1} > \frac{\alpha_0}{\alpha_1}$, there is no separating perfect Bayesian equilibrium in this game.

Proposition 2: When $\frac{1-p_0}{1-p_1} \leq \frac{\alpha_0}{\alpha_1}$, there is a unique separating perfect Bayesian equilibrium that satisfies the Intuitive Criterion, in which the strong type ruler produces hostile foreign propaganda of level $h_1^* = \frac{1-p_0}{\alpha_0}$ and the weak type ruler does not produce any hostile foreign propaganda. The citizens will concede if they observe that the level of hostility in foreign propaganda is greater than or equal to h_1^* and they will revolt otherwise.

2.4.2 Pooling Equilibrium

Suppose there exists a pooling equilibrium in which both the strong type and weak type ruler produce hostile foreign propaganda of level h^* . Thus, the citizens cannot learn the ruler's type from the foreign propaganda messages and their posterior belief $\mu(h) = \bar{\theta}$. From Lemma 1, it is easy to see that when $\bar{\theta} > \mu'$, there exists a pooling equilibrium in which both the strong and weak rulers choose $h = 0$ and the citizens will concede.

Proposition 3: When $\bar{\theta} > \mu'$, there exists a pooling equilibrium in which both strong and weak rulers produce no hostile foreign propaganda and the citizens choose to concede.

When $\bar{\theta} \leq \mu'$, for the weak ruler, there exists an h_0^* that satisfies

$$\bar{\theta}(1 - \alpha_0 h_0^*) + (1 - \bar{\theta})(p_0 - \alpha_0 h_0^*) = p_0.$$

That is, the level of hostile foreign propaganda h_0^* makes the weak government indifferent between producing no such propaganda or being known as weak, where $h_0^* = \frac{\bar{\theta}(1-p_0)}{\alpha_0}$. In other words, the weak type ruler can afford foreign propaganda with a hostility level h_0^* at most. If a strong ruler can benefit from deterring protests by producing more hostile propaganda, he will have incentives to deviate from pooling strategies. This requires that for any h_1^* ,

$$\bar{\theta}(1 - \alpha_1 h_0^*) + (1 - \bar{\theta})(p_1 - \alpha_1 h_0^*) \geq 1 - \alpha_1 h_1^*.$$

By solving this inequality, we can obtain $h_1^* \geq h_0^* + \frac{(1-\bar{\theta})(1-p_1)}{\alpha_0}$. This means that the strong type ruler will always have an incentive to produce foreign propaganda with hostility level $h_1^* \in (\frac{\bar{\theta}(1-p_0)}{\alpha_0}, \frac{\bar{\theta}(1-p_0) + (1-\bar{\theta})(1-p_1)}{\alpha_0})$ to differentiate himself from the weak ruler. Therefore, a pooling equilibrium cannot hold in this game.

Proposition 4: When $\bar{\theta} \leq \mu'$, there is no pooling equilibrium in which both

strong and weak rulers produce the same level of hostile foreign propaganda.

2.5 Concluding Remarks

This chapter illustrates the hard propaganda mechanism of authoritarian foreign propaganda. I argue that a strong ruler can use foreign propaganda with high-level hostility to signal his type to domestic audience. The proposed formal model shows that this separating strategy can only exist when the *competence ratio* ($\frac{1-p_0}{1-p_1}$) is smaller than the *coup success probability ratio* ($\frac{\alpha_0}{\alpha_1}$). This threshold is more likely to be satisfied when the discrepancy in repressive capacity between strong and weak rulers is small. [Gurieiev and Treisman \(2019\)](#) pointed out that modern autocrats have significantly reduced the use of violent repression but have increased the manipulation of information for survival. In this vein, aggressive foreign propaganda can be an increasingly important tool for authoritarian rulers to manipulate their citizens' beliefs.

However, it is necessary here to clarify that the hard propaganda theory proposed in this chapter is not the only mechanism through which aggressive foreign propaganda functions. As will be shown in the following chapters, there are also other determinants of China's foreign propaganda behaviors. First, authoritarian rulers use nationalistic propaganda to reinforce the legitimacy of their regimes. For authoritarian rulers, a critical source of legitimacy is nationalism ([Downs & Saunders, 1999](#); [Razi, 1990](#); [Riabov & Riabova, 2014](#)). Antagonistic narratives in propaganda can cultivate nationalism by

constructing “bad others”. Additionally, aggressive foreign propaganda can also be the results of authoritarian bureaucratic politics. In authoritarian countries, power sharing among political elites is a fundamental problem (Svolik, 2012). Similar to the participation in a cults of personality (Crabtree et al., 2020), the political elites in the propaganda apparatus can use hostile foreign propaganda as a tool to show their loyalty to the ruler. Since crude propaganda such as “Wolf Warrior” diplomacy risks costing individual propagandists their personal reputation, heavy-handed bureaucrats can show their loyalty for future promotion.

Chapter 3

Nationalist Propaganda during the COVID-19 Pandemic

3.1 Introduction

On the last day of 2019, the World Health Organization (WHO) China office noticed that cases of viral pneumonia, later named COVID-19, were reported on the website of the Wuhan Municipal Health Commission ([World Health Organization, 2020](#)). However, the Chinese officials suggested that the cluster of cases was limited and there was no evidence that the virus spread between humans until President Xi Jinping ordered the bureaucracy to take actions to protect the citizens from the novel virus in late January ([Buckley & Myers, 2020](#)). The novel virus quickly spread throughout the world and the WHO characterized it as a pandemic on March 11, 2020. As the COVID-19 cases

and deaths increased rapidly in most countries, China’s global image suffered severe damage because of the suspected cover-up and delay on COVID-19 (Jacob, 2020). Facing the global criticism, the Chinese government ramped up its foreign propaganda activities to promote narratives favorable to China (Ogden, 2020). On the one hand, Chinese officials emphasize China’s quick and effective COVID-19 measures and China’s medical aid to other countries, and on the other hand, China spent much effort to rebut the Wuhan lab conspiracy theory (Hagström & Gustafsson, 2021; Jaworsky & Qiaoan, 2021).

China’s foreign propaganda activities have received considerable scholarly attention in recent years (Brady, 2015; Brazys & Dukalskis, 2020; Edney, 2014; Shambaugh, 2015; Zhang et al., 2021). Among China’s foreign propaganda tools, state media plays a vital role in spreading information (Brazys & Dukalskis, 2020; Cheng et al., 2016; Molter & DiResta, 2020). As part of the “media going global” policy, China’s main state-owned media have built multiple language editions and been disseminating China’s messages to almost all over the world (Yang, 2017; Zhang, 2010). The expansion of Chinese state media has raised the concerns of the US government, and 15 China-based media companies had been designated as *foreign missions* by the US as of October 2020 (Pamuk & Brunnstrom, 2020). Despite the increasing attention from both researchers and practitioners, there is a relative paucity of empirical research on the current prevalence of Chinese foreign propaganda.

The aim of this chapter is to systematically examine China’s COVID-19 propaganda content. By employing computational text analysis methods, I

attempt to illuminate how Chinese state-owned media frame the COVID-19 to a global audience. It has been argued that China's foreign propaganda is used for the purpose of building national cohesion and domestic legitimacy (Edney, 2015). Specifically, the China's propaganda apparatus views soft power as a potential tool to enhance CCP's legitimacy so that nationalism is incorporated in China's foreign propaganda. In times of crisis such as the COVID-19 pandemic, nationalist propaganda is likely to be used to maintain regime legitimacy.

3.2 From Public Diplomacy to Foreign Propaganda

Communication among countries has long been a topic of great interest in the study of International Relations (IR). Scholars have used concepts such as soft power (Nye, 1990), public diplomacy (Gilboa, 2008), foreign propaganda (Van Herpen, 2015), disinformation (Lanoszka, 2019), and strategic narratives (Miskimmon et al., 2014) to investigate how countries seek to expand their influence across borders. Public diplomacy and foreign propaganda are the two most popular terms that are used to study China's efforts to influence international public opinion (Brady, 2015; d'Hooghe, 2014; Edney, 2012; Hartig, 2015; Wang, 2008a). While many scholars use public diplomacy and foreign propaganda interchangeably, Chang and Lin (2014) peddled the nuance between the two notions: foreign propaganda is often blatant manipulation

of news media by governments, but public diplomacy is more sophisticated and with a more positive connotation.

China's external propaganda activities are determined by the Party-state's grand strategy (Wang, 2022). From the late 1980s, the Chinese leaders gradually adopted a new guiding principle of foreign policies, which was later summarized as "hide your capabilities and bide your time" (*taoguang yanghui*) (Chen & Wang, 2011). Under this principle, China intentionally maintained a low profile in international affairs and focused on domestic economic growth (Goldstein, 2020; Zhao, 2010). In Jiang Zemin and Hu Jintao's period, China's influence operations was guided by this grand strategy with aims to shape a friendly international environment (d'Hooghe, 2014; Wang, 2008a). The key characteristics can be embodied in three aspects. First, China tried to promote a positive self-image by emphasizing its splendid culture and great economic achievements while avoiding controversial political topics (Hartig, 2018; Zhou, 2022). Second, although the Chinese government played a main role in public diplomacy, a variety of non-state actors such as intellectual elites and NGOs complemented China's voices and brought more legitimacy to China's public diplomacy (d'Hooghe, 2014; Kurlantzick, 2007). Third, China's public diplomacy is led by the State Council Information Office (SCIO), who defines the messages to be propagated abroad (Shambaugh, 2013, p. 222). Although the Ministry of Foreign Affairs is an important organ to implement China's public diplomacy policies, its role is limited because of its weak position in China's political system (d'Hooghe, 2014, p. 139). China's "hide

and bide” approach had not been fundamentally changed until Xi Jinping ascended to China’s new top leader in 2012 ([Jerdén, 2014](#); [Johnston, 2013](#)).

Under Xi Jinping, China’s domestic politics and foreign policies changed dramatically ([Pei, 2018](#); [Shirk, 2018](#)). China no longer sticks to the lying low strategy but aims at undermining the liberal international order ([Kim & Kim, 2022](#); [Pei, 2018](#)). These changes are reflected in China’s information operations in several ways. First, China’s diplomatic messages become increasingly aggressive and hostile in response to Xi’s call for “daring to fight” in international stage ([Martin, 2021](#); [Sullivan & Wang, 2022](#)). Second, the Chinese Communist Party (CCP) has strengthened its leading role in public diplomacy, and the room for free expression has been significantly encroached ([d’Hooghe, 2021](#); [Zhao, 2019](#)). Third, the Chinese diplomats and state media journalists have been increasingly active on social media platforms that have been banned in China ([Huang & Wang, 2019](#); [Shumba, 2021](#)). The messages disseminated by those individuals are often aggressive and bold, which has been dubbed “wolf warrior diplomacy”.

In short, China’s external communication practices has degenerated from sophisticated public diplomacy to bold foreign propaganda after Xi took power in late 2012. The COVID-19 crisis provides a unique opportunity to examine China’s foreign propaganda activities because international public opinion toward China has deteriorated quickly after the outbreak of the pandemic and the Chinese government has made huge propaganda efforts to improve its national image ([Jacob, 2020](#); [Verma, 2020](#)).

3.3 Theoretical Expectations

Scholars have long recognized the importance of domestic context in shaping China's foreign propaganda practices. Shirk (2008, p. 8) argues that the number one priority for China's leaders is always the preservation of Communist Party rule and international considerations never come first. In China's foreign propaganda practices, there exists a dilemma that promoting diverse views to appeal to foreign audiences would hurt the consistency of China's domestic propaganda, which is important for the CCP to maintain the regime (Edney, 2014). In times of crisis, the Chinese state media often use dichotomous frames to construct a good China and bad others (Molter & DiResta, 2020; Xia et al., 2022; Zhang et al., 2021). By doing so, the Chinese government can shift people's blame from China's political system onto external factors.

Protecting the Chinese people from disease, disaster, crime, and terror is one of the major source of CCP's legitimacy (Weiss & Wallace, 2021). However, the CCP made a series of mistakes at the early stage of the COVID-19 pandemic. First, the Chinese government had not reacted to the spread of COVID-19 quickly enough. The novel coronavirus might have been circulating in Wuhan as early as December 1, 2019 (Boghani, 2021). However, due to the inbuilt limitations of China's public health system, no serious precautionary measures were taken by the Chinese government for more than one month, which wasted precious time for controlling the virus. Second, eight people

who warn people about the growing epidemic were punished by Wuhan police for “spreading rumors” on January 1, 2020, and the Chinese state media widely publicised this punishment (Zhuang, 2020). Doctor Li Wenliang, one of the eight punished people, die on February 7 after getting infected with COVID-19. Li’s death invoked an explosion of anger towards the authorities among ordinary Chinese people. Third, unlike the SARS crisis in 2003, China did not accept the help from the US and WHO (McNeil Jr & Kanno-Youngs, 2020). Also, China delayed to provide information on COVID-19 to the WHO, which caused complaints from the latter (The Associated Press, 2020). China’s recalcitrance to international cooperation makes it difficult to trace the origins of COVID-19.

A public health crisis has the potential to become a political legitimacy crisis (Christensen & Lægreid, 2020; Meadows et al., 2022; Yang, 2018). The outbreak of COVID-19 and China’s malfeasance had put the CCP in a situation of such crisis. To maintain government legitimacy, the Chinese state media employed a variety of strategies to communicate with the citizens. Xia et al. (2022) found that the Chinese state media highlighted the heroic deeds of the Chinese front-line medics and the poor performance of the US to demonstrate China’s success in fighting against COVID-19. Meadows et al. (2022) showed that bolstering government legitimacy was a significant factor that motivated Chinese state media’s COVID-19 reports. Schneider (2021) examined China’s visual propaganda during COVID-19 and found that China’s leadership legitimated itself by inciting people’s nationalistic

emotions.

As aforementioned, China’s foreign propaganda has to be consistent with domestic propaganda in order to maintain one “official truth”. Thus, the hypotheses of this study is as follows:

Hypothesis 1: *In China’s foreign propaganda practices, state media uses a positive frame to report COVID-19 in China.*

Hypothesis 2: *In China’s foreign propaganda practices, state media uses a negative frame to report COVID-19 in the US.*

3.4 Data and Methods

To examine China’s COVID-19 propaganda message, I applied computational content analysis methods to the articles published by the Chinese state media. Compared to manual content analysis, computational methods enable researchers to discover the pattern of topics or sentiments from large-scale texts with minimal costs (DiMaggio, 2015; Hilbert et al., 2019; van Atteveldt et al., 2019). In this article, I combined unsupervised and semi-supervised machine learning methods to explore the COVID-19 related messages from the Chinese state media. These methods have been shown to produce valid and reliable results in previous social science research (e.g. Bowler et al., 2022; Bright et al., 2020; Maier et al., 2018; Trubowitz & Watanabe, 2021; Von Nordheim et al., 2018; Watanabe & Zhou, 2022; Zhou, 2022).

3.4.1 Data Collection

This study analyzed the coverage of COVID-19 by three English-language Chinese state media, Xinhua News Agency, *People’s Daily Online* English edition, and *Global Times*. The Xinhua News Agency is China’s largest and most influential state press agency. It has been evolved to one of the largest news agencies in the world while its status as a government propaganda apparatus has remained unchanged (Hong, 2011). *People’s Daily Online* is the official website of *People’s Daily*, which is an official newspaper of the Central Committee of the CCP. The content in *People’s Daily* is considered to be the viewpoints of the Chinese leadership (Wu, 1994). The primary task of *People’s Daily Online* is to disseminate authoritative information from China to the world through a variety of language editions.¹ *Global Times* is a daily tabloid newspaper, which is famous for its nationalistic perspectives and pro-government tones. Although *Global Times* is under the auspices of the *People’s Daily*, its language is much more hawkish and aggressive than China’s typically stodgy state news (Huang, 2016).

For this study, I built a novel text corpus of news articles in the three Chinese media to examine China’s COVID-19 foreign propaganda strategies. More specifically, I searched the news articles containing the word “coronavirus” or “COVID” (case insensitive) from Xinhua General News Service, *People’s Daily Online* English edition, and *Global Times* during the period from 1 January 2020 to 31 December 2021 in the Lexis Advance database and

¹See <http://en.people.cn/n3/2018/0706/c90828-9478507.html>.

downloaded the full texts of all these articles.² In total, 105,144 articles from Xinhua General News Service, 18,651 articles from *People's Daily Online* English edition, and 6,727 articles from *Global Times* are collected. Figure 3.1 shows the number of articles retrieved from each source by day. As can be seen, Xinhua News Agency publishes hundreds of articles every day, which report the situation of COVID-19 pandemic around the world.

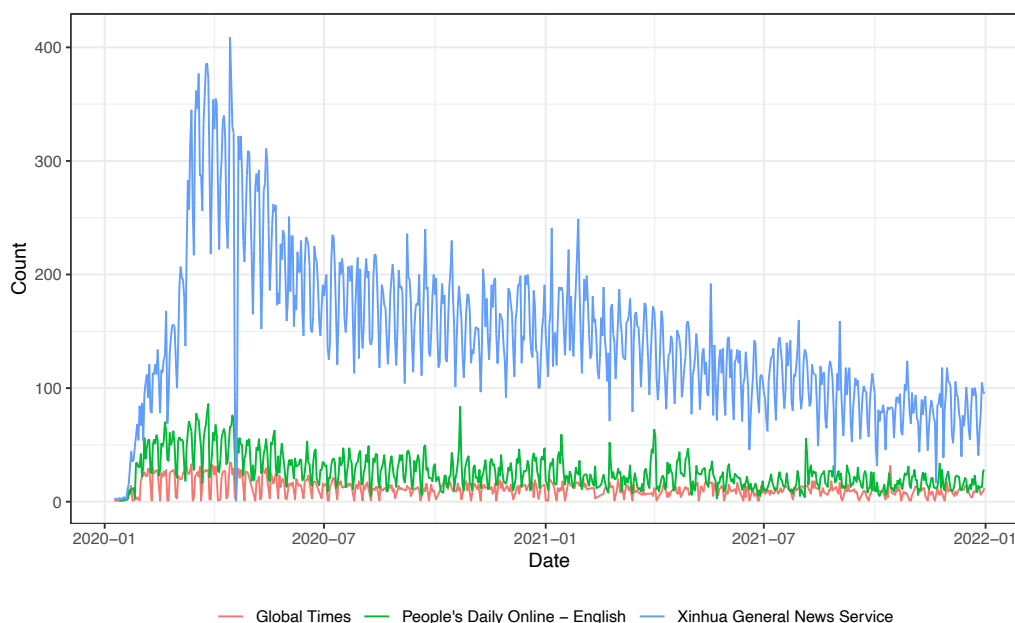


Figure 3.1: Number of COVID-19 related articles in each media

²According to the WHO, COVID-19 was first noticed by the WHO's country office in China from the website of the Wuhan Municipal Health Commission on December 31, 2019. See <https://www.who.int/news/item/29-06-2020-covidtimeline>. Nonetheless, the first mention of the new-type coronavirus in China's English-language state media appeared on January 9, 2020.

3.4.2 Geographical Classification

To examine China’s COVID-19 narratives on different countries, I first identified the country that is most likely to be associated with each of the news articles. For this task, I applied the Newsmap model, which is an automated geographical news classifier developed by [Watanabe \(2018\)](#), to the corpus. Newsmap is a semi-supervised machine learning method that only need a small dictionary as supervision, and it can achieve more accurate classification than simple keyword matching method. Figure 3.2 shows the number of articles of top 5 reported countries by month. As expected, the number of articles about China is much larger than that of any other country in China’s foreign propaganda media.

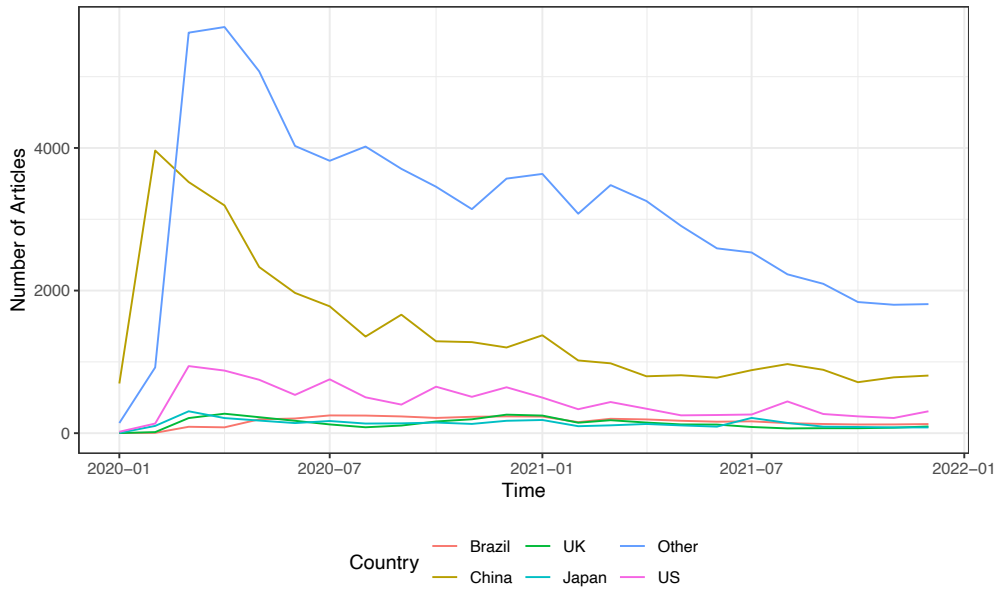


Figure 3.2: Number of articles of top 5 reported countries

3.4.3 Computational Framing Analysis

Framing analysis is one of the most commonly used methods to study media content (Chong & Druckman, 2007; Entman, 1993; Pan & Kosicki, 1993; Scheufele, 1999; Vliegenthart, 2012). Recent advances in computational methods have facilitated investigation of media frames from several aspects. First, by using computational methods, scholars can achieve a previously impossible task—the systematic analysis of large-scale textual data (Grimmer & Stewart, 2013, p. 268). Thanks to the continuously increasing power of computers, researchers can apply computational framing analysis models to millions of news articles with an affordable cost. Second, computational methods can help us learn the unobservable quantities behind the texts (Benoit, 2020, p. 465). In communication studies, numerous computational models have been used to identify media frames (Guo et al., 2022; Nicholls & Culpepper, 2021). Third, computational methods can let the data speak for themselves free of human bias (Kitchin, 2014, p. 4). In most cases, computational framing analysis is easier for researchers to reproduce than traditional human coding methods.

In this study, I first conducted Latent Dirichlet allocation (LDA) topic modeling as suggested by Guo et al. (2022). LDA topic model is an unsupervised machine learning method which is increasingly being used to extract the latent thematic structure of large-scale texts in social sciences. The purpose of topic modeling here is to obtain a big picture of the information in the data. Then I conducted computational framing analysis using the Latent

Semantic Scaling (LSS) model. LSS is a semi-supervised text scaling model which locates documents on various pre-defined dimensions (Watanabe, 2021). Compared to supervised methods such as Random Forests (Breiman, 2001) and Support Vector Machines (Cortes & Vapnik, 1995), LSS does not require a large manually coded training set but only needs a small set of user-provided seed words, which makes it considerably less expensive. In this study, I use the LSS model to detect the positive and negative framing of COVID-19 news in the Chinese state media.

3.5 Results

3.5.1 Topics of COVID-19 News

To obtain a preliminary understanding of the data, I applied LDA topic models to the corpus. The output of a topic model is the number of topics where each topic is represented by a bundle of words that are most likely to be co-occurred in one document. Because topics are often discussed by using specific words, we can manually give each set of words a topic label. When fitting the LDA model, we have to choose the number of topics. However, there is no perfect method to make this decision. Researchers usually fit topic models with different topic numbers and then check the topic coherence for each (e.g. Grimmer, 2010; Jacobs & Tschötschel, 2019; Pak, 2019). I created LDA models with 5-15 topics and found the model with 10 topics is of the best quality.

Table 3.1 shows a summary of topics generated by the LDA topic model with 10 topics, including manually labeled semantic meanings. We see that the Chinese state media covered various aspects of the pandemic. The Chinese state media reported the situation of COVID-19 all over the world (Topic 3). However, only two countries have their independent topics—China (Topic 2, 7, and 10) and the US (Topic 9). Also, the financial and economic impacts are important topics in Chinese media’s COVID-19 news (Topic 1 and Topic 6). Furthermore, there is the topic with concern of the Tokyo Olympic Games during the pandemic.

Table 3.1: 10 Topics in COVID-19 News

Topic	Words	Label
1	billion, growth, quarter, bank, market, financial, points, rate, month, sector	Finance
2	xi, wang, meeting, relations, trade, future, nations, important, political, un	China's foreign relations
3	hong, kong, imported, mainland, discharged, tally, india, died, asymptomatic, transmitted	COVID-19 around the world
4	games, iran, team, olympic, turkey, raising, recoveries, israel, tokyo, league	Tokyo Olympic
5	vaccination, doses, vaccinated, population, research, testing, variant, use, experts, clinical	COVID-19 vaccine
6	market, trade, products, production, companies, industry, company, business, yuan, services	Economic impact of COVID-19
7	wuhan, students, online, school, hubei, workers, like, education, hospital, tourism	COVID-19 in Wuhan
8	lockdown, restrictions, britain, prime, travel, emergency, weeks, european, italy, figures	COVID-19 measures
9	us, trump, washington, media, political, house, times, american, white, biden	COVID-19 in the US
10	africa, african, supplies, un, masks, continent, agency, food, humanitarian, nations	China's COVID-19 aid

3.5.2 Positive China and Negative Others

To detect the positive and negative frames in the news, I applied the LSS model to the corpus. The LSS model can generate sentiment scores for each word in the corpus based on their proximity to the positive and negative seed words. Figure 3.3 shows the distribution of sentiment scores and word frequencies of words in the corpus, with a sample words highlighted. Words close to the left side are more negative and words close to the right side are more positive. What stands in the figure is that in contrast to praising words for Xi's strong leadership, Trump appears in the upper-left corner, which means he is frequently criticized for his failure on COVID-19.

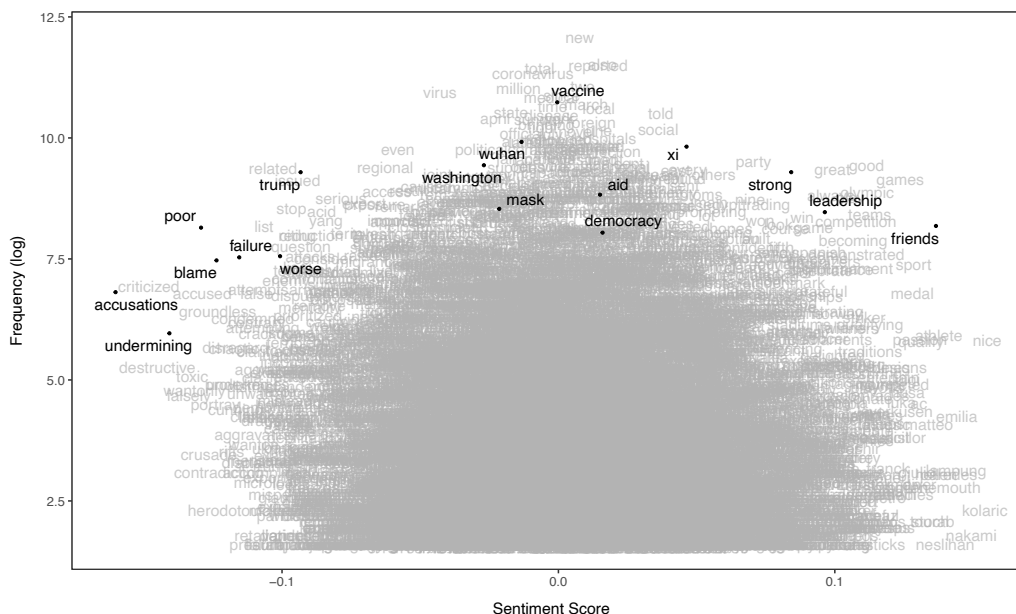


Figure 3.3: Distribution of Sentiment Scores and Word Frequencies

Next, I investigated the sentiment scores of news articles related to China.

and the US. Figure 3.4 presents the smoothed average of sentiment scores. As can be seen, the Chinese state media framed the US pandemic situation using a much more negative tone than that of China. This is consistent with Chinese media’s domestic propaganda strategy that highlighting the poor performance of the US in the fight against COVID-19 (Xia et al., 2022).

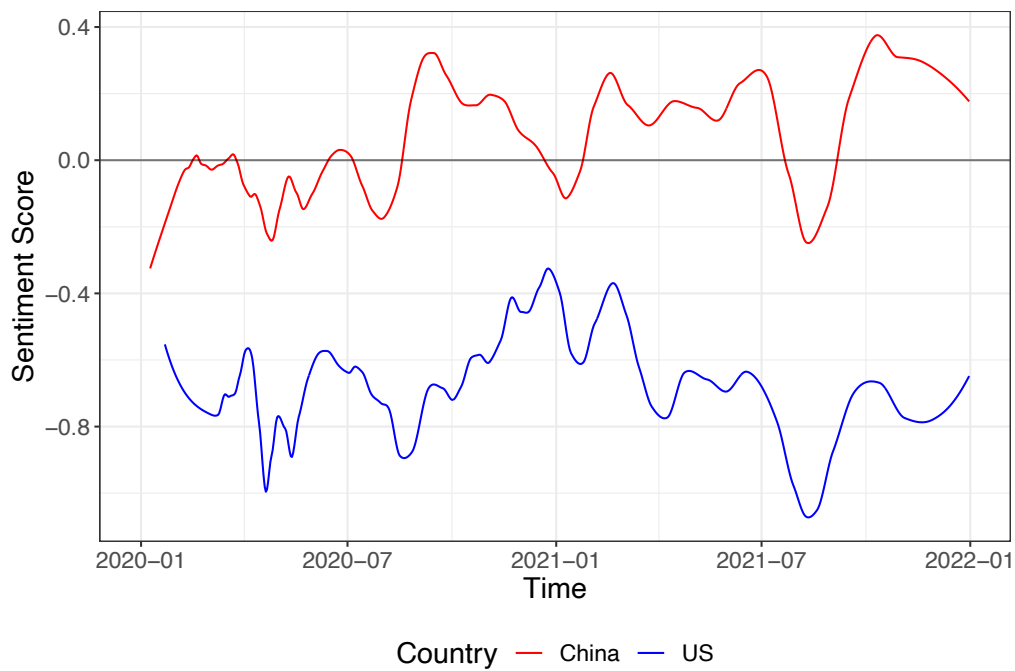


Figure 3.4: Tone of COVID-19 news of China and the US

3.6 Concluding Remarks

In this chapter, I explored how China’s English-language state media report the COVID-19 pandemic. State media is a major instrument for the Chinese

government to spread messages abroad (Brazys & Dukalskis, 2020; d’Hooghe, 2014). When COVID-19 turned to a global pandemic, the CCP realized that the international public opinion had become increasingly hostile to China. Since the CCP is not able to exert censorship to foreign media as it does at home, it had to fight back against the criticisms by propagating its own narratives of COVID-19. This chapter has investigated how the Chinese state media report the COVID-19 pandemic targeted at English-speaking audiences. The results show that Chinese state media published hundreds of thousands of news articles related to the pandemic during 2020 and 2021. The most focused country is undoubtedly China, however, the US-related pandemic news also consists a large part of Chinese media’s pandemic report. While China’s COVID-19 stories are framed very positive, the pandemic in the US is reported in a negative tone.

These results are consistent with the nationalism and legitimacy mechanism proposed in this dissertation. As previous studies have shown, while wolf warrior diplomacy often backfires abroad, it is very popular among the Chinese audience (Sullivan & Wang, 2022; Zhu, 2020). To evoke nationalist sentiments at home, the Chinese propaganda apparatus employed anti-foreign narratives both internally and externally. Consequently, China’s foreign propaganda practices damaged its relationships with other countries especially the United States.

The contribution of this study is twofold. First, this study provides the first systematic analysis of COVID-19 news coverage by the English-

language Chinese state media. As various computational methods have been developed for large scale text analysis, social scientists are increasingly using those methods to study media content. However, there is little published computational communication research on Chinese propaganda. It is hoped that this research will facilitate the application of computational methods in propaganda studies. Second, the findings of this research shed new light on China's international messaging. This study provides strong empirical confirmation that China has adopted a more aggressive and assertive approach to international affairs under Xi's leadership. Before Xi Jinping, the Chinese media used a reactive and defensive strategy of international communication by producing positive content about China ([Rawnsley, 2015a](#)). The hostility toward the US in Chinese state media indicates a transition of China's foreign policy.

Chapter 4

The Undiplomatic Diplomats on International Social Media

4.1 Introduction

Social media is an increasingly important tool for public diplomacy and international propaganda ([Duncombe, 2017](#); [Golovchenko, 2022](#); [Ingenhoff et al., 2021](#)). Although the world's most influential social media such as Twitter, Facebook, and Youtube are blocked in China, the Chinese state media have long been using those platforms for international propaganda ([Jia & Li, 2020](#); [Molter & DiResta, 2020](#); [Zhang et al., 2021](#)). Contrast to the active role of state media, the Chinese diplomats had not been active on international social media until recent years. By the end of 2018, there were only less than twenty Chinese diplomat accounts on Twitter ([Huang & Wang,](#)

2019).

In this chapter, I argue that China's wolf warrior diplomacy is the results of Chinese bureaucratic politics. Before Xi Jinping became China's president, the Chinese Foreign Ministry had suffered from a relatively low status in China's political hierarchy (Jakobson & Manuel, 2016; Sun, 2017; Zhao, 2022). The CCP leaders control the foreign policy decision-making tightly, and the Chinese diplomats are held to stringent party discipline. Under Xi Jinping, China's external propaganda strategies have experienced structural changes and the foreign affairs system is playing a more prominent role in external propaganda (Wang, 2022). Facing the growing criticism on human rights violations in Xinjiang, Hong Kong national security law, and the responsibility of the COVID-19 pandemic from Western countries, the Chinese diplomats opened Twitter accounts to fight back in droves since late 2019.

This chapter examines how the Chinese diplomats use social media for international propaganda. I collected all the tweets posted by the Chinese diplomat accounts and conducted topic modeling and network analysis to the data. The results show that the Chinese diplomats are engaging in a negativity campaign with the Western discourse on China under Xi's instruction of "dare-to-fight." Compared with institutional accounts, the Chinese diplomats are more willing to post anti-West messages on their personal accounts to show their willingness and ability of "fighting." Those wolf warrior records may contribute to their future promotion because the diplomats can claim credit of competency and loyalty from those behaviors. This study sheds new light

on the interaction of China's domestic politics and foreign policy.

4.2 Chinese Foreign Policy Making

4.2.1 Back to Personalist Dictatorship

China's foreign policy making process has experienced fundamental changes since the establishment of the People's Republic of China in 1949 ([Gong et al., 2009](#); [Lampton, 2001](#); [Zhao, 2022](#)). Since the Chinese foreign policy making system is highly centralized, the top leaders play a decisive role in making China's foreign policies.

In the Mao Zedong era, Mao held the ultimate authority over all important policy decisions. Before the Culture Revolution, Premier Zhou Enlai and the CCP's second-in-command Liu Shaoqi assisted Mao with the routine decisions and shared limited responsibility in the foreign affair system. Specifically, Mao decides the strategic issues; Liu is in charge of inter-party diplomacy; and Zhou is responsible for inter-government diplomacy ([Gong et al., 2009](#), p. 47). In 1966, Mao launched the Culture Revolution to "prevent the restoration of capitalism". In this political movement, Liu Shaoqi was purged from the central leadership and Zhou Enlai's authority was also undermined. Mao dominated the foreign policy decision-making and other agencies such as the other CCP leaders, the foreign ministry, and the consulting institutions became dysfunctional during this period.

After Mao's death, the second generation of CCP leaders began to reflect

on the disastrous results caused by personistic rule. Deng Xiaoping became the paramount leader, and he started to promote collective leadership in which important decisions are made jointly by a group of senior CCP leaders. In order to prevent disasters brought by arbitrary authority, CCP began to institutionalize its decision making process by establishing normative rules and procedures ([Teiwes, 2001](#)). An increasing number of actors had emerged in China's foreign policy decision making system. Overseen by the leaders in the inner circle of CCP, the Central Bureaucracies such as the Ministry of Foreign Affairs, the Ministry of Foreign Trade and Economic Cooperation, and Xinhua News Agency operate independently in foreign affairs ([Lu, 2000](#)). Jiang Zemin and Hu Jintao followed the rules of collective leadership established by Deng and further promoted the institutionalization and professionalization in foreign policy decision making ([Lampton, 2001](#); [Zhao, 2022](#)).

In 2012, Xi Jinping became the CCP General Secretary at the 18th Party Congress and he quickly concentrated political power in his hands through an anti-corruption campaign and a series of reforms in ideology, military, and stability-maintenance machine. In 2022, Xi began his third term as CCP top leader and became the most powerful Chinese leader since Mao. In Shirk ([2018](#), p. 23)'s words, "(p)ersonalistic rule is back". In foreign policy decision making, Xi established new foreign policy decision making bodies such as the State Security Commission with himself as the head. Xi's personalization of Chinese foreign policy making has resulted the Chinese foreign policy

bureaucrats' competition in loyalty rather than professionalism in the foreign policy stage (Zhao, 2022, p. 9). Since Xi has repeatedly required the CCP cadres to display “fighting spirit”, the Chinese diplomats became actively conduct wolf warrior diplomacy to show their loyalty to Xi Jinping.

4.2.2 The Enlarged Role of Foreign Affairs System

One of the most important characteristics of China's diplomatic system is that diplomacy is overseen by the Party (*dangguan waijiao*) (Zhao & Gao, 2015, p. 39). Under this principle, the foreign policy decision-making power is highly concentrated in a small group of party leaders, and the executive departments of diplomacy, mostly the Ministry of Foreign Affairs, have limited authority. The status of China's foreign affairs system changes in terms of the top diplomat's rank in the Party. Except Zhou Enlai's concurrent holding of foreign minister, the heads of China's foreign affairs system have never served as a member of the Politburo Standing Committee of the CCP. During 1998-2017, the top officers of the foreign affairs system were not even a member of the Politburo, which consists of the 25 most powerful politicians of the PRC.

In contrast, the propaganda system plays a central role in Chinese politics (Brady, 2009a; Creemers, 2017; Shambaugh, 2007). In the recent 20 years, the chief officer of the propaganda system has always been a member of the Politburo Standing Committee of the CCP. Foreign propaganda is part of the propaganda system's work. The State Council Information Office (SCIO), which is the public face of CCP's External Propaganda Leading Group, plays

an oversight and coordinating role in China's foreign propaganda. Compared with the Central Foreign Affairs Office (CFAO), which is the front organ of CCP's Foreign Affairs Leading Group, SCIO is equipped with a much larger staff, a considerably larger budget, and a great deal more bureaucratic clout ([Shambaugh, 2013](#), p. 221).

Until recent years, the Chinese state media, overseen by CCP's propaganda system, is the major messenger of Chinese propaganda. Since the diplomatic authority is highly centralized in the Party, the Chinese diplomats are required to maintain the Party's discipline and confidentiality and not to express their own opinion ([Zhao & Gao, 2015](#), p. 42). However, things have changed since Xi Jinping became China's top leader. In 2016, Zhao Lijian, who was a counselor at the Chinese Embassy in Islamabad, engaged in a Twitter spat with a Pakistani journalist who criticized China's China-Pakistan Economic Corridor project ([India TV, 2016](#)). This is one of the earliest cases that a Chinese diplomat uses his personal social media account to debate with foreigners. Since then, Zhao has posted combative tweets against criticism of China on a daily basis. One of the most famous is that he called the former US National Security Adviser Susan Rice "a disgrace" and "shockingly ignorant" in a Twitter debate in July 2019 ([Taylor, 2019](#)). One month after the fight with Rice, Zhao was promoted to deputy director of the Chinese Ministry of Foreign Affairs Information Department and later became the spokesperson of the foreign ministry.

Zhao's belligerent behaviors are in correspondence with Xi Jinping's

obsession with “fighting spirit”. As aforementioned, Chinese bureaucratic politics is not governmental politics but the CCP’s internal politics. China’s foreign propaganda is a concern of both China’s foreign affairs system and propaganda system, where the latter plays a primary role (Wang, 2022, p. 5). Under Xi Jinping, the role of the foreign affairs system has become increasingly important (Zhao & Gao, 2015; Zhao, 2022). To compete with the propaganda system, the Chinese diplomats are eager to show their loyalty to Xi Jinping by conducting “wolf warrior diplomacy.”

4.3 Data Collection

To examine China’s propaganda activities on social media, I collected all the tweets of by 192 Chinese diplomat accounts until July 31, 2022. The list of Twitter accounts are created based on the Alliance for Securing Democracy’s Hamilton Dashboard and revised by the author of this paper.¹ Those accounts include the official accounts of Chinese embassies, consulates, missions to international organizations, and the personal accounts of Chinese diplomats. The spokesperson of the Chinese Ministry of Foreign Affairs, Zhao Lijian, is the first identified Chinese diplomat who created a Twitter account. Zhao joined Twitter on May 2010 and has posted more than 70,000 tweets (including RTs) by the end of July 2022. Zhao also has the largest number of Twitter

¹See <https://securingdemocracy.gmfus.org/hamilton-%20monitored-accounts-on-twitter#china> for Hamilton monitored Chinese official Twitter accounts and Appendix A for the full list of Twitter accounts analyzed in this study.

followers (more than 1.7 million) among all the Chinese diplomats. Figure 4.1 shows the number of Chinese diplomat accounts on Twitter by time. By the middle of 2019, there were only less than 50 Chinese diplomat accounts on Twitter. However, the number of Chinese diplomat accounts rapidly increased to more than 150 in 2020. The total number of tweets collected is 1,041,325.

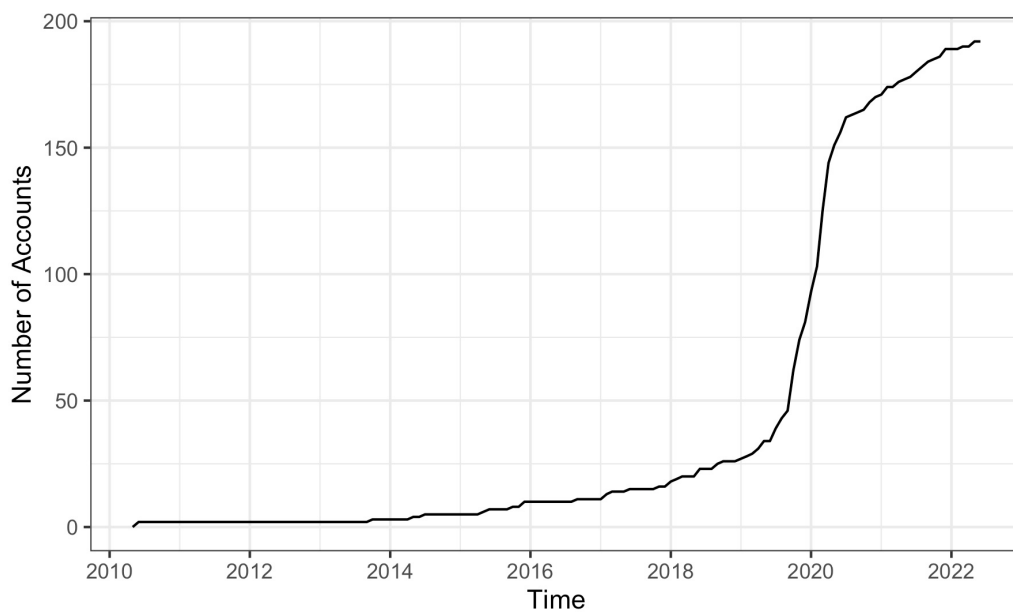


Figure 4.1: Number of Chinese Diplomat Twitter Accounts

The Chinese diplomat tweets are written in a variety of languages. Figure 4.2 presents the number of tweets by language.² English is the most frequently used language by the Chinese diplomats on Twitter, which consists approximately 67 percent of all the tweets. Chinese is the third most used language, which indicates diasporic Chinese and users from China through

²Tweet languages are detected by the Twitter API.

VPN are important targets of Chinese foreign propaganda. In this study, I investigate Chinese diplomats' propaganda activities by analyzing their English and Chinese tweets.

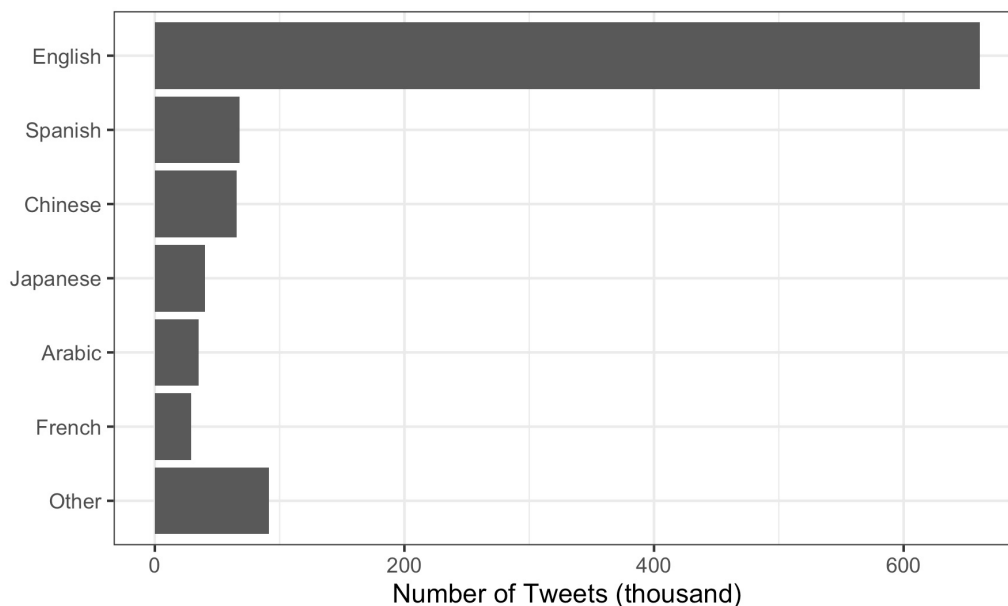


Figure 4.2: Number of Chinese Diplomat Tweets by Language

4.4 Analysis

I applied the Structural Topic Model (STM) to the data to investigate the topics in Chinese foreign propaganda. STM is an algorithm from the probabilistic topic model family, which can automatically detect the latent topics in large corpora ([Roberts et al., 2014](#)). Compared to other forms of topic models, STM's key advantage is that it allows users to incorporate covariates from metadata into the estimation of topics. Therefore, it is very

useful for estimating relationships between topics and covariates, especially for short texts such as open-ended survey responses and social media posts (e.g. Kwon et al., 2019; Tvinnereim & Fløttum, 2015; Wright et al., 2022).

To avoid the confusion caused by mixed languages, I only use the English tweets to conduct topic modeling. Three variables, retweeted times, account type, and tweeting date, are used as covariates in the STM. *Retweet times* measures the popularity or influence of a tweet. *Account type* is coded as institute for embassy, consulate, or diplomatic mission accounts, and as personal for diplomats’ personal accounts. *Tweeting date* is included to examine the temporal changes of topics in China’s foreign propaganda. Besides the covariates, we also have to decide the number of topics when fitting a STM. Unfortunately, there is not a globally best method for this decision (Grimmer & Stewart, 2013). To select an appropriate model, I fitted a number of models with different number of topics and investigated the quality of each model. First, I calculated a range of metrics such as the held-out likelihood (Wallach et al., 2009), residuals (Taddy, 2012), variational lower bound, and semantic coherence (Mimno et al., 2011) for each model. Next, I scrutinized the substantive output by the STM to check whether the generated topics are interpretable. Considering both statistical and substantive validity, I found the ten-topic STM is superior to others.³

Figure 4.3 shows the distribution of topics with manually coded labels.⁴

³The detailed statistical metrics and sample results of alternative models can be found in Appendix B.

⁴I label each topic not only by checking the most frequent and exclusive words but

As can be seen, nine of the ten topics are about China itself, including China’s scenic places (Topic 7), China’s international cooperation (Topic 1), and China’s economy under COVID-19 (Topic 8). Negative news of the US (Topic 6) is also an important topic in Chinese diplomatic tweets, which consists 12% of all the tweets. It indicates that blaming the US is one important narrative strategy used by the Chinese diplomats. Another noteworthy thing is that information of China’s political system did not emerge as a topic in the model. It means that the Chinese diplomats are not that confident to talk much about China’s political institutions.

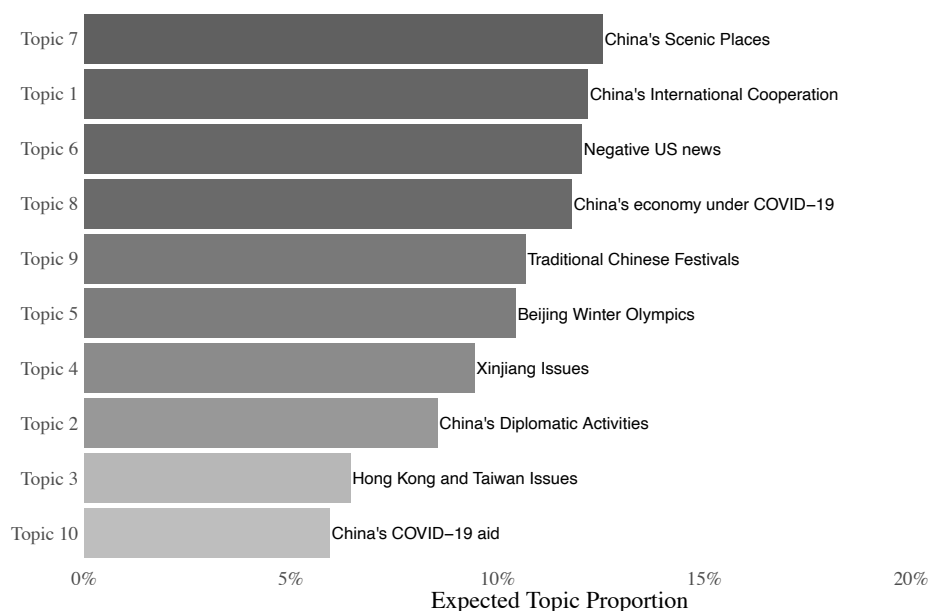


Figure 4.3: Topic distributions in Chinese Diplomat Tweets

I also examined whether a topic is more likely to be posted by an institution by reading representative tweets of each topic. The high probability words as well as example tweets of each topic can be found in Appendix C.

tional or personal account. As shown in Figure 4.4, while Topic 6 (Negative US news) is most likely to be posted by an individual diplomat, Topic 7 (China’s Scenic Places) is most likely to be posted by a Chinese embassy or consulate. This means that the Chinese diplomats want to claim credit of “wolf warrior diplomacy” for their future promotions.

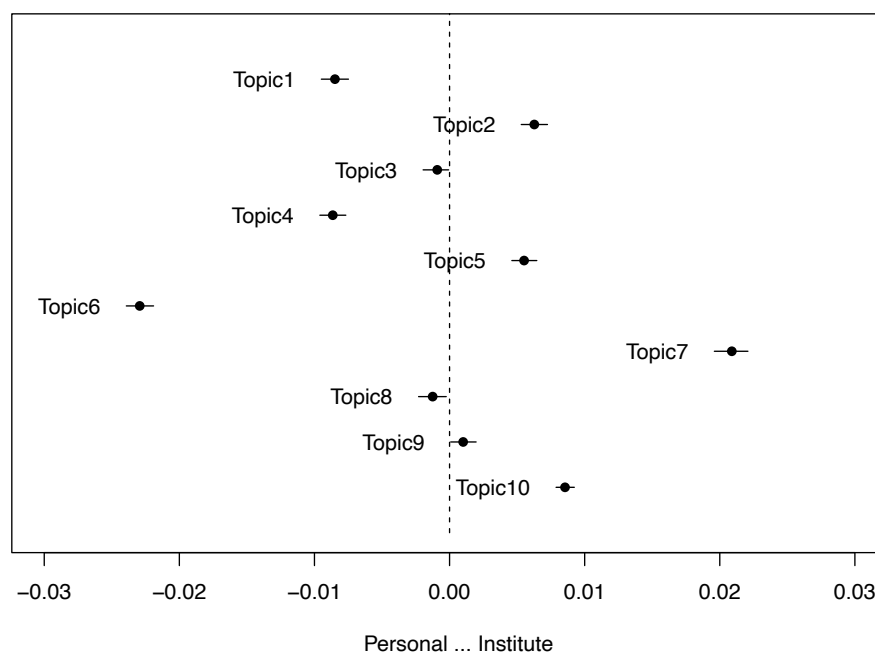


Figure 4.4: Topic distributions in Chinese Diplomat Tweets

4.5 Concluding Remarks

In this chapter, I show that the Chinese diplomats are more likely to post aggressive propaganda messages using their personal social media accounts. In doing so, they can claim credit for “daring to fight” and show their loyalty to Xi Jinping. As Xi Jinping’s consolidation of power, his personal preferences have become an important determinant of CCP’s intra-party politics. Xi’s obsession with “fighting spirit” has provided the Chinese diplomats to conduct aggressive behaviours to follow the top leader’s instruction. Although the causal relationship has not been empirically tested, wolf warrior diplomacy is accompanied with the raising status of China’s foreign affairs system. In the 20th National Congress of the CCP in 2022, the Chinese foreign minister Wang Yi, a famous wolf warrior diplomat, promoted to the Politburo member despite passing the unofficial age limit of 68.

This study was limited by the absence of Chinese diplomats data in a longer period. Since most of the Chinese diplomats opened their social media accounts in recent years, more time is needed to observe the effect of posting aggressive propaganda messages on the promotion of a diplomat. Notwithstanding this limitation, this study offers one of the first extensive examinations of Chinese diplomatic Tweets. Further research could also usefully explore China’s propaganda networks on social media and identify a more diverse group of China’s foreign propaganda actors.

Chapter 5

Conclusion

5.1 The Dilemma of China's Foreign Propaganda

In the first twenty years of the 21st century, people witnessed the rapid rise of China as a great power in international society. Although China has achieved remarkable growth in economy and military, China's national image has not been much improved ([Hartig, 2020](#); [Kurlantzick, 2007](#); [Shambaugh, 2015](#)). The Chinese leaders have recognized the importance of improving China's national image and quickly embraced the concept of soft power with great enthusiasm. In 2007, President Hu Jintao asked to “enhance culture as part of the soft power of our country” in his report to the 17th Congress of the CCP ([Hu, 2007](#)). Five years later, Hu explicitly said that “(w)e will take solid steps to promote public diplomacy as well as people-to-people and cultural exchanges, and protect China's legitimate rights and interests overseas.” ([Hu,](#)

2012). After Xi became China's paramount leader, China's soft power push was accelerated. According to a summary by CCP's official journal *Qiushi*, Xi has talked about "telling China's story well" at least 26 times on different occasions since 2012 (Qiushi, 2021).

However, on the other hand, Xi repeatedly advocated a "dare-to-fight" spirit among the CCP cadres including the Chinese diplomats (Pollard & Baptista, 2022; Wei, 2019). The "dare-to-fight" spirit is closely connected with Xi Jinping's Dream of Great Rejuvenation—to become a prosperous, respected, modernized, and a leading world power. This Chinese Dream has become a central topic in China's domestic propaganda and has been linked to the legitimacy of the CCP (Miao, 2020). To achieve the goals of the Chinese Dream, Xi calls on the Party and the Chinese people to "dare to fight" against the challenges both at home and abroad. As Gill (2022) investigated, more than 1,200 uses of the term "fight" have been identified in Xi's speeches during 2012 to 2021.

Xi Jinping's dual demand of soft power and the Chinese dream has created a dilemma for China's foreign propaganda. When the Chinese media and diplomats use aggressive language to fight against the Western criticism, China's national image would suffer a potential deterioration. This dilemma is durable for authoritarian countries especially there exists a strong leader.

5.2 Three Mechanisms of Authoritarian Foreign Propaganda

In this dissertation, I proposed three mechanisms through which China's authoritarian institutions impact its foreign propaganda behaviors.

The first mechanism is *hard propaganda*. It is argued that a dictator can signal his/her strength to the citizens by affording costly propaganda activities. Since aggressive foreign propaganda hurts a country's soft power and hinders international cooperation, producing such propaganda is at a high cost, especially for a country with strong economic ties with the external world. I demonstrated this hard propaganda mechanism using a formal model in which an authoritarian regime plays a signaling game vis-à-vis its citizens. The equilibria show that a strong ruler can produce a certain level of hostile foreign propaganda that is not affordable for the weak one to credibly convey his/her type to the citizens. By observing such a level of hostile foreign propaganda, citizens can infer that the ruler is strong and choose to concede rather than participate in protests.

The second mechanism is *nationalism and authoritarian legitimacy*. Nationalism is a powerful ideology that can bolster authoritarian legitimacy. A widely used strategy to cultivate nationalism is to depict a picture of "bad others". When authoritarian governments face crises, the propaganda apparatus often diverts responsibility to other countries by producing anti-foreign messages. Authoritarian governments also have to ensure that the content of

foreign propaganda is politically consistent with that of domestic propaganda, or the effect of domestic propaganda would be undermined. I examined the COVID-19 related content in three English-language Chinese state media during 2020-2021 using automated content analysis and the results show that the Chinese propaganda articles report China in a very positive tone and report the US in a negative tone during the pandemic.

The third mechanism is *bureaucratic politics*. In authoritarian countries, since political institutions are usually weak, the process of bureaucratic politics is more complicated than in democracies. After Xi Jinping’s ascension, the primary requirement for Chinese bureaucrats has become “to assure Xi’s ‘core’ status within the party.” ([Reuters, 2022](#)). Since Xi has repeatedly called for a “fighting spirit”, the party cadres in China’s foreign affairs system became combative so that they can compete for more resources for their department and expect higher positions for their personal career. I investigated the topics of Chinese diplomatic tweets and found that anti-US posts constitute an important part of those tweets. Especially, Chinese diplomats are more likely to use their personal accounts to post fighting messages to indicate their loyalty to Xi Jinping.

The three mechanisms are not mutually exclusive but work together in shaping China’s foreign propaganda strategies. These mechanisms root in China’s authoritarian regime, and Xi Jinping, China’s most powerful leader ever since Mao Zedong, provides the trigger for these mechanisms. First, Xi is a strong leader who can afford the cost of aggressive foreign propa-

ganda. Xi consolidated political and military power with rapid speed during his presidency. He removed his political rivals within the party through an unprecedented anti-corruption campaign and intra-party power struggle. However, even for Xi, repression by violence can be a costly option. By signaling his power through aggressive foreign propaganda, Xi can credibly convey his strength to the Chinese citizens. Second, anti-foreign propaganda can cultivate nationalism to increase regime legitimacy. Although wolf warrior diplomacy backfires abroad, it is popular among Chinese citizens. The outbreak of COVID-19 had become an acid test for Xi's governance (Nagy, 2020). To regain legitimacy, Xi's propaganda machine shifted into high gear to depict the poor performance of the US government in both domestic and foreign propaganda during the pandemic. Third, because of Xi's absolute authority, his colleagues could not effectively reverse his policy preferences. Rather, party cadres began competing in loyalty by faithfully implementing Xi's instructions. The promotion of early wolf warrior diplomats thus encouraged the Chinese diplomats to conduct aggressive foreign propaganda.

5.3 Implications for Democracies

China's assertiveness has caused the vigilance of democratic countries. In 2010, China had become one of the central issues in the US mid-term elections (Wichowsky & Weiss, 2021). Nowadays, getting tough on China remains as a rare case of bipartisan consensus in the US congress (Dominguez, 2022; John-

son, 2022). Some scholars also worry about China's challenge to democracy and the liberal international order (Brady, 2015; Diamond, 2020; Nathan, 2015). However, many of those arguments get the challenge from China wrong. Although the CCP welcomes democratic backsliding abroad, the primary purpose of its activities is not to undermine democracy or spreading authoritarianism but to secure its leadership in China (Weiss, 2019).

In this dissertation, I argue that China's foreign propaganda is not designed to persuade the international audience but to help maintain the CCP's rule in China. If China's real goal is to export its governance model, the strategy should be using soft propaganda to attract the audience. However, aggressive foreign propaganda such as wolf warrior diplomacy has little international appeal. The crude and heavy-handed propaganda messages are more likely to deteriorate China's international image rather than to improve it. Even in China, the practices of wolf warrior diplomacy have been questioned (Daily Sabah, 2021).

Nonetheless, China's propaganda activities have harmed the information environment, which is important for the healthy functioning of democracy. During the COVID-19 pandemic, the Chinese state media and diplomats repeatedly spread conspiracy theories that the novel virus originated from the US (CGTN, 2021; Ministry of Foreign Affairs of the People's Republic of China, 2021). For the Xinjiang internment camps the Chinese media affirmed that those are vocational education and training centers for the good of Uyghurs (China Daily, 2019). When pro-democracy protests happened in

Hong Kong, the Chinese government claimed that the protests are orchestrated by foreign forces in order to undermine CCP's leadership in China (Myers, 2019). A recent experimental study has shown that certain groups of German citizens are vulnerable to those kind of foreign anti-mainstream propaganda (Mader et al., 2022).

In order to successfully respond to China's challenges, it is important to understand the motives behind its actions. The mechanisms proposed in this dissertation show that China's aggressive propaganda does not necessarily mean its ambition to undermine democracy and the liberal international order. Thus, containment should not be the right response. As Weiss (2019, p. 102) correctly pointed out, the best response to China's challenges is to "make democracy work better".

5.4 A Call for Future Research

This research has thrown up many questions in need of further investigation.

First, it would be interesting to empirically test the hard propaganda mechanism. Using a survey experiment, (Huang, 2015) shows that domestic hard propaganda worsened Chinese people's satisfaction with the government but at the same time reduced citizens' willingness to protest. Different to domestic hard propaganda, the cost of foreign hard propaganda is not producing such propaganda per se but the potential backfire from other countries. Scholars could field a survey experiment to test whether the

citizens can recognize the signals in aggressive foreign propaganda.

Second, further research might explore the activities of other China state-affiliated actors on international social media. Although state media and diplomats are the most prominent propaganda actors, it has been revealed that there exist inauthentic pro-China networks on social media ([Carmichael, 2021](#); [Myers et al., 2022](#)). Since those fake accounts are supposed to be bought by the Chinese government, analyzing the activities of those accounts can enhance our understanding of Chinese foreign propaganda.

Third, more research is required to examine the impact of Chinese propaganda among the foreign public. The openness of democratic societies allows authoritarian propaganda to spread with few obstacles. Previous studies have shown that people who mistrust the government, believe in conspiracy theories, or are generally disconnected from politics are particularly vulnerable to authoritarian foreign propaganda ([Mader et al., 2022](#)). It would be interesting to extract narratives from China's propaganda messages and examine which kinds of narratives are more persuasive and which ones are likely to backfire.

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Appendix A

List of Chinese Diplomat Twitter Accounts

Table A.1 presents the full list of Chinese diplomat Twitter accounts investigated in this research.

Table A.1: Chinese Diplomat Accounts on Twitter

Country	Type	Handle	Created	Followers	Tweets	Verified
Afghanistan	Ambassador	@ChinaEmbKabul	2017-01-30	25665	1994	FALSE
Albania	Embassy	@ChinaembassyT	2019-04-29	2975	814	FALSE
Angola	Embassy	@ChinaEmbAngola	2019-10-24	3530	2900	TRUE
Antigua and Barbuda	Embassy	@ChinaEmbAntigua	2020-04-08	863	317	FALSE
Argentina	Embassy	@ChinaEmbArg	2020-03-17	8759	1710	TRUE
Australia	Consulate	@ChinaConSydney	2020-04-24	7661	5691	TRUE
Austria	Ambassador	@li_xiaosi	2019-09-05	48648	7386	TRUE
Austria	Embassy	@chinaembaustria	2020-01-30	6350	4795	TRUE
Barbados	Ambassador	@YXiusheng	2020-04-01	6877	7081	TRUE
Belarus	Embassy	@ZhongBai2020	2020-02-10	5959	825	TRUE
Belgium	Ambassador	@ChinaAmbBelgium	2019-12-01	8712	1573	TRUE
Bolivia	Consul General	@WangJialei4	2020-01-30	3237	3224	FALSE
Bolivia	Consulate	@ConsuladoCHNSC	2020-01-21	1748	1216	FALSE
Brazil	Ambassador	@WanmingYang	2015-11-04	88765	2803	TRUE
Brazil	Embassy	@EmbaixadaChina	2018-05-03	92812	4263	TRUE
Brazil	Consulate	@ConsulChinaRJ	2019-12-10	2330	194	TRUE
Brazil	Consulate	@CGChinaSP	2020-06-11	793	405	TRUE
Bulgaria	Ambassador	@AmbDongXiaojun	2020-05-27	6342	2149	FALSE
Burundi	Embassy	@AmbChineBurundi	2019-06-25	3749	567	TRUE
Cameroon	Embassy	@AmbChineCmr	2019-12-16	2755	1403	TRUE

Canada	Embassy	@ChinaEmbOttawa	2014-06-12	12027	5311	TRUE
Canada	Consulate	@ChinaCGCalgary	2019-12-10	3384	2703	TRUE
Chad	Embassy	@ambchinetchad	2019-09-26	4955	4306	TRUE
Chile	Embassy	@ChinaEmbajada	2019-12-10	1780	481	FALSE
Colombia	Embassy	@china_embajada	2020-02-07	5313	1256	TRUE
Croatia	Embassy	@ChinaEmbCroatia	2021-11-26	551	85	FALSE
Cuba	Ambassador	@MahuiChina	2019-10-24	44526	16252	TRUE
Cuba	Embassy	@EmbChinaCuba	2020-03-03	4266	1685	TRUE
Cuba	Counselor	@yiwen_zh	2015-11-20	2098	2354	FALSE
Cyprus	Ambassador	@AmbassadorLiu	2020-11-02	1584	821	TRUE
Cyprus	Former Ambassador	@AmbassadorHuang	2020-02-27	2597	321	FALSE
Czech Republic	Embassy	@ChineseEmbinCZ	2020-02-24	3459	4775	TRUE
Democratic Republic of the Congo	Ambassador	@Amb_ZhuJing	2020-01-09	14209	1854	TRUE
Democratic Republic of the Congo	Embassy	@AmbCHINEenRDC	2020-01-09	12674	1713	TRUE
Denmark	Embassy	@ChinaInDenmark	2017-05-10	1883	2859	TRUE
Djibouti	Embassy	@ChineAmbDjibout	2020-04-16	2699	1237	TRUE
Dominican Republic	Ambassador	@EmbZhangRun	2018-12-25	19593	5819	TRUE
Dominican Republic	Embassy	@ChinaEmbajadaRD	2019-04-25	7377	2211	TRUE
Dominican Republic	Staffer	@luisxu9	2019-01-13	2003	586	FALSE
Ecuador	Embassy	@EmbajadaChinaEc	2019-12-02	7451	3668	TRUE
Egypt	Ambassador	@AmbLiaoLiqiang	2019-12-01	14695	1603	TRUE
Egypt	Staffer	@CHN_EGY	2020-06-21	2377	1521	FALSE
Egypt	Former Minister	@liupheonix	2022-04-22	2614	1569	FALSE
El Salvador	Ambassador	@oujianhong	2018-08-27	15113	2602	FALSE
El Salvador	Embassy	@EmbajadaChinaSV	2019-02-19	22361	2329	FALSE
Equatorial Guinea	Embassy	@EmbChinaGE	2020-03-25	3458	911	TRUE
Eritrea	Embassy	@ChinaEmbEritrea	2021-06-07	3920	449	TRUE
Estonia	Embassy	@ChineseEstonia	2021-08-27	913	302	FALSE
Ethiopia	Embassy	@ChinaEmbAddis	2019-12-19	11237	397	TRUE
Fiji	Embassy	@ChineseEmb_FJ	2021-01-21	2046	707	TRUE
Finland	Embassy	@ChinaEmbFinland	2019-12-23	952	253	FALSE
France	Embassy	@AmbassadeChine	2019-08-14	47923	12917	TRUE
France	Consulate	@consulat_de	2020-02-20	2207	4321	FALSE
France	Consulate	@China_Lyon	2020-03-05	2344	1015	TRUE

Germany	Embassy	@ChinaEmbGermany	2019-12-20	6284	3356	TRUE
Germany	Consulate	@ChinaCG_HH	2020-02-28	2555	1285	TRUE
Ghana	Embassy	@ChinaEmbinGH	2020-03-04	4530	1251	TRUE
Greece	Embassy	@Chinaemb_Hellas	2020-07-14	3220	1097	TRUE
Grenada	Ambassador	@WeiHongtian	2021-01-29	395	1125	TRUE
Grenada	Embassy	@ChinaEmbGrenada	2019-10-21	6025	3584	TRUE
Grenada	Former Ambassador	@DrZhaoyongchen	2019-07-19	4518	1027	TRUE
Guinea	Embassy	@chine_guinee	2019-09-25	5015	759	TRUE
Hungary	Embassy	@ChineseEmbinHU	2019-10-23	5662	3760	TRUE
India	Ambassador	@China_Amb_India	2017-12-05	94283	9087	TRUE
India	Consul General	@ZhaLiyong	2019-08-30	21743	31460	TRUE
India	Staffer	@ChinaSpox_India	2020-03-30	12080	4061	TRUE
Indonesia	Ambassador	@Amb_LuKang	2022-04-13	25349	741	TRUE
Iran	Ambassador	@AmbChangHua	2019-10-08	24947	5979	TRUE
Iraq	Embassy	@ChinaIraq	2020-01-12	8056	920	TRUE
Ireland	Embassy	@ChinaEmbIreland	2020-02-16	4873	1166	TRUE
Italy	Embassy	@AmbCina	2018-05-10	42290	5338	TRUE
Japan	Consul General	@xuejianosaka	2021-08-11	46359	48940	TRUE
Japan	Ambassador	@AmbKongXuanyou	2021-10-20	3479	40	TRUE
Japan	Embassy	@ChnEmbassy_jp	2014-04-23	98341	5842	TRUE
Japan	Consulate	@ChnConsulateNgo	2020-02-10	2956	1384	FALSE
Japan	Consulate	@ChnConsulateNgt	2020-03-18	2937	459	TRUE
Japan	Consulate	@ChnConsul_osaka	2019-09-09	20018	4251	TRUE
Japan	Consulate	@ChnConsulateFuk	2020-04-08	2599	1813	TRUE
Jordan	Embassy	@ChineseembassyJ	2019-09-10	4954	1793	TRUE
Kazakhstan	Embassy	@ChinaEmbKazakh	2019-09-30	2855	3596	TRUE
Kenya	Embassy	@ChineseEmbKenya	2019-03-20	8788	3852	TRUE
Kiribati	Ambassador	@TSonggen	2020-08-28	23	1	FALSE
Kuwait	Embassy	@ChinaEmbKuwait	2020-04-02	2905	792	TRUE
Lebanon	Ambassador	@ChinainLebanon	2020-02-07	12944	2209	TRUE
Lebanon	Staffer	@CaoYi_MFA	2018-05-12	123017	100737	TRUE
Lesotho	Ambassador	@AmbassadorLei	2020-03-06	1164	236	FALSE
Lesotho	Embassy	@ChinaEmbLesotho	2020-02-28	925	1260	TRUE
Liberia	Embassy	@ChineseLiberia	2019-12-03	5022	1358	TRUE
Malawi	Ambassador	@LiuHongyang4	2018-02-27	2623	1993	FALSE
Malawi	Embassy	@ChinaEmbassy_MW	2019-11-27	2938	796	TRUE
Maldives	Ambassador	@China_Amb_Mdv	2019-06-16	18443	4261	FALSE
Mali	Ambassador	@LiyongZHU1	2019-08-06	7944	262	FALSE
Mali	Embassy	@Chine_au_Mali	2018-08-10	4196	682	FALSE
Malta	Ambassador	@YDunhai	2021-01-08	19389	2430	TRUE
Malta	Embassy	@ChinaEmbMalta	2020-04-02	1366	634	TRUE
Mauritania	Embassy	@ChinaEmbinMR	2019-09-16	2812	125	FALSE

Mexico	Embassy	@EmbChinaMex	2021-03-15	40404	1803	TRUE
Montenegro	Embassy	@ChineseEmbinMNE	2020-11-20	1210	618	FALSE
Namibia	Embassy	@ChinaEmbNamibia	2021-11-25	1185	157	FALSE
Nepal	Ambassador	@PRCAmbNepal	2019-06-18	66457	367	TRUE
Netherlands	Embassy	@ChinaEmbNL	2020-06-23	5022	883	TRUE
Netherlands	Ambassador	@ChinaAmbNL	2020-12-16	1607	40	FALSE
Netherlands	Staffer	@LiuYanCHN	2019-03-07	554	236	FALSE
Nigeria	Embassy	@china_emb_ng	2019-09-10	3244	2274	FALSE
Oman	Embassy	@ChinaEmbOman	2020-03-01	188	56	FALSE
Pakistan	Ambassador	@AmbNong	2020-10-28	55996	394	TRUE
Pakistan	Embassy	@CathayPak	2015-09-19	151758	7893	TRUE
Pakistan	Counselor	@zhang_heqing	2020-05-14	250925	186583	TRUE
Pakistan	Consul General	@libijian2	2020-01-31	96585	47759	TRUE
Pakistan	Staffer	@GuWenliang	2020-02-06	1338	439	FALSE
Panama	Ambassador	@weiasecas	2017-11-01	18369	22388	FALSE
Panama	Embassy	@EmbChinaPa	2021-11-09	1913	254	TRUE
Papua New Guinea	Embassy	@ChineseEmb_PNG	2020-02-12	5492	991	TRUE
Peru	Embassy	@ChinaEmbPeru	2020-02-18	11619	529	TRUE
Philippines	Embassy	@Chinaembmanila	2017-02-20	13767	6800	FALSE
Poland	Ambassador	@AmbLiuGuangYuan	2020-03-18	5741	975	FALSE
Poland	Embassy	@ChinaEmbPoland	2019-07-31	6087	2664	TRUE
Qatar	Ambassador	@AmbZhouJian	2020-02-06	5930	8421	FALSE
Republic of the Congo	Embassy	@chinaembcongobz	2020-04-14	2457	407	TRUE
Russia	Embassy	@ChineseEmbinRus	2020-02-08	25691	1075	TRUE
Rwanda	Embassy	@ChinaEmbinRW	2021-09-17	1333	233	FALSE
Samoa	Embassy	@chinaandsamoa	2019-09-24	4922	487	TRUE
Saudi Arabia	Ambassador	@AmbChenWeiqing	2019-07-23	79359	2382	TRUE
Saudi Arabia	Embassy	@ChinaEmbKSA	2019-07-24	16242	2117	TRUE
Saudi Arabia	Consulate	@CCGJeddah	2021-04-05	2572	1237	TRUE
Senegal	Embassy	@ChineAmbassade	2020-10-14	1325	657	FALSE
Serbia	Ambassador	@AmbChenBo	2020-03-17	12126	237	FALSE
Serbia	Embassy	@EmbChina_RS	2020-05-06	3977	277	FALSE
Slovakia	Embassy	@ChinaEmbSVK	2020-02-10	4718	932	TRUE
Slovenia	Embassy	@ChinaEmSlovenia	2017-12-13	4481	2041	TRUE
Somalia	Ambassador	@AmbSomQinJian	2020-05-05	6705	529	FALSE
Somalia	Embassy	@ChineseSomalia	2019-06-23	10693	1529	TRUE
South Africa	Consul General	@CGCHINA_CPT	2020-03-02	11532	25230	FALSE
South Africa	Consul General	@sa_durban	2019-11-28	4079	20860	FALSE
South Africa	Consulate	@ChnConsulateJhb	2019-10-24	736	2525	FALSE
South Africa	Ambassador	@ChinaAmbSA	2019-09-11	16746	3781	TRUE
South Korea	Consulate	@jejuZLG	2019-10-23	2034	215	TRUE

Spain	Embassy	@ChinaEmbEsp	2019-09-10	27708	5572	TRUE
Spain	Consulate	@ConsulChinaBcn	2020-02-14	3879	1584	TRUE
Sri Lanka	Embassy	@ChinaEmbSL	2020-03-20	22924	2949	TRUE
Sudan	Embassy	@CHNembSudan	2020-03-21	4910	6805	FALSE
Suriname	Ambassador	@AmbLiuQuan	2019-09-03	14263	14634	TRUE
Suriname	Embassy	@CHNEmbSuriname	2019-09-05	1209	0	FALSE
Switzerland	Consul General	@Dr_ZhaoQinghua	2020-02-02	5418	1175	TRUE
Syria	Ambassador	@AmbFengBiao	2020-03-15	5423	103	FALSE
Tanzania	Embassy	@ChineseEmbTZ	2019-12-09	13450	2237	TRUE
Tonga	Embassy	@embassy_chinese	2019-11-17	2220	72	FALSE
Trinidad and Tobago	Ambassador	@AmbFangQiu	2020-10-30	1546	1700	FALSE
Turkey	Consulate	@chinaconsulist	2020-02-10	7252	4267	TRUE
Uganda	Ambassador	@PRC_Amb_Uganda	2021-07-03	4856	533	TRUE
Uganda	Embassy	@ChineseEmb_Uga	2018-01-26	9478	4268	TRUE
Uganda	Staffer	@chenhuixin	2010-05-08	685	470	FALSE
Ukraine	Embassy	@China_Ukraine__	2020-03-23	813	182	FALSE
United Arab Emirates	Ambassador	@Amb_Yiming	2019-09-25	17480	622	TRUE
United Arab Emirates	Consulate	@CGPRCinDubai	2019-12-07	3488	1434	TRUE
United Kingdom	Ambassador	@AmbZhengZeguang	2021-06-01	6035	975	FALSE
United Kingdom	Embassy	@ChineseEmbinUK	2019-11-14	39959	3898	TRUE
United Kingdom	Consulate	@CCGBelfast	2020-03-03	4908	1193	TRUE
United Kingdom	Consul General	@CGMeifangZhang	2020-01-30	91722	25497	TRUE
United Kingdom	Consulate	@chinacgedi	2020-02-05	2800	631	TRUE
United States	Ambassador	@AmbQinGang	2021-07-19	200523	774	TRUE
United States	Embassy	@ChineseEmbinUS	2019-06-05	114046	2373	TRUE
United States	Staffer	@SpoxCHNinUS	2021-03-31	5496	1361	TRUE
United States	Consulate	@ConsulateSan	2020-03-17	3761	3463	FALSE
United States	Consul General	@CGZhangPingLA	2019-11-07	6713	266	TRUE
United States	Consulate	@ChinaConsulate	2017-02-01	5409	2155	TRUE
Uruguay	Ambassador	@embajadorcn_uy	2021-06-07	3725	2371	TRUE
Venezuela	Ambassador	@Li_Baorong	2016-08-26	9095	16705	FALSE
Venezuela	Embassy	@Emb_ChinaVen	2019-09-13	5340	2590	FALSE
Yemen	Embassy	@ChineseEmbtoYEM	2019-09-09	54359	1144	TRUE
Zimbabwe	Ambassador	@China_Amb_Zim	2019-04-06	15709	1473	TRUE
Zimbabwe	Embassy	@ChineseZimbabwe	2018-09-04	14507	3827	TRUE
African Union	Former Ambassador	@Ambassador_Liu	2019-10-22	10270	8182	TRUE
Association of Southeast Asian Nations	Ambassador	@China2ASEAN	2020-01-20	86973	7507	TRUE

European Union	Mission	@ChinaEUMission	2013-09-24	25308	12435	TRUE
MFA	Representative of the Chinese Government on Korean Peninsula Affairs	@AmbLiuXiaoMing	2019-10-09	274244	7009	TRUE
MFA	Spokesman	@zlj517	2010-05-08	1702792	71120	TRUE
MFA	Spokesman	@SpokespersonCHN	2019-10-14	1605261	7456	TRUE
MFA	Spokesman	@MFA_China	2019-10-14	558230	6841	TRUE
MFA	Director General	@WuPeng_MFACHina	2020-09-22	25516	2270	TRUE
MFA	Director General	@FuCong17	2020-06-18	8164	536	TRUE
MFA	Counsellor of Department of Information	@Li_Yang_China	2020-03-17	43469	1529	FALSE
MFA	Counsellor of Department of Information	@Zhou_Li_CHN	2022-03-01	4852	2560	FALSE
Organisation for the Prohibition of Chemical Weapons	Mission	@China_OPCW	2020-06-18	2506	242	TRUE
United Nations	Ambassador	@ChinaAmbUN	2020-02-27	41021	2868	TRUE
United Nations	Mission	@Chinamission2un	2015-04-27	113027	7264	TRUE
United Nations	Spokesman	@CHN_UN_NY	2020-05-08	3169	3610	TRUE
United Nations Office in Geneva	Ambassador	@Amb_ChenXu	2019-12-31	12352	954	TRUE
United Nations Office in Geneva	Mission	@ChinaMissionGva	2015-05-14	4506	7052	TRUE
United Nations Office in Geneva	Spokesman	@ChnMission	2020-01-31	1614	2188	FALSE
United Nations Office in Geneva	Ambassador	@Amb_LiSong	2020-06-17	4676	1021	TRUE
United Nations Office in Vienna	Mission	@ChinaMissionVie	2019-10-15	5243	1858	TRUE

Appendix B

STM diagnostics

Figure B.1 shows the held-out likelihood, residual, lower bound, and semantic coherence for STMs with topic number of 6 to 15. We can see that as the number of topics increases, the held-out likelihood gradually increased and the residuals became smaller and smaller. However, the semantic coherence became lower after the number of topics becomes more than 10.

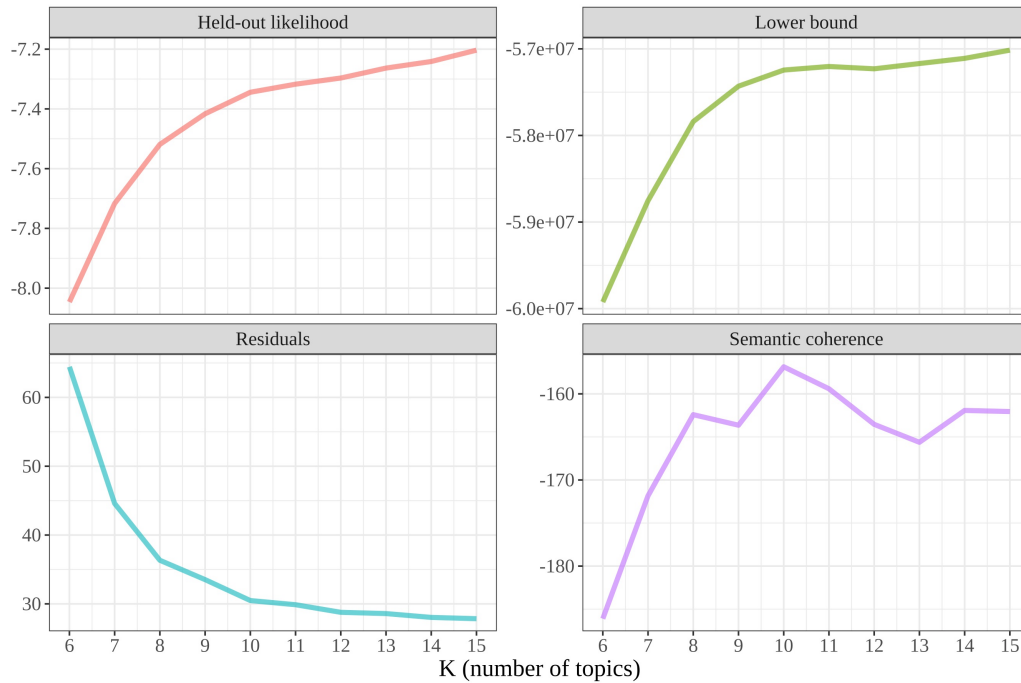


Figure B.1: Model diagnostics by number of topics

Table B.1 and Table B.2 show the summary of results of STM with 9 and 11 topics. While *Probability* presents the most frequent words in the topic, *FREX* is the weighted harmonic mean of the word’s rank in terms of exclusivity and frequency, which is commonly used to alleviate the domination of highly frequent words.

Table B.1: summary of STM with 9 topics

Topic	Probability	FREX
1	@zlj517, pakistan, #cpec, cpec, power, road, project,  , @cpec_official, #pakistan	#cpec, cpec, @cpec_official, gwadar, @plancom-pakistan, @abdulmaan, @pid_gov, @cpec15, corridor, #gwadar
2	#china, beijing, xinjiang, #xinjiang, @libijian2, winter, take, @spokespersonchn, #beijing2022, poverty	#beijing2022, olympic, games, olympics, @beijing2022, gold, athletes, #olympics, #winterolympics, paralympic
3	us, u.s, @spokespersonchn, #us, @mfa_china, human, rights, media, times, war	opposes, sanctions, internal, politicians, disinformation, war, wrong, nato, interference, pompeo
4	first, @cgtnofficial, new, china’s, national, @xhnews, @globaltimesnews, space, , cultural	space, exhibition, astronauts, flight, module, officially, launched, shanghai, aircraft, #ciie
5	#covid19, covid-19, hong, fight, @xhnews, health, kong, cases, @chinadaily, pandemic	cases, #coronavirus, outbreak, novel, coronavirus, doses, vaccine, patients, #covid19, confirmed
6	president, xi, foreign, wang, minister, jinping, said, state, yi, meeting	councilor, communist, jinping, phone, met, republic, anniversary, meeting, party, president
7	china’s, year, province, city, beautiful, @chinadaily, world’s, @pdchina, #china, largest	lake, mountain, trillion, scenery, river, located, scenic, forest, guizhou, #glamorchina
8	cooperation, development, countries, global, world, international, #china, economic, china’s, work	@globalnews, @cbcnews, @globeandmail, @ctvnews, challenges, economy, sustainable, role, common, promote
9	people, one, can, good, great, time, day, like, many, years	wish, love, thank, family, know, friends, everyone, language, dear, come

Table B.2: summary of STM with 11 topics

Topic	Probability	FREX
1	president, cooperation, xi, wang, development, jinping, foreign, countries, global, yi	councilor, yi, xi, jinping, premier, wang, brics, high-level, mutual, keqiang
2	#covid19, covid-19, fight, health, @xhnews, cases, medical, new, countries, vaccine	cases, doses, vaccines, confirmed, medical, #coronavirus, vaccine, novel, #vaccines, #covid19
3	@cgtnofficial, u.s, via, says, video, us, from, russia, said, ukraine	trump, biden, @youtube, @chenweihua, link, @martjacques, @rnaudbertrand, trump's, donald, @thehill
4	foreign, hong, government, national, kong, full, china's, security, ministry, uk	hong, kong, @ambluixiaoming, hksar, kong's, ministry, #hongkong, office, issued, paper
5	beijing, winter,  , #beijing2022, anniversary, today, olympic, games, space, first	olympic, #beijing2022, medal, olympics, @beijing2022, games, athletes, men's, #olympics, gold
6	us, countries, #us, @mfa_china, @spokespersonchn, must, #china, @globaltimesnews, country, political	sovereignty, #usa, opposes, confrontation, territorial, internal, hegemony, unilateral, one-china, urge
7	people, xinjiang, #xinjiang, human, media, rights, @spokespersonchn, poverty, western, @caoyi_mfa	@globalnews, @cbcnews, @ctvnews, @globeandmail, forced, genocide, labor, uyghur, fake, truth
8	day, one, year, new, beautiful, time, like, people, @zhang_heqing, happy	festival, dance, traditional, music, love, art, opera, calendar, cute, panda
9	china's, #china, province, first, year, @libijian2, @pdchina, @xhnews, city, world's	trillion, high-speed, yuan, southwest, percent, nw, trains, freight, located, yoy
10	@zlj517, pakistan, #cpec, cpec, road, project, @cpec_official, power, minister, #pakistan	#cpec, @cpec_official, cpec, gwadar, @cpec15, @plancompakistan, @cpec_cscec, @cpec_gov_pk, motorway, @pid_gov
11	world, years, economy, good, china's, development, great, made, country, #china	huge, past, changes, economy, decades, achievements, innovation, rest, remarkable, goal

Appendix C

High Probability Words and Representative Tweets

Table [C.1](#) shows a summary of topics generated by the STM with 10 topics.

Table C.1: Summary of STM with 10 Topics

Topic	Label	Probability	FREX
1	China's International Cooperation	cooperation, development, global, countries, economic, world, #china, work, trade, international	opportunities, promote, development, win-win, sustainable, belt, opening-up, initiative, innovation, carbon
2	China's Diplomatic Activities	president, xi, foreign, wang, minister, jinping, state, yi, meeting, said	councilor, yi, @globalnews, @cbcnews, @globeandmail, @ctvnews, wang, jinping, text, phone
3	Hong Kong and Taiwan Issues	national, security, hong, government, china's, kong, law, taiwan, international, people's	hong, kong, #hongkong, sovereignty, law, taiwan, hksar, hk, legislation, kong's
4	Xinjiang Issues	us, #us, human, u.s, rights, @spokespersonchn, war, @mfa_china, xinjiang, countries	origins, labor, nato, hegemony, tracing, human, forced, origin, #nato, ideological
5	Beijing Winter Olympics	beijing, pakistan, 🇨🇳, @zlj517, winter, ambassador, #beijing2022, #cpec, cpec, anniversary	olympic, olympics, games, medal, #beijing2022, anniversary, space, paralympic, men's, module
6	Negative US news	people, can, one, world, many, time, like, @spokespersonchn, just, now	@chenweihua, done, speak, lives, enough, understand, answer, let, save, might
7	China's Scenic Places	china's, province, #china, city, #xinjiang, beautiful, @libijian2, xinjiang, @chinadaily, @pdchina	#amazingchina, located, mountain, lake, scenic, scenery, county, mountains, river, southwest
8	China's economy under COVID-19	china's, first, new, @xhnews, #china, million, #covid19, year, billion, cases	cases, percent, trillion, confirmed, novel, gdp, total, yuan, rate, #coronavirus
9	Traditional Chinese Festivals	day, good, new, year, great, today, happy, friends, festival, thank	friends, friend, festival, happy, love, family, wish, dear, day, language
10	China's COVID-19 aid	@cgtnofficial, covid-19, #covid19, countries, #china, vaccine, health, vaccines, , public	vaccine, vaccines, #vaccine, #sinovac, , emergency, sinopharm, #sinopharm, trials, vaccination

Table C.2 presents three representative tweets for each topic.

Table C.2: Example Tweets of Each Topic

Topic	Example Tweets
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-
- 1 #China proposed promoting coop in 6 areas to push the #LMC to a new level. 1.strengthen strategic guidance 2.deepen economic integration 3.expand agricultural coop 4.adhere to green development 5.promote digital coop 6.closer people-to-people exchanges

China and the EU have broad consensus on tackling climate change and promoting sustainable development. We should foster a green and digital partnership, deepen cooperation in such areas as environmental technology, circular economy, clean energy, and sustainable finance.

China is ready to work with all countries to advance the building of a new type of international relations featuring mutual respect, fairness and justice and win-win cooperation, and jointly build a community with a shared future for mankind.

-
- 2 #Latest SC&FM Wang Yi to Attend the Third China+Central Asia Foreign Ministers' Meeting and Pay an Official Visit to Kazakhstan. During his visit to Kazakhstan, SC&FM Wang Yi will meet with Kazakh Pres. Kassym-Jomart Tokayev and talk with Deputy PM&FM Mukhtar Tileuberdi.

At the invitation of Italian Prime Minister Mario Draghi, President Xi Jinping will address the 16th #G20 Leaders' Summit via video link, while State Councilor & FM Wang Yi will attend the Summit in #Rome as the President's Special Representative.

Chinese Premier Li Keqiang on Friday co-chaired the 23rd China-EU leaders' meeting with European Council President Charles Michel and European Commission President Ursula von der Leyen via video link.

-
- 3 Establishing and improving the legal system and enforcement mechanisms for the Hong Kong to safeguard national security is a necessary move to plug Hong Kong's loopholes in safeguarding national security, and improving the institutional system of "one country, two systems."

Hong Kong affairs are the internal affairs of China. The National Security Law protects Hong Kong's long-term stability and prosperity. Most of the UN members support China on the Hong Kong National Security Law.

The Taiwan question is China's domestic affair. The one-China principle is a basic norm of international relations. According to relevant UNGA&WHA resolutions, the participation of China's Taiwan region in WHO activities must be handled in accordance with the one-China principle.

4	The US has turned a blind eye to its deplorable human rights record and abuses in relation to Muslims, and instead repeatedly fabricated lies about Xinjiang. This is pure hypocrisy and double standard. The so-called allegations of “forced labor” and “genocide” in Xinjiang are nothing but vicious lies concocted by anti-China forces. It is preposterous for the US, a country with a deplorable track record of human rights issues, to accuse and smear China. “Concentration camps” “forced sterilization” “forced labor”...The constant fabrication of lies about #Xinjiang is aimed at making discord among the ethnic groups in China, discrediting CHN and driving a wedge b/w CHN&Muslim countries. Such sinister intentions are doomed to fail.
5	#BeijingOlympicProfile - Gao Tingyu is a Chinese speed skater, who made his Olympic debut at the 2018 Olympics, winning a bronze medal in the Men’s 500m speed skating event. First male speed skater from China to win a medal in Olympic speed skating. @Beijing2022 #Olympics Beijing 2022 Paralympic Winter Games include 6 sports: Para Alpine Skiing, Para Biathlon, Para Cross-Country Skiing, Para Snowboard, Para Ice Hockey and Wheelchair Curling. The torch relay of the Beijing 2022 Winter Paralympics starts on Wednesday and will culminate in the lighting of the Paralympic flame in the National Stadium on Friday at the Games’ opening ceremony. The relay will cross three competition zones and feature 565 torchbearers.
6	RT @warriors: Steve Kerr on today’s tragic shooting in Uvalde, Texas. The more you read the news about U. S Covid 19 situation, the less you understand it. People puzzled why some politicians put politics above saving lives. There must be something very wrong. Hope they could do the right thing at right time: concentrating on saving more lives. Kill whatever you don’t like or fear whatever is better than yours. Does this speak for the entire American people or just the logic of a few of US politicians?
7	Beautiful China Backbone’ Rice Terraces are an incredible farm engineering phenomenon in a remote mountain area of Guilin. Longji’s famed rice terraces’ main terraced areas are the Ping’an Rice Terraces, Jinkeng Rice Terraces, & Longji Old Zhuang Rice Terraces. #China Longtan Grand Canyon is in Luoyang City, Henan Province, the world geological Park, National 5A scenic spot, national Geological Park, enjoys “ancient Ocean natural Museum”, “gorge unique”&“Yellow River gallery”. @HenanAmazing @HenanAmazing @henan #AmazingChina #China Kanas Lake is located in China’s #Xinjiang Uygur Autonomous Region. Fairy Bay is one of the most charming scenic spots in the Kanas Nature Reserve. It runs along a large portion of the lake and is covered with dense fog on winter mornings, creating a tranquil scene.

8	China's exports rose by 1.4 percent year on year in yuan terms to 1.46 trillion yuan (about 205.74 billion U.S. dollars) in May, official data showed on Sunday. Imports fell by 12.7 percent to 1.01 trillion yuan last month, resulting in a trade surplus of 442.75 billion yuan. China's online retail sales reached 5.15 trillion yuan in the first half of 2020, up 7.3% year on year. The number of e-commerce users in China rose by 100 million compared with last year, and the number of stores on major online retail platforms went up 3.8% year on year. In November, China's retail sales of consumer goods in urban areas reached 3,407.2 billion yuan, an increase of 4.9 percent over the same period of last year; the retail sales of consumer goods in rural areas reached 544.2 billion yuan, an increase of 5.6 percent.
9	#LanternFestival falls on 15th day of 1st month on Chinese lunar calendar, the end of Spring Festival celebrations. It is customary to appreciate lantern at night and eat sweet dumplings to pray for blessing and prosperity for the year. Wish everyone a happy Lantern Festival! The #DragonBoatFestival is celebrated on the fifth day of the fifth lunar month every year. This year, the festival falls on June 3. Traditional celebrations of the festival include eating zongzi, drinking realgar wine and racing dragon boats. Today marks Qixi Festival, or Chinese Valentine's Day, which falls on the 7th day of the 7th month on the Chinese lunar calendar. Originating from a 2,000-yr-old legend, the festival celebrates eternal love between Niulang & Zhinv
10	China has given vaccine assistance to 53 developing countries at their requests and has exported or is exporting vaccine doses to 22 countries that are in urgent need. China has also decided to provide 10 million doses of Chinese-made vaccines to COVAX for developing countries. In response to #WHO's request, China will provide 10 million doses of COVID19 #vaccines to global vaccine sharing scheme #COVAX to meet the urgent needs of developing countries. By itself, China has been providing vaccines to 14 developing countries, and will do so to another 38. Ystd another batch of 1mln doses of Sinopharm's #COVID19 vaccines arrived at Phnom Penh. To date, #China had provided #Cambodia w/ 11.7mln doses of #COVID19 vaccines, w/ 2.2mln donated by China & 9.5mln purchased by #Cambodia.