



Wolf Warrior Spreads Superior: The narrative and effectiveness of Chinese public diplomacy behaviours on Twitter

Linjiang Guo¹ · Qian Qin²

Accepted: 9 April 2024
© The Author(s) 2024

Abstract

Since 2013, when President Xi Jinping pioneered the concept of "telling China's stories well," the number of senior Chinese diplomats and state-affiliated media accounts on Twitter has increased. Different from the vague and evasive diplomatic parlance, some diplomats defend the policies of China in a relatively aggressive way, even sometimes resulting in online disputes with foreign politicians. They are labeled as "wolf-warrior diplomats," a term coined from the record-breaking Chinese nationalist action movie series *Wolf Warrior*. This paper investigates the effectiveness of China's "wolf warrior diplomacy" on audience engagement on Twitter and significant factors impacting communication effectiveness. Through the utilization of advanced offensive and humor detection algorithms, counterintuitively, this study finds that the wolf-warrior tweets improve Twitter audience engagement, though prior research pointed out that these tweets may bring out adverse feelings in some audiences. Moreover, it also unveils that providing more information and posting humorously on Chinese diplomatic Tweets can enhance their reach and dissemination.

Keywords Wolf warrior · Public diplomacy · Offensive language · Audience engagement · China

Introduction

In 2013, Xi Jinping pioneered the concept of "telling China's stories well" (jianghao zhongguo gushi) at a national conference on the work of publicity and ideology [100], one year after he took office as the president of China. The concept

✉ Qian Qin
qian.qin@unsw.edu.au

¹ University of Technology, 15 Broadway Ultimo NSW 2007, Sydney, NSW, Australia

² School of Social Sciences, University of New South Wales, UNSW, Sydney, NSW 2052, Australia

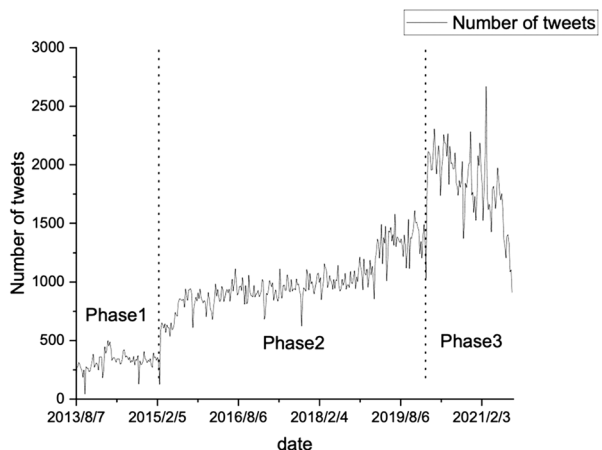
soon dominated China's overseas communication and public diplomacy strategies. Accordingly, the Chinese government, as well as the media, pursued to improve their international communication capability to present a "true, multi-dimensional and panoramic" (*zhenshi liti quanmian*) view of China to the overseas audience [101]. As part of this trend, more and more senior diplomats, embassies, and significant state-affiliated media started to actively spread their opinions on the new virtual battleground – Twitter.

Twitter is an Internet service where users communicate through "tweets," quick and frequent real-time messages [90]. It is one of the most popular social media platforms, making it an important communication channel for government organizations worldwide [21]. In recent years, with the development of the concept of public diplomacy in the digital era, Twitter has been increasingly employed by many countries as a more interactive tool for engaging the foreign public compared with traditional channels [12, 25, 33].

Despite the popularity of Twitter, China did not formally march into this battlefield until 2013. That year, most accounts held by Chinese diplomats and embassies were registered. But China gained momentum to conquer this battlefield swiftly, for which Chinese diplomats actively gave their voice on Twitter to reach out to the international community and "tell China's stories well." This research retrieved 482,119 tweets posted by the 20 most influential official accounts in 2010–2021. As shown in Fig. 1, the number of tweets posted per week has significantly increased since 2013, particularly in 2015, when Xi Jinping used the term "telling China's stories well" more frequently in his speeches [81].

While most Chinese embassies simply share the official information linked to their website, some diplomats are more active in playing a personal role in defending the policies made by the Chinese government. Some even air their views in a relatively aggressive way, which sometimes results in confrontation with foreign politicians. The trend has been captured by media and academia outside China since 2019, when Zhao Lijian, a Foreign Ministry Spokesperson, challenged Susan Rice on Twitter, the former United States national security adviser [70].

Fig. 1 Number of tweets posted per week changing with time



"You are such a disgrace, too. And shockingly ignorant, too. I am based in Islamabad. Truth hurts. I am simply telling the truth," Zhao fired back at Rice on Monday. "To label someone who speak the truth that you don't want to hear a racist, is disgraceful & disgusting." (@zlj517, tweeted on 15 July 2019)

Since then, Zhao Lijian and his colleagues have been labelled as "wolf-warrior diplomats"¹ by overseas media and Chinese netizens [62, 87, 105]. Wolf-warrior is a term coined from the record-breaking Chinese action movie series Wolf Warrior in which a Chinese special forces soldier fights with foreign mercenaries and protects Chinese civilians overseas. As the highest-grossing film in China until 2021, the Rambo-style action adventure catered to China's growing nationalist ambitions, along with anti-Western sentiment [11, 75]. It indicates a shift from the vague and evasive diplomatic parlance since Deng Xiaoping initiated the principle of "keeping a low profile" (*taoguang yanghui*) in the 1990s to the aggressive and emotional rhetoric in Xi's era [17, 84]. The authors notice that wolf-warrior diplomacy is sometimes perceived as China's assertive diplomatic approach, but the term is refined to refer to China's vigorous and even offensive behavior in public diplomacy and international communication.

For the Chinese government, the primary goals of international communication, including the use of Twitter, are to eventually "have a greater voice on the world stage" and "foster a favorable external environment in terms of public opinion" [93]. The goals are typical pursuits of governments in public diplomacy strategies, which are, in general, designed to influence the perceptions of others and to promote the legitimacy of respective governments' actions [66]. While Twitter diplomacy is never used as an official term by the Chinese government, Hua Chunying, Foreign Ministry Spokesperson.

There are usually three or four Foreign Ministry Spokespersons. Hua Chunying is currently the one with the highest ranking (Director). She once emphasized the significance of the role of Twitter communication in China's public policy by commenting that the Chinese diplomats are speaking in a "truthful, objective and impartial manner" on Twitter and other platforms to fight against "the dark and ugly world of disinformation" [44]. The Chinese government has been relatively silent on the achievement of its public diplomacy activities on Twitter or the increasing spread of wolf-warrior messages by its diplomats and state-affiliated media. Therefore, this article aims at studying the effect of "wolf-warrior diplomacy" on audience engagement on Twitter, with an extended and comprehensive investigation on other critical features.

The article is structured into five sections. The second section offers an in-depth review of existing academic work in relevant fields, encompassing the emerging phenomenon of Twitter diplomacy, the evolution of public diplomacy, China's Twitter strategies, and the information dissemination methodologies underpinning this research. The third section provides a detailed explanation of the research

¹ Wolf-warrior diplomat or wolf-warrior diplomacy is a term coined from the record-broke 2017 Chinese action movie Wolf Warrior 2, in which a Rambo-style hero protected Chinese overseas citizens from American-led mercenaries.

methodology and the data sources utilized. By introducing "user" as an independent variable in the negative binomial model, the methodology allows for the minimization of differences among specific accounts. This sets the stage for the "Findings" section, where the authors present the key results of our analyses and the primary interpretation. Finally, the concluding section encapsulates the implications of our research findings and assesses the validity of the initial hypotheses.

Literature Review

In this section, the authors explore the transformation of diplomacy from its traditional form, focusing on the rise of Twitter diplomacy. Further, the impacts on contemporary public diplomacy featured with social media are examined. Special attention is given to China's wolf-warrior diplomacy on Twitter and the implications for information dissemination and audience engagement. By analyzing these aspects, the review aims to provide a comprehensive understanding of the changing landscape of diplomacy in the age of social media, providing an academic background for the research questions. The authors also propose three hypotheses accordingly, as shown in Fig. 2.

The shift from traditional forms to public diplomacy

Hierarchy, secrecy, and one-way communication with the public have been the principles of traditional diplomacy for centuries [8, 9]. In the past, diplomatic efforts primarily revolved around face-to-face negotiations, closed-door meetings, and official communiqués. However, the last century witnessed a vast expansion of technical possibilities when all major powers launched their programs to win support from their citizens and the rest of the world through communication technologies [26, 31]. Tracts and sermons were replaced by telegraphs and mass media, and the interaction between diplomats and foreign citizens had reached a new level [6, 17, 84]. With the ability to directly influence foreign publics and even potentially instigate changes in their governments, the activities to persuade diplomats have become less attractive.

The twenty-first century is marked by the rise of Twitter as a social media platform that has shaped international diplomacy from cagey doors to public interaction to advance their varied political and diplomatic strategies [12, 25, 33]. Politicians

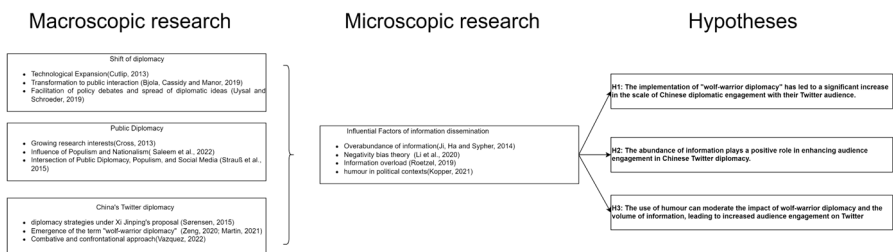


Fig. 2 Mind map of the literature review

and scholars have long noticed the novelty and power of Twitter in government agencies' communication strategies, especially in domestic politics [36, 96, 98]. Previous research indicates that Twitter is a relatively formal platform for engaging with the public [38]. With the popularisation of Twitter, leaders of governments can converse with cyber citizens of their own and other countries [40]. In addition, world leaders use Twitter as a digital platform to promote their political agenda [15]. Twitter offers faster, more global, and more interactive communication than traditional channels like radio, T.V., and print news. As a result, the concept of Twitter diplomacy, or "twiplomacy", emerged, referring to the use of Twitter by heads of state, diplomats, and governmental organizations to facilitate public diplomacy. Twitter diplomacy is prevalent as it enables two-way communication and straightforward dialogue between nations and their foreign populations, even among nations without formal diplomatic ties.

Twitter itself is also evolving as a platform to accommodate political communications. Twitter has transformed secret diplomacy into public diplomacy, empowering political leaders, international organization heads, and diplomats to engage with target audiences more efficiently and even initiate debates on relevant issues [20, 71]. Twitter diplomacy allows leaders to develop new foreign policy initiatives by garnering widespread public appeal and directly involving foreign publics. Even though some people might post aggressively or offensively when commenting on politics, Twitter remains a valuable platform for fostering relationships among cyber citizens, independent of their leadership [91]. By simply retweeting, cyber citizens can participate in policy debates and facilitate the spread of the ideas of diplomats, as retweeting can suggest endorsement and raise the visibility of the original content [79, 94].

Heine and Turcotte distinguished three levels of the use of Twitter by diplomats: (i) Basic: convey official information such as speeches and press releases; (ii) Intermediate: more personalized information recommending recent articles in the press; and (iii) Advanced: participate fully in the political debates, and even sometimes actively pursue the polemical subjects [41]. While most of the tweets posted by Chinese diplomats are plain propaganda, which is the basic level, the tweets of wolf-warrior diplomats might be at a higher level of Twitter use.

The features of public diplomacy in the social media era

Public diplomacy refers to how diplomats, governments, individuals, and groups directly or indirectly impact public attitudes, which can further influence other governments and their foreign policy choices [82]. Similarly, Manheim concludes that public diplomacy explains and speaks for governmental policy and represents a nation before foreign publics [60]. According to his findings, strategic public diplomacy refers to government-public communication. Public diplomacy is also termed 'people's diplomacy,' which includes government-induced efforts to communicate with foreign publics directly as official attempts to win "the hearts and minds of people around the world" [36, 57]. In this sense, Joseph Nye points out that public diplomacy is a critical instrument of soft power [67].

With the rise of social media, the features and dynamics of public diplomacy have transformed significantly. In the social media era, public diplomacy is no longer a one-way communication process but an interactive and participatory practice that

engages diverse audiences on multiple levels. For academia, public diplomacy has been of growing interest in fields such as communications, public affairs, public relations, and place branding in recent years [24].

The real-time nature of social media enables diplomats to respond quickly to international events and crises, creating new demands for openness, transparency, real-time communication, and public engagement in diplomatic activities [50]. Government entities of nations such as Pakistan and India engage actively on social media platforms, even though their interactions are predominantly confined to their citizens [46]. Also, many social media accounts are held by individual diplomats rather than embassies or agencies, making the information disseminated relatively personalized and sometimes informal [61, 80].

In summary, the intersection of public diplomacy and social media has created a new landscape for diplomatic engagement. Public diplomacy creates an environment that enables the successful conduct of traditional diplomatic activities and impacts domestic public opinion and politics in other countries. However, the understanding of digital diplomacy's implementation on Twitter, the online engagement involving embassies and ambassadors, and the extent to which disseminated information correspond with the interests of their respective stakeholder groups remains limited, particularly in the realm of quantitative empirical research [86]. The prevalence of negative emotions and confrontational communication styles in social media content significantly reshaped public diplomacy. It underscores the need for a nuanced understanding of the impact of such communication strategies on the potential consequences of diplomatic engagement. The authors' research will contribute to the broader scholarly conversation on international relations and public diplomacy.

China's wolf-warrior diplomacy on Twitter

China's public diplomacy strategies have evolved along with the development of social media. The Chinese government employed public diplomacy tools in the 2000s to project a more positive image of China, i.e., a "trustworthy, cooperative, peace-loving, developing country that takes good care of its enormous population" [27]. In 2004, China's Ministry of Foreign Affairs and Trade created a Public Diplomacy Division within the Information Department, accompanied by a series of costly public diplomacy programs such as Confucius Institutes, promotional videos in New York's Times Square, and multi-language television broadcasts [76]. However, in the era of Xi Jinping, aggressive and emotional rhetoric had increasingly supplanted the ambiguous and elusive diplomatic language that was prevalent since the 1990s, when Deng Xiaoping introduced the principle of "keeping a low profile" (tagging yang hui) [17, 84]. The term "wolf-warrior diplomacy," used by mainstream foreign media and academia, emerged gradually [42, 62, 97, 105]. While the term "wolf-warrior diplomacy" is sometimes refers to aggressive and assertive communications or even physical actions of China's officials, in this paper, the authors use a more constrained and practical definition, i.e., the use of offensive language in China's public diplomacy, particularly on Twitter [29, 62, 87].

Chinese public diplomacy shifted from evading controversy [64] and using cooperative rhetoric [28] to coercive and confrontational diplomacy to combat criticism

and pursue superiority in the international hierarchy. Moreover, a confrontational policy can assist the Chinese government in realizing its ambition to thwart foreign governments' efforts to gain "discourse power" in global politics, potentially paving the way for an alternative to the current US-led international order in the long run [34].

Wolf warrior diplomacy constitutes part of the new foreign policy strategy termed Xi Jinping's "Major Country Diplomacy" (*daguowaijiao*), which involves the pursuit of more active participation in world affairs, showing power instead of hiding and taking harder on the Western world on ideological grounds [83]. Chinese current hawkish rhetoric and aggressive diplomatic push resemble wolf warrior diplomacy adopted in 2017 and are more in line with "Xi Jinping Thinking" on diplomacy [42].

This shift in policy changed Chinese diplomats' tone, which turned out to be more direct and argumentative [97]. Chinese officials regard wolf-warrior diplomacy as an "essential" riposte to Western diplomats over social media. The use of the Twitter account in late 2020 by Zhao won vigorous applause from Chinese nationalists within the country, while Wuheqilin's Sina Weibo account, a Chinese self-styled wolf-warrior artist, doubled his followers to 1.24 million [18]. Although Chinese diplomats are tweeting in English and Twitter is blocked by the Great Firewall in China, which indicates that the target audience would likely be foreign nationals, Chinese people are enthusiastically translating the tweets and foreigners' responses into Chinese and sharing them on social media in China. A shift from traditional public diplomacy to wolf-warrior diplomacy helps arouse pride in the Chinese nation, which could motivate diplomats to continue using the strategies. Also, as discussed in the following sections, the wolf-warrior communication strategy enhances the effectiveness of information dissemination and audience engagement.

Information dissemination and influential factors

It is essential to explore how information spreads on social media platforms such as Twitter to understand the impact of Chinese Twitter diplomacy. Information dissemination is influenced by user preferences and recommendation algorithms, which can amplify specific messages and reduce the visibility of others [45]. Research has shown that a vast majority of sharing behaviors on social media can lead to significant dissemination of information [54]. Another study found that a small number of users who share information online can significantly influence the spread of information, including fake news and political content [37]. This is particularly relevant for Chinese Twitter diplomacy, as retweets, a form of audience engagement, can significantly influence the reach and impact of official messages. Thus, the authors choose the number of retweets as the research indicator. Therefore, understanding the effects of retweet behavior and the factors that influence it is crucial for effective Chinese Twitter diplomacy.

From the psychological perspective, the negativity bias theory provides a controversial explanation for how emotions influence information dissemination. The negativity bias theory indicates that people share negative expressions over social media networks because negative emotions can arouse readers [56]. Moreover, negative words in a message commonly show distinctiveness and novelty compared to positive words [43].

Previous studies have employed text-mining technology to extract textual features for various purposes [89]. With natural language processing techniques

advancements, researchers can use a broader range of methods to uncover factors influencing audience engagement [58]. Emotions have been a focal point of many studies, with some researchers exploring whether positive or negative emotions can expand the readership of information, yielding controversial outcomes [10, 32, 56]. Other researchers have focused on the impact of personal attitudes. They calculate the average of topic emotions from the sentiment score of each essay to obtain personal attitudes, which have been verified as a critical factor in explaining information dissemination and news diffusion [68]. Text features are also crucial in improving text visibility. Hashtags, for example, have revolutionised how social media users search and classify information, attracting a wide range of users [16].

In addition to examining emotions and hashtags, researchers have also analyzed the role of information volume in text. However, accurately measuring the quantity of information in a news article or text remains a significant challenge. One study found that an overabundance of information in news reports may negatively impact readers' comprehension, reducing interest in completing the article [47]. Another study has shown that the time delay between reading and sharing information can be partly attributed to information overload [39].

Despite previous research analyzing the characteristics of Twitter diplomacy or the factors influencing information dissemination on social media, more research is needed to integrate both aspects. Based on the literature reviewed above, the following section presents three hypotheses.

Expanding upon the negativity bias theory, which posits that negative words in a message frequently convey a sense of uniqueness and innovation in contrast to positive words [43], this study argues that employing a "wolf-warrior" style in tweets might be perceived as lacking grace by certain readers; nevertheless, it also holds the potential to attract significant attention and engagement owing to its unique and distinctive nature. Therefore, this study proposes hypothesis **H1: The implementation of "wolf-warrior diplomacy" has led to a significant increase in the scale of Chinese diplomatic engagement with their Twitter audience**

In addition, drawing on the work in information overload, this research aims to investigate the role of information overload in Twitter diplomacy. Information overload refers to the difficulty in understanding an issue and effectively making decisions when faced with excess information. For Twitter users, the decision of whether to retweet is a part of the decision-making process. Previous research has demonstrated that an abundance of information in a news story may negatively impact readers' comprehension, reducing their interest in engaging with the content [55]. While sharing news on Twitter can amplify its reach, it is essential to base this on an accurate understanding of the content. In the context of Twitter, the ability to comprehend information is a critical factor in determining whether or not it will be shared.

Some research points out that information overload is conducive to sharing decisions. Sharing strategies in situations of information overload might be compared to the spread of disease. Where people often act irrationally by infecting others (i.e., retweeting to other members of their network) rather than sparing themselves (i.e., taking time to rest and recover from their overloaded state) [77]. Twitter used to impose a rigid 140-character limit on tweets for several years. However, in 2017, the limit was raised to 280 characters and beyond. However, despite this change, Twitter

users have generally sent short messages. This brevity can sometimes result in insufficient information, which contradicts the purpose of public diplomacy, which aims to provide information. Although the amount of information in a text can indeed be overwhelming, it is within the reader's comprehension. Chinese Twitter diplomacy also serves to counter criticism and provide information for foreigners. Accordingly, the authors propose the second hypothesis **H2: The abundance of information plays a positive role in enhancing audience engagement in Chinese Twitter diplomacy.**

The impact of humor in political contexts has been a research topic [30, 51, 59]. It is argued that humor can be an effective persuasive technique in creating a friendly environment to attract a broad range of potential supporters [5]. However, up-to-date research needs to pay more attention to the role of humor in public diplomacy. Although Chernobrov [19] has studied how strategic humor as a diplomatic tool effectively promotes state narratives, further research is required to provide quantitative evidence. Humor has been shown to promote a friendly and approachable communication atmosphere, which can create a conducive environment for effective information exchange and facilitate the objectives of wolf-warrior diplomacy. Based on this rationale, the authors put forward the third hypothesis **H3: The use of humour can moderate the impact of wolf-warrior diplomacy and the volume of information, leading to increased audience engagement on Twitter, by facilitating a friendly and amicable communication environment.**

Methods and Data

This section presents the model and variables selected to investigate their influence on the efficacy of Chinese Twitter diplomacy.

Features Development

This study uses text mining methods based on the transformer structure to meet Twitter offensive meaning detection requirements, whose training Twitter dataset is named SemEval2019 OffensEval [104]. The dataset comprises more than 14,000 tweets written in English, which have been classified as offensive or non-offensive posts. The offensive posts in the dataset contain insults, threats, or any form of untargeted profanity. The human annotator assigned both offensive and non-offensive labels. Using the deep sentiment analysis model RoBERTa [7], which has a performance of 81.6 (metrics is the F1 score).² RoB-RT is a state-of-the-art large language model that has been pre-trained using the transformer structure. The model's output represents the likelihood of text being classified into two categories: offensive and non-offensive, with each category being assigned a score ranging from 0 to 1. This research obtains an offensiveness score for each text.

² The classification code is available at <https://github.com/cardiffnlp/tweeteval>

Wolf warrior content In the context of calculating the Wolf-Warrior Value (WWV), the original score refers to the offensiveness score assigned to a particular text or statement, which is a continuous variable that ranges from 0 to 1. Higher scores indicate a greater possibility of offensiveness. As the offensive component proportion rises in a sentence, the algorithm is more inclined to assign a higher probability of being classified as offensive. The increased probability correlates with a higher degree of offensiveness, which considers each word's contribution. Table 1 provides examples. The quadratic transformation for calculating WWV is chosen because it generates a new variable centred around a value of 0.5. It increases rapidly as the offensiveness score deviates from this central point. The rescaling of the offensiveness score in this way is based on the conceptualization of wolf-warrior attitude as offensiveness or a willingness to defend national interests, often expressed in an aggressive or confrontational manner. The WWV calculation seeks to mitigate the influence of nuanced disturbance in the offensiveness score by penalizing moderate values and rewarding extreme ones. Since the offensiveness score ranges from 0 to 1, a score lower than 0.5 indicates a low likelihood of the text being offensive. Therefore, the authors consider WWV to be 0 for such scores. The WWV is calculated as follows:

$$WWV = \begin{cases} (\text{offensive value} - 0.5)^2, & \text{if offensive value} > 0.5 \\ 0, & \text{else} \end{cases}$$

Semantic topic diversity This study operationalizes a variable of information theory, Shannon entropy, using posterior probability derived from the LDA topic model [69]. Shannon Entropy is the most profound and valuable of all diversity indices [49], while LDA is leveraged to assess prior belief on topic-word distribution and topic distribution. LDA is adopted to obtain an optimal number of latent text topics, utilizing coherence as an indicator [85]. As shown in Fig. 3, 16 topics are considered relatively optimal. Next, a Latent Dirichlet Allocation is created using the Python gensim package,³ and the posterior function was used to evaluate the posterior probability of the 16 topics for each piece of text as the following formula. The coherence metric aligns with human evaluations and balances internal measures of information gain and comparisons to human ratings of coherent topics [85]. Therefore, the authors adopt coherence as the determinant of the optimal number of topics for an LDA model. The computing process is as follows:

$$P(\text{Topic}_i | W_1, W_2 \dots W_n) = \frac{P(\text{Topic}_i, W_1, W_2 \dots W_n)}{P(W_1, W_2 \dots W_n)}$$

$$= \frac{P(W_1, W_2 \dots W_n | \text{Topic}_i)}{\sum_j P(W_1, W_2 \dots W_n | \text{Topic}_j) P(\text{Topic}_j)}$$

Entropy(text) = $-\sum_{i=1}^n P(\text{Topic}_i | W_1, W_2 \dots W_n) \times \log(P(\text{Topic}_i | W_1, W_2 \dots W_n))$
 where $W_1, W_2 \dots W_n$ are words constituting the text of a Tweet, Topic_i is derived from LAD calculation.

Humour sense The “wolf warrior” communication acts are not the only component in the Chinese diplomatic communications repertoire [87]. When the need for a different mode of communication arises, humour intonation is also deployed to (re-)

³ <https://radimrehurek.com/gensim/models/ldamodel.html>

Table 1 Examples of texts and their offensive value

offensive value (Types and values)	Text	Author
Low (0.02)	"It's the time you spent on your rose that makes your rose so important." Flowers, balloons and toys are ready at a flower market in Pakistan. Choose one and express your love??? More #AsiaAlbum stories here:	China Xinhua News
Medium (0.32)	#Opinion: Will US under Biden still count on Five Eyes in its anti-China cause? The Five Eyes alliance is a by-product of the Cold War. The international community should reject such a group	Global Times
High (0.67)	Time for U.S. anti-China forces to cease regressive practices!	Zhang heqing
Extremely high (0.85)	"The investigation of the origin of the virus does not help to solve the problem of pandemic control. This is nothing but a stupid and unhelpful political move to cover up the #UnitedStates' attempt to contain China's rise."	Hua Chunying

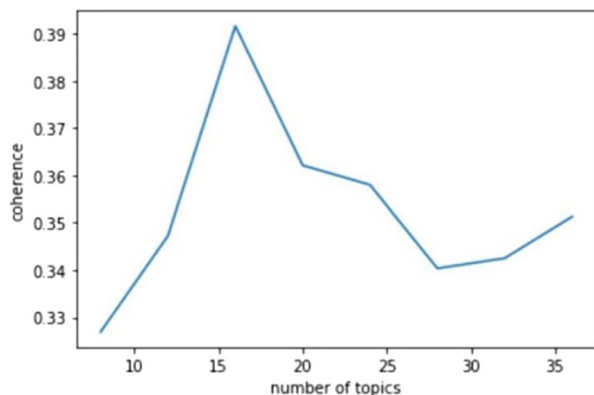
assert diplomatic positions and deflect criticism. The authors employed the Colbert model to measure the level of humour [4]. This state-of-the-art model is evaluated for the binary task of humour detection and provides a humour score ranging from 0 to 1, indicating low to high likelihood, respectively.

Posting skills Notwithstanding that Twitter constrains the length of the text to 280 characters, a few techniques could improve the display effect.. For instance, the hashtag, also known as the “pound sign,” has significant power to transform the way we feel about social media text [52]. Additionally, using pictures, videos, and hyperlinks is also an efficient measure. In this study, posting skills are measured by a package of variables, including the number of hashtags, images, and links in each tweet. By operationalizing posting skills through these elements, the authors aim to capture the various skills that diplomats employ to enhance the impact of their messages on Twitter.

The degree of interaction The degree of interaction may reflect the level of interest or influence that one has on a particular issue or topic, and this may impact the engagement of Twitter users who follow these diplomats. For example, if high-profile diplomats are actively engaging with one another on a particular issue, this may draw more attention and interest from their followers on Twitter. Alternatively, if diplomats are not engaging with one another or are engaging in a negative manner, this may result in lower levels of engagement from Twitter users. It counts the number of “@” users who are mentioned in each tweet as the degree of diplomatic interaction.

Topic related to national core interests The assertive tone [48] and, at times, hostility in China’s diplomatic discourse are closely tied to specific issues that align with Chinese core interests[29], such as territorial disputes and accusations of human rights violations. Consequently, the increased engagement of Twitter users may be attributed to the heightened salience of these issues rather than solely to the rhetoric employed in the messages. In order to mitigate potential misinterpretations, researchers employ topic modelling, specifically Latent Dirichlet Allocation (LDA), to identify topics associated with national core interests by hand. Subsequently, they calculate the probability that a

Fig. 3 Coherence changing with the LDA parameter: number of topics



given text pertains to these topics, allowing for a more nuanced understanding of the influence of core-interest-related issues on diplomatic communication.

Text-based linguistic variables To control for unobserved heterogeneity due to text-based key characteristics, following [2], authors choose the same control variables: $\log(\text{WC})$, the log mean number of word count per tweet; $\log(\text{WPS})$, the log mean number of words count per sentence; and LongW , the mean per cent of words in the text that are longer than six letters. The Log transformation is commonly used to transform variables with skewed distributions and reduce the impact of outliers. As these linguistic features often exhibit a skewed distribution, log transformation can help normalize their distribution and improve the robustness of the analysis. Therefore, the authors consider these specific linguistic features and use the corresponding log-transformed variables as text-based linguistic variables in the study.

In this study, the authors focused on retweet numbers as the primary measure of audience engagement because it is a direct measure of how far a message is being disseminated, indicating that the content has resonated with the audience to the extent that they are willing to share it with their own followers. This makes retweets a suitable metric to gauge the impact of wolf-warrior diplomacy on information spread.

The definitions of the variables used in this study are summarized in Table 2.

Statistical Model

In conclusion, according to the formerly mentioned variables, the authors propose an empirical analysis framework in Fig. 4. The corresponding variables illustrate in Table 2. Firstly, the authors collect data from Twitter, then the authors obtain two variables (wolf warrior content and semantic topic diversity) by performing the two text mining models. Finally, the authors adopt an empirical analysis, multilevel negative binomial regression, to explore the impact of Chinese Twitter diplomacy.

To offer a more comprehensive explanation of the use of a negative binomial regression model, the authors clarify why time was excluded as a variable. While time is an important factor that can influence retweet counts, the authors limited their focus to a specific time range (2020–2021) to minimize the influence of external factors on retweet counts. Thus, the authors decided not to use a panel regression model which considers time in this study.

The authors developed three multilevel negative binomial models operating at the user level: a base model, Model 1, and a modified model with a moderator (Model 2). Following previous research [69], the authors first test the base model. After conducting initial tests on the base model with control variables, the authors proceeded to test Model 1, which comprises of several independent variables divided into four categories: aggressive content (WWV), semantic topic diversity (TopicDiversity), posting skills (Hashtag, Photo, Video), and degree of interaction (Mention). To

evaluate the moderating effect, the authors then constructed Model 2, which incorporates the moderator (Humour). Table 2 provides a detailed overview of the variables and their respective definitions. The three models were presented as follows:

Base:

$$\text{Retweet}_i = \exp[c_i + \beta_0 + \beta_1 \text{WWV}_i + \beta_2 \text{core_interests}_i + \beta_{3\sim 5} \text{TweetsLinguisticControls}_i + \beta_6 \text{User} + \varepsilon_i]$$

Model 1:

$$\text{Retweet}_i = \exp[c_i + \beta_0 + \beta_1 \text{WWV}_i + \beta_2 \text{TopicDiversity}_i + \beta_3 \text{HashTag}_i + \beta_4 \text{Photo}_i + \beta_5 \text{Video}_i + \beta_6 \text{Mention}_i + \beta_7 \text{core_interests}_i + \beta_{8\sim 10} \text{TweetsLinguisticControls}_i + \beta_{11} \text{User} + \varepsilon_i]$$

Model 2:

$$\text{Retweet}_i = \exp[c_i + \beta_0 + \beta_1 \text{WWV}_i] + \beta_2 \text{TopicDiversity}_i + \beta_3 \text{HashTag}_i + \beta_4 \text{Photo}_i + \beta_5 \text{Video}_i + \beta_6 \text{Mention}_i + \beta_7 \text{core_interests}_i + \beta_8 \text{WWV}_i \times \text{Humour}_i + \beta_9 \text{TopicDiversity}_i \times \text{Humour}_i + \beta_{10\sim 12} \text{TweetsLinguisticControls}_i + \beta_{13} \text{User} \times \varepsilon_i$$

where $\beta_{6\sim 8} \text{TweetsLinguisticControls}_i = \beta_6 * \text{Log}(\text{lenth}_i + 1) + \beta_7 * \text{Log}(\text{sent_len} + 1) + \beta_8 * \text{Log}(\text{long_word} + 1)$. User is a dummy variable term that captures differences in followers, registration time, and other relevant factors between different accounts.

To identify the most suitable regression method for the analysis, the authors tested four different methods: Ordinary Least Squares (OLS) regression, Poisson regression, negative binomial regression, and zero-inflated Poisson regression. To compare these methods and select the best-fitting model for the dataset, the authors utilized the Akaike Information Criterion (AIC).

The AIC is a statistical measure that evaluates the goodness of fit of a model, while considering both the model's ability to explain the data and its complexity. It can be used to compare different models and select the one that provides the best fit for a given dataset [3]. Computationally, AIC is calculated as $(-2 \times \log \text{likelihood}) + 2p$, where p represents the number of parameters estimated in the model. The results show in Table 3.

The analysis indicates that the multilevel negative binomial regression model is most appropriate for this study, given that it has the lowest AIC value. This finding is consistent with the nature of the dependent variable, which shows evidence of overdispersion. Multilevel negative binomial regression is a flexible method that can handle overdispersion, which occurs when the variance in the dependent variable is greater than what would be expected based on the mean. By selecting multilevel negative binomial regression, the authors can better account for this overdispersion, which leads to more accurate and reliable results.

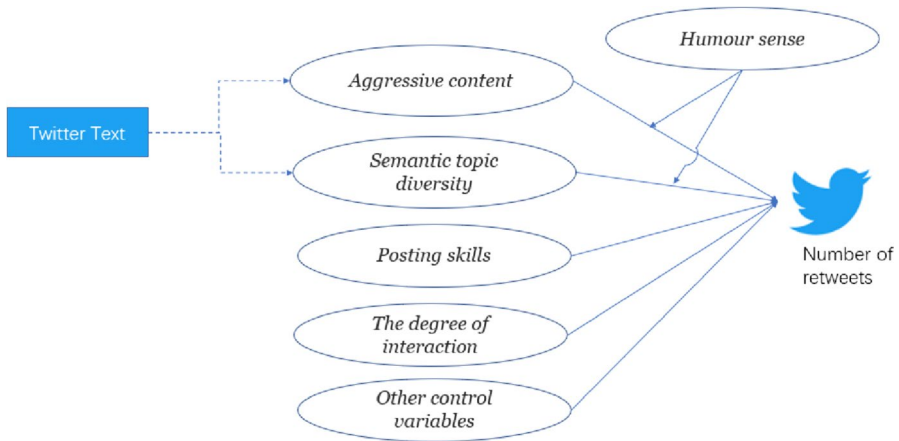


Fig. 4 Research Design

Data Collection

The authors retrieved 482,119 publicly available tweets posted by 20 official accounts within the timeline from 1 January 2010 to 28 August 2021, leveraging the Twint package, an open-source Twitter scraping tool widely used by academia [1, 1, 13, 74, 78]. The 20 official accounts can be divided into two categories. The first is individual accounts, including ambassadors, diplomats, and officials affiliated with a

Table 2 Summary statistics of tweets posted by diplomats

Variable	Description
<i>Dependent Variable</i>	
Retweet	Number of retweets per Tweet
<i>Independent Variable</i>	
WWV	wolf warrior value per Tweet range from 0 to 1
TopicDiversity	Calculated the volume of information per Tweet
Hashtag	Number of hashtags per Tweet
Photo	Number of photos per Tweet
Video	Number of videos per Tweet
Hyperlinks	Number of hyperlinks per Tweet
Mention	number of “@” users who are mentioned per Tweet
<i>Moderating Variable</i>	
Humour	The score of humour per Tweet, range from 0 to 1
<i>Control Variable</i>	
core_interests	The probability that a given text pertains to topics related to national core interests
lenth	The log number of word count per tweet
sent_len	The log number of words per sentence
long_word	The log number of words in the text that are longer than six letters

Table 3 AIC comparison of four model

Regression method	OLS	Poisson regression	Negative binomial regression	Zero-inflated poisson regression
AIC	1,847,351	6,851,805	1,015,847	1,080,364

state-funded institution. The latter is organization accounts encompassing embassies and Chinese media controlled by the central government. All accounts selected are considered public diplomacy tools of the Chinese government, with the clear intention to “telling China’s stories well” under the same guiding principle.

Before data collection, the authors first used keyword searches, either independently or in combination, such as China, spokesperson, ambassador, and embassy, to obtain information on some diplomat accounts. The authors then utilized follower and following lists to find other potential official accounts since there is often considerable interaction among these official accounts. The authors cannot guarantee that all personal accounts of diplomats have been collected, as some accounts may be private and not used for official purposes, or they may have too little influence to be included. However, the dataset is supposed to cover most of the influential accounts held and managed by Chinese officials for public diplomacy use. All tweets posted by selected accounts were included in the dataset Table 4.

The correlation coefficient matrix is shown in Table 5. All variables do not exhibit large collinearity except for the number of like, reply, and retweet. However, neither like nor reply is one of the variables in the regression model, preventing multicollinearity.

Findings

Our findings indicate the significance of the factors influencing audience engagement within the realm of Twitter diplomacy. Table 6 presents the regression results, wherein the base model includes only the independent variable WWV, while Model 1 considers additional variables, excluding the moderator. The findings across all three models show a consistent pattern, indicating that the wolf warrior attitude expressed in the text has a significant positive effect on audience engagement, leading to a larger scale of information dissemination (**WWV**, $\beta = 10.49$, $p < 0.01$). This confirms hypothesis H1, which states that the implementation of “wolf-warrior diplomacy” has significantly increased the scale of Chinese diplomatic engagement with its Twitter audience.

Moreover, the results suggest that a high degree of semantic topic diversity is positively associated with audience engagement (**TopicDiversity**, $\beta = 0.22$, $p < 0.01$), supporting hypothesis H2, which proposes that a diversity of information positively influences audience engagement in Chinese Twitter diplomacy. Additionally, posting with videos has a significant positive impact on engagement (**Video**, $\beta = 0.82$, $p < 0.01$), while photos (**Photo**, $\beta = -0.14$, $p < 0.01$) and hyperlinks (**Hyperlink**, $\beta = -0.13$, $p < 0.01$) have the opposite effects. Furthermore, the number of interactions (“@”) significantly contributes to audience engagement (**Mention**, $\beta = 0.15$, $p < 0.01$).

In Model 2, after introducing the moderator, humour, the effect of the interaction term between humour sense and WWV on audience engagement is positive and

Table 4 Basic features of selected accounts

Handle(username)	Self-description	Join Year & Month	Followers
AmbCuiTiankai	Former Chinese Ambassador to the US	2019-06	148,192
CathayPak	Embassy of the People's Republic of China in the Islamic Republic of Pakistan	2015-09	130,020
chenweihua	China Daily EU Bureau Chief/columnist. Ex-DC, NY chief correspondent. Knight Fellow Stanford, WPI Fellow Macalester, Freedom Forum Fellow UHManoa Views My Own!!	2009-11	106,964
China_Amb_India	Chinese Ambassador to India	2017-12	89,691
ChinaConsulate	Official Twitter Account of Consulate General of the People's Republic of China in Chicago, IL, U.S	2017-02	4,000
Chinaembmanila	The official twitter account of the Embassy of the People's Republic of China in the Republic of the Philippines	2017-02	13,336
ChinaEmbOttawa	The official twitter account of the Embassy of the People's Republic of China in Canada	2014-06	8,186
ChinaEmSlovenia	The official twitter account of the Embassy of the People's Republic of China in the Republic of Slovenia	2017-12	2,936
ChinaEUMission	Mission of the People's Republic of China to the EU. Tweeting about #ChinaEU relations	2013-09	22,356
ChinaMission2un	The official twitter account of the Permanent Mission of the People's Republic of China to the United Nations	2015-04	73,060
ChinaMissionGva	This is the Permanent Mission of the People's Republic of China to the United Nations Office at Geneva and other International Organizations in Switzerland	2015-05	3,799
ChineseEmb_Uga	None	2018-01	6,577
ChineseZimbabwe	Chinese Embassy in Zimbabwe	2018-09	9,704
cidaofficial	We are the China International Development Cooperation Agency, with a primary mission of providing Chinese foreign assistance to developing countries	2020-03	10,966
globaltimesnews	China's national English language newspaper, under the People's Daily. https://t.co/pKmPtcE99D	2009-06	1,876,205
SpokespersonCHN	Foreign Ministry Spokesperson; Director General, Information Department, MFA PRC; Get to know us more;	2019-10	960,258
weiasacas	Embajador de China en Panamá Embajador de China en Panamá	2017-11	17,242
XHNNews	We are public media for the public good. We don't pursue corporate interests, nor will we yield to the pressure of ideological stigmatization and political bias	2012-02	12,376,807
zhang_heqing	Counsellor & Director. Personal account. Tweets are only personal views, Retweets are not necessarily endorsements	2020-05	78,873
zlj517	Spokesman & DDC, Information Department, Foreign Ministry	2010-05-08	1,001,748

*The data is up to October 2021

Table 5 Correlation coefficient matrix

	like	reply	retweet	hash	entropy	WV	photo	url	mention	humour	entities	length	sent_len	long_word	core_interes
like															
reply	0.63														
retweet	0.84	0.55													
hash	0.01	0.03	0.03												
entropy	0.01	0.01	0.01	0.06											
WV	0.04	0.04	0.02	-0.18	0.07										
photo	-0.03	-0.02	-0.01	0.05	-0.01	-0.17									
url	-0.07	-0.02	-0.05	-0.01	0	-0.14	0.38								
mention	0.01	0	0.02	0.01	0	-0.02	-0.07	0.03							
humour	0.08	0.06	0.06	0.21	0.09	0.05	-0.25	-0.35	0.02						
entities	0	0.01	0.01	0.18	0.14	-0.11	0.06	-0.05	0.02	0.09					
length	0.02	0.04	0.02	0.26	0.25	-0.06	-0.02	-0.13	-0.02	-0.02	0.43				
sent_len	-0.04	-0.02	-0.02	0.07	0.04	-0.14	0.24	0.21	-0.02	0.11	0.14	0.25			
long_word	-0.03	-0.02	-0.01	0.13	0.02	-0.18	0.13	0.16	-0.01	0.19	0.09	-0.12	0.08		
core_interest	0.02	0.02	0.01	-0.03	-0.13	0.05	-0.07	-0.08	0.01	-0.03	-0.10	0.01	-0.07	0.117	

Table 6 Regression results

DV: Retweet	Base	Model 1	Model 2
WWV	8.45*** (2.04)	10.49*** (2.00)	5.47*** (2.83)
TopicDiversity		0.22*** (0.08)	0.20*** (0.08)
HashTag		0.10*** (0.01)	0.11*** (0.01)
Photo		-0.14*** (0.01)	-0.13*** (0.01)
Video		0.82*** (0.05)	0.98*** (0.04)
Hyperlink		-0.13*** (0.03)	-0.14*** (0.03)
Mention		0.15*** (0.05)	0.15*** (0.05)
WWV × Humour			18.84*** (2.32)
TopicDiversity × Humour			0.35*** (0.05)
Core_interests	0.09 (0.07)	0.15** (0.07)	0.15** (0.07)
Log(lenth + 1)	0.50*** (0.03)	0.38*** (0.03)	0.37*** (0.03)
Log(sent_len + 1)	-0.18*** (0.03)	-0.09*** (0.03)	-0.09*** (0.03)
Log(long_word + 1)	0.77*** (0.18)	0.73*** (0.18)	0.72*** (0.18)
Log-likelihood	-519,037	-501,491	-478,290
N	139,542	139,542	139,542

* < 0.1, ** < 0.05, *** < 0.01

significant (**WWV** × **Humour**, $\beta = 18.84$, $p < 0.01$). Additionally, the interaction term between the volume of information and humour sense is negative and significant (**TopicDiversity** × **Humour**, $\beta = 0.35$, $p < 0.01$). These moderating effects support hypothesis H3, which suggests that the use of humour can create a friendly environment that moderates the impact of wolf-warrior diplomacy and the volume of information, leading to increased audience engagement on Twitter. To illustrate the nature of the interaction effect, the authors plotted the predicted values of the dependent variable at one standard deviation above and below the mean of the independent variables. As shown in Fig. 5, this provides further support for Hypothesis 3.

In summary, the findings indicate that the wolf warrior attitude, the volume of information posting skills, and humour sense all play significant roles in enhancing audience engagement in Chinese Twitter diplomacy. The authors discuss the results in depth in the discussion section.

To verify the robustness of the model, following [95], the authors filter Tweets that have over 50 retweets. Table 7 shows robust regression results by using the filtered data. The authors, accordingly, can conclude that the findings are valid.

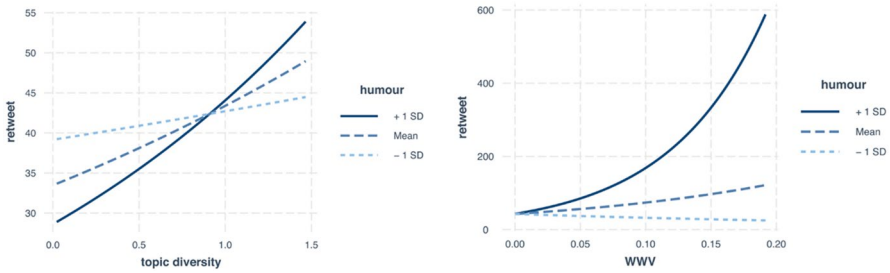


Fig. 5 Interaction of humour sense and topic diversity/WWV

Conclusion

The Chinese government has identified itself as a “major country” (*da guo*), contributing its share to “world peace and development” [65]. China’s “wolf warrior diplomacy” can be understood as a “status claim” for a higher status in the international hierarchy, as it is a rising power questing for great power status [88, 99, 106]. In 2009, the then President Hu Jintao stated that China should “actively get something accomplished” (*jiji yousuo zuowei*) while maintaining the strategy of “keeping a low profile” [73]. President Xi Jinping, Hu’s successor, further introduced the concepts of “*fenfa youwei*”, or “striving for achievement” in 2014 [14]. As Yan Xuetong argues, China has moved away from the low-profile approach, and seeks to strengthen ITS political support [102]. The relatively aggressive narrative of Chinese public diplomacy behaviours on Twitter might demonstrate China’s ambition.

Chinese Twitter diplomacy can be divided into three phases: start-up, growth, and maturity. The transformation of each phase suggests a significant increase in the number of tweets. Political strength motivates these changes, which happened just before or after Xi’s statement on China’s international communication, i.e., “telling China’s stories well” (*jianghao zhongguo gushi*) [100] and “true, multi-dimensional and panoramic” (*zhenshi liti quanmian*) [101]. In this study, the authors further examined text features of Chinese Twitter diplomacy to characterize the impacts of wolf warrior diplomacy and other posting skills on audience engagement, quantified by the number of retweets.

China’s “wolf warrior diplomacy” significantly expands its readership on Twitter ($p < 0.01$), despite potentially arousing negative emotions due to its aggressive content, particularly during times of crisis [63]. The results verify the hypothesis (H1) that implementing “wolf-warrior diplomacy” has led to a significant increase in the scale of Chinese diplomatic engagement with their Twitter audience. Two factors may contribute to this phenomenon. Firstly, negativity bias has a more substantial impact in this circumstance. As one of the most popular social networking platforms, Twitter has a significantly larger share of influential weak-tie contacts compared to strong-tie social media platforms like Facebook [92]. In this context, people may be less inclined to maintain a positive personal image by reposting friendly or positive content, as they remain primarily anonymous to other users [10]. Consequently, negative emotions can more effectively arouse readers, resulting in greater audience engagement [43, 56].

Table 7 Robust regression analysis results

DV: Retweet	Base	Model 1	Model 2
WWV	8.45*** (2.04)	10.49*** (2.00)	6.89*** (1.91)
TopicDiversity		0.22*** (0.08)	0.55*** (0.07)
HashTag		0.09*** (0.01)	0.15*** (0.10)
Photo		-0.14*** (0.01)	-0.13*** (0.01)
Video		0.82*** (0.05)	0.67*** (0.04)
Hyperlink		-0.13*** (0.03)	-0.22*** (0.01)
Mention		0.15*** (0.05)	0.36*** (0.01)
WWV × Humour			16.17*** (1.77)
TopicDiversity × Humour			0.39*** (0.07)
Core_interests	0.09 (0.08)	0.11** (0.06)	0.12** (0.06)
Log(lenth + 1)	0.50*** (0.03)	0.38*** (0.03)	0.33*** (0.02)
Log(sent_len + 1)	-0.18*** (0.03)	-0.09*** (0.03)	-0.12*** (0.01)
Log(long_word + 1)	0.77*** (0.18)	0.73*** (0.18)	0.73*** (0.18)
Log-likelihood	-183,101	-163,535	-181,264
N	37,324	37,324	37,324

* < 0.1, ** < 0.05, *** < 0.01

Secondly, the shift in Chinese public diplomacy from evading controversy to combative and confrontational has garnered support from certain groups, such as nationalists. While the U.S. has the most significant number of Twitter users, other countries follow closely, such as Japan, India, Turkey, and Saudi Arabia [23]. In essence, the U.S. is often the target of China’s Twitter diplomacy denunciations, which resonates with individuals in these countries who harbor unfavorable views of the U.S. An intriguing observation is that Chinese authorities seem to find this approach practical, which may partially explain why the Chinese government adopts it. The finding extends the negativity bias theory to Twitter diplomacy, highlighting that utilizing emotionally negative expressions in diplomatic tweets captures a greater degree of attention from the audience [56]. However, it’s important to note that this heightened attention doesn’t necessarily equate to agreement with the content presented.

The authors also find a positive correlation between audience engagement and the volume of information presented in a Tweet, supporting the hypothesis that abundant information enhances audience engagement in Chinese Twitter diplomacy (H2). The

professionalism of the account owners can tell part of the story. People are more likely to read complex information when they perceive the information supplier as professional [95]. For example, informative reviews on medical support platforms can help people choose a doctor, whereas informative online restaurant reviews can have the opposite effect [69]. The information overload theory posits that an excess of information may detrimentally affect readers' understanding, resulting in diminished interest and engagement [39, 47]. However, this theory's applicability needs to be improved in the context of Twitter diplomacy. As information richness grows, the attractiveness of the information to readers follows an initial increase and subsequent decrease pattern. As such, a moderate abundance of information can prove captivating. Furthermore, the inherent constraint—the character limit of tweets—forestalls tweets from becoming overly intricate and overwhelming for readers.

Moreover, this research sheds light on the effective use of humor by Chinese official Twitter accounts. The findings support the hypothesis that a humorous tone exerts a positive moderating influence on the relationship between the volume of information and retweeting and the relationship between wolf warrior content and retweeting (H3). Sometimes, humor has a transformative impact on how information is conveyed. Chinese diplomats use both humor and offensive language (wolf-warrior content) to counter claims from other countries, enhancing the effectiveness of China's Twitter diplomacy. These results align with previous research suggesting that strategic humor is a fast-emerging, multi-format tool in public diplomacy, effectively promoting state narratives [19]. To conclude, humor can moderate the impact of wolf-warrior diplomacy and the volume of information, leading to increased audience engagement on Twitter.

In addition to the hypotheses that were proved above, the authors also investigated the use of some posting skills. Results show that using hashtags (##) and mentions (@) contributes to attracting audience engagement. Hashtags, an abstract of diplomatic Twitter [22], will increase social media users' self-selected behaviors [52], whereas mentions represent interactions between diplomats, conveying activity and liveliness. The study also finds that video posting significantly enhances audience engagement, while posting with images and hyperlinks negatively impacts it. Some scholars argue that audience attention is limited, and incorporating pictures and hyperlinks may distract from the text [72], potentially dispersing focus and reducing retweeting behaviors. While no contradictory evidence is discovered, a closer and qualitative examination of specific tweets by Chinese diplomats containing images and hyperlinks reveals that many of these tweets simply post information with hyperlinks linked to press releases published by media agencies or their official websites. As previously discussed, this type of Twitter usage can be categorized as primary level, primarily conveying official information rather than personalized information and emotional content [41]. Therefore, the authors argue that posting with images and hyperlinks is often associated with a basic level of Twitter usage, resulting in lower audience engagement.

Like other rising powers, China faces the dilemma between expanding its power and avoiding deterrence by the dominant power. Yan and Sun [103] argue that the rising power is more likely to prevail through a low-key tactic when there is a relatively significant disparity between it and the dominant power. Since the Reform and Open Up policy, Chinese officials often avoided labeling China as a revisionist state. As Fu Ying, a senior diplomat and the Chairperson of the National People's

Congress Foreign Affairs Committee, emphasized at a high-level conference that China is part of the international order with “neither intention nor ability” (*wuyi ye wuli*) to overthrow the existing order [35]. However, the continuous growth of a rising power will sooner or later raise the attention and nervousness of the dominant power, resulting in unavoidable competition. There must be a time when a rising power chooses to act more aggressively, which is also the time when the rising power cannot further claim a higher status with low-key strategies. The wolf-warrior behavior of Chinese diplomats on Twitter has shown the trend.

Over the decades, China has demonstrated a willingness to play a more important role in international society. As a rising power, China has attempted to advance its stature within the global system and search for a greater voice [53]. However, the status claims of China have been rejected by the United States in recent years, resulting in a series of conflicts between the two major powers. This might also be why Chinese diplomats have acted more aggressively recently. The authors suggest that future research should continue to explore the nuances of diplomatic communication strategies in the digital age, as they offer valuable insights into understanding the complex interplay of power, status, and influence.

This study has limitations, such as the inability to comprehensively capture various facets of wolf warrior diplomacy by focusing solely on measuring offensiveness. In future research, exploring improved quantitative methods to encapsulate the nuances of wolf warrior diplomacy better remains a promising avenue for further investigation. Additionally, given that both wolf warrior diplomacy and populism share the goal of establishing a direct connection with the people, it is intriguing to consider whether warrior diplomats are adopting or learning from the tactics of populists.

In conclusion, the article explores the effectiveness of China’s “wolf warrior” diplomacy strategy on Twitter, focusing on how the offensive expression employed by state-affiliated Chinese media and diplomats influence audience engagement. Utilizing advanced text mining and natural language processing techniques, the study is, to the best of the authors’ knowledge, the first to quantitatively analyze the impact of China’s wolf warrior diplomacy on audience engagement, with a particular focus on retweeting behaviors. Incorporating advanced attitude detection models and econometric methods, it further investigates how emotions, content features, and information volume affect the reach and impact of these official Twitter messages. The research is supposed to enrich the scholarly debates on public diplomacy, social media communication, and the dynamics of information dissemination. This study analyzes Twitter content directly linked to the Chinese government, revealing both consistency and significance in the findings.

Acknowledgements The authors express their sincere thankfulness to the participants of the 16th Biennial Conference of the Australasian Association for Communist and Post-communist Studies (AACaPS) for their valuable comments and suggestions, especially Dr Fengshi Wu and Dr Deborah Barros Leal Farias. In addition, Mr Junda Chen has provided technical support for data collection; Mr. Nitin Bisht and Ms Xiaotong Jiao has proofread the manuscript. The authors also thank all Bilibili users who subscribe Xiao Q Bu Shi Dao Mang Quan for their continuous support. Finally, the authors are grateful to the editors and the anonymous peer reviewers of this article for their support. All shortcomings and mistakes in this article are entirely our own.

Author Contributions These authors jointly supervised this work and contributed equally.

Funding Open Access funding enabled and organized by CAUL and its Member Institutions

Data Availability The datasets generated during and/or analysed during the current study are available from the corresponding author upon reasonable request.

Declarations

Ethical Approval This article does not contain any studies with human participants performed by any of the authors.

Informed Consent This article does not contain any studies with human participants performed by any of the authors.

Competing Interests The authors declare no competing interests.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

References

1. Agustningsih, Kartikasari Kusuma, Ema Utami, and Hanif Al Fatta. 2021. Sentiment Analysis of COVID-19 Vaccine on Twitter Social Media: Systematic Literature Review. In *2021 IEEE 5th International Conference on Information Technology, Information Systems and Electrical Engineering (ICITISEE)*, 121–126.
2. Aleti, Torgeir, Jason I. Pallant, Annamaria Tuan, and Tom van Laer. 2019. Tweeting with the Stars: Automated Text Analysis of the Effect of Celebrity Social Media Communications on Consumer Word of Mouth. *Journal of Interactive Marketing* 48. SAGE Publications: 17–32.
3. Anderson, David R., and Kenneth P. Burnham. 2002. Avoiding pitfalls when using information-theoretic methods. *The Journal of wildlife management*. JSTOR: 912–918.
4. Annamoradnejad, Issa, and Gohar Zoghi. 2024. Colbert: Using bert sentence embedding for humor detection. *Expert Systems with Applications* 1: 123685.
5. Asdourian, Bruno, and Diana Ingenhoff. 2020. A Framework of City Diplomacy on Positive Outcomes and Negative Emotional Engagement: How to Enhance the International Role of Cities and City/Mayor Branding on Twitter? In *City Diplomacy: Current Trends and Future Prospects*, ed. Sohaela Amiri and Efe Sevin, 83–109. Palgrave Macmillan Series in Global Public Diplomacy. Cham: Springer International Publishing.
6. Baik, Jason M., Thet H. Nyein, and Sepideh Modrek. 2022. Social Media Activism and Convergence in Tweet Topics After the Initial #MeToo Movement for Two Distinct Groups of Twitter Users. *Journal of Interpersonal Violence* 37: NP13603–NP13622.
7. Barbieri, Francesco, Jose Camacho-Collados, Luis Espinosa Anke, and Leonardo Neves. 2020. TweetEval: Unified Benchmark and Comparative Evaluation for Tweet Classification. In *Findings of the Association for Computational Linguistics: EMNLP 2020*, ed. Trevor Cohn, Yulan He, and Yang Liu, 1644–1650. Online: Association for Computational Linguistics.
8. Bátora, Jozef. 2009. *Foreign Ministries and the Information Revolution: Going Virtual?* Leiden, The Netherlands: Brill | Nijhoff.

9. Bátorá, Jozef, and Brian Hocking. 2008. Bilateral Diplomacy in the European Union: Towards “post-modern” Patterns? *Discussion Papers in Diplomacy*: 1–28.
10. Berger, Jonah, and Katy Milkman. 2010. Social transmission, emotion, and the virality of online content. *Wharton research paper* 106: 1–52.
11. Berry, Chris. 2018. Wolf Warrior 2: Imagining the Chinese Century. *Film Quarterly* 72: 38–44.
12. Bjola, Corneliu, Jennifer Cassidy, and Ilan Manor. 2019. Public Diplomacy in the Digital Age. *The Hague Journal of Diplomacy* 14. Brill Nijhoff: 83–101.
13. Bonsón, Enrique, David Perea, and Michaela Bednárová. 2019. Twitter as a tool for citizen engagement: An empirical study of the Andalusian municipalities. *Government Information Quarterly* 36: 480–489.
14. Brady, Anne-Marie. 2014. *Chinese Foreign Policy: A New Era Dawns*, Wilson Center. Available at: <https://www.wilsoncenter.org/article/chinese-foreign-policy-new-era-dawns>. Accessed 8 Jul 2023.
15. Burgess, Jean, and Nancy K. Baym. 2020. *Twitter: A biography*. New York: New York University Press.
16. Butwin, Betsy A. 2015. #Trademarklaw: Protecting and Maximizing the Value of Trademarks in an Evolving Social Media Marketplace. *Cybaris: An Intellectual Property Law Review* 7: 110.
17. Chen, Dingding, and Jianwei Wang. 2011. Lying Low No More? China’s New Thinking on the Tao Guang Yang Hui Strategy. *China: An International Journal* 09: 195–216.
18. Cheng, Dean. 2020. Challenging China’s “Wolf Warrior” Diplomats. *Heritage Foundation Backgrounder* 3504: 1–10.
19. Chernobrov, Dmitry. 2022. Strategic humour: Public diplomacy and comic framing of foreign policy issues. *The British Journal of Politics and International Relations* 24. SAGE Publications: 277–296.
20. Chhabra, Radhika. 2020. Twitter Diplomacy: A Brief Analysis. *ORF*. January 20.
21. Cho, Seong Eun, and Han Woo Park. 2012. Government organizations’ innovative use of the Internet: The case of the Twitter activity of South Korea’s Ministry for Food, Agriculture, Forestry and Fisheries. *Scientometrics* 90: 9–23. <https://doi.org/10.1007/s11192-011-0519-2>.
22. Collins, Stephen D., Jeff R. DeWitt, and Rebecca K. LeFebvre. 2019. Hashtag diplomacy: Twitter as a tool for engaging in public diplomacy and promoting US foreign policy. *Place Branding and Public Diplomacy* 15: 78–96.
23. Countries with most Twitter users 2022. 2023. *Statista*. Available at: <https://www.statista.com/statistics/242606/number-of-active-twitter-users-in-selected-countries/>. Accessed 8 Jan 2023.
24. Cross, Mai’a K. Davis. 2013. Conceptualizing European Public Diplomacy. In *European Public Diplomacy*, ed. Mai’a K. Davis Cross and Jan Melissen, 1–11. New York: Palgrave Macmillan US.
25. Cull, Nicholas J. 2011. WikiLeaks, public diplomacy 2.0 and the state of digital public diplomacy. *Place Branding and Public Diplomacy* 7: 1–8.
26. Cutlip, Scott M. 2013. *Public Relations History: From the 17th to the 20th Century: The Antecedents*. New York: Routledge.
27. d’Hooghe, Ingrid. 2005. Public Diplomacy in the People’s Republic of China. In *The New Public Diplomacy: Soft Power in International Relations*, ed. Jan Melissen, 88–105. Studies in Diplomacy and International Relations. London: Palgrave Macmillan UK.
28. Daekwon, Son. 2017. Xi Jinping Thought Vs. Deng Xiaoping Theory, *The Diplomat*. Available at: <https://thediplomat.com/2017/10/xi-jinping-thought-vs-deng-xiaoping-theory/>. Accessed 8 Nov 2022.
29. Dai, Yaoyao, and Luwei Rose Luqiu. 2022. Wolf Warriors and Diplomacy in the New Era: An Empirical Analysis of China’s Diplomatic Language. *China Review* 22: 253–283.
30. Davies, Christie. 2014. Political ridicule and humour under socialism. *The European Journal of Humour Research* 2. Krakowskie Towarzystwo Popularyzowania Wiedzy o Komunikacji Językowej Tertium: 1–27.
31. Davis, Karen. 2001. Universal coverage in the United States: Lessons from experience of the 20th century. *Journal of Urban Health* 78: 46–58.
32. Dember, William N., and Larry Penwell. 1980. Happiness, depression, and the Pollyanna principle. *Bulletin of the Psychonomic Society* 15: 321–323.
33. Duncombe, Constance. 2017. Twitter and transformative diplomacy: Social media and Iran–US relations. *International Affairs* 93: 545–562. <https://doi.org/10.1093/ia/iax048>.
34. Eun, Yong-Soo. 2022. Alternative Order Without Alternative Norms? *Fudan Journal of the Humanities and Social Sciences* 15: 227–246.

35. Fu, Ying. 2015. Zai Gongtong de Wuyan Xia - Zhongguo de Quanguo Zhixu Guan [Under the Same Roof: China's View of Global Order] presented at the Understanding China Conference, November 1, Beijing.
36. Gilboa, Eytan. 2008. Searching for a theory of public diplomacy. *Annals of the American Academy of Political and Social Science* 616: 55–77.
37. Grinberg, Nir, Kenneth Joseph, Lisa Friedland, Briony Swire-Thompson, and David Lazer. 2019. Fake news on Twitter during the 2016 U.S. presidential election. *Science* 363. American Association for the Advancement of Science: 374–378.
38. Gruzd, Anatoliy, James Lannigan, and Kevin Quigley. 2018. Examining government cross-platform engagement in social media: Instagram vs Twitter and the big lift project. *Government Information Quarterly* 35: 579–587.
39. Guan, Lu., Hai Liang, and Jonathan J. H. Zhu. 2022. Predicting reposting latency of news content in social media: A focus on issue attention, temporal usage pattern, and information redundancy. *Computers in Human Behavior* 127: 107080.
40. Haro-de-Rosario, Arturo, Alejandro Sáez-Martín, and María del Carmen Caba-Pérez. 2018. Using social media to enhance citizen engagement with local government: Twitter or Facebook? *New media & society* 20. SAGE Publications Sage UK: London, England: 29–49.
41. Heine, Jorge, and Joseph F. Turcotte. 2012. Tweeting as Statecraft: How, Against All Odds, Twitter Is Changing the World's Second Oldest Profession. *Crossroads: The Macedonian Foreign Policy Journal* 3: 59–72.
42. Hille, Kathrin. 2020. 'Wolf warrior' diplomats reveal China's ambitions. *Financial Times*, May 12.
43. Hornik, Jacob, Rinat Shaanan Satchi, Ludovica Cesareo, and Alberto Pastore. 2015. Information dissemination via electronic word-of-mouth: Good news travels fast, bad news travels faster! *Computers in Human Behavior* 45: 273–280.
44. Hua, Chunying. 2020. Foreign Ministry Spokesperson Hua Chunying's Regular Press Conference on June 12, 2020. *Ministry of Foreign Affairs of The People's Republic of China*. June 12.
45. Huszár, Ferenc, Sofia Ira Ktena, Conor O'Brien, Luca Belli, Andrew Schlaikjer, and Moritz Hardt. 2022. Algorithmic amplification of politics on Twitter. *Proceedings of the National Academy of Sciences* 119. Proceedings of the National Academy of Sciences: e2025334119.
46. Ittefaq, Muhammad. 2019. Digital diplomacy via social networks: A cross-national analysis of governmental usage of Facebook and Twitter for digital engagement. *Journal of Contemporary Eastern Asia* 18: 49–69.
47. Ji, Qihao, Louisa Ha, and Ulla Sypher. 2014. The role of news media use and demographic characteristics in the possibility of information overload prediction. *International Journal of Communication* 8: 16.
48. Johnston, Alastair Iain. 2013. How New and Assertive Is China's New Assertiveness? *International Security* 37: 7–48.
49. Jost, Lou. 2006. Entropy and diversity. *Oikos* 113: 363–375.
50. Khan, M. Laeeq, Muhammad Ittefaq, Yadira Ixchel Martínez Pantoja, Muhammad Mustafa Raziq, and Aqdas Malik. 2021. Public Engagement Model to Analyze Digital Diplomacy on Twitter: A Social Media Analytics Framework. *International Journal of Communication (19328036)* 15. University of Southern California, USC Annenberg Press: 1741–1769.
51. Kopper, Akos. 2021. The use of humour in diplomatic tweets: The affiliative potential of ridicule. *Cooperation and Conflict* 56. SAGE Publications Ltd: 309–327.
52. Kumar, Naveen, Liangfei Qiu, and Subodha Kumar. 2022. A Hashtag Is Worth a Thousand Words: An Empirical Investigation of Social Media Strategies in Trademarking Hashtags. *Information Systems Research* 33: 1403–1427.
53. Lanteigne, Marc. 2005. *China and international institutions: alternate paths to global power*. Asian Security Studies. London: Routledge.
54. Lazer, David, Eszter Hargittai, Deen Freelon, Sandra Gonzalez-Bailon, Kevin Munger, Katherine Ognyanova, and Jason Radford. 2021. Meaningful measures of human society in the twenty-first century. *Nature* 595. Nature Publishing Group: 189–196.
55. Lee, Sun Kyong, Nathan J. Lindsey, and Kyun Soo Kim. 2017. The effects of news consumption via social media and news information overload on perceptions of journalistic norms and practices. *Computers in Human Behavior* 75: 254–263.
56. Li, Lifang, Zhiqiang Wang, Qingpeng Zhang, and Hong Wen. 2020. Effect of anger, anxiety, and sadness on the propagation scale of social media posts after natural disasters. *Information Processing & Management* 57: 102313.

57. Liu, Kerry. 2022. The Global Times and The China Threat Narrative: An Empirical Analysis. *Journal of Chinese Political Science* 27: 1–18.
58. Ludwig, Stephan, Tom Van Laer, Ko De Ruyter, and Mike Friedman. 2016. Untangling a web of lies: Exploring automated detection of deception in computer-mediated communication. *Journal of Management Information Systems* 33. Taylor & Francis: 511–541.
59. Lunde, Ingunn. 2016. Hashtag Poetics: Political humour on Russian Twitter. *Zeitschrift für Slawistik* 61. De Gruyter (A): 102–118.
60. Manheim, Jarol B. 1994. *Strategic public diplomacy and American foreign policy: The evolution of influence*. New York: Oxford University Press.
61. Manor, Ilan, and Corneliu Bjola. 2021. Public Diplomacy in the Age of ‘Post-reality.’ In *Public Diplomacy and the Politics of Uncertainty*, ed. Pawel Surowiec and Ilan Manor, 111–143. Palgrave Macmillan Series in Global Public Diplomacy. Cham: Springer International Publishing.
62. Martin, Peter. 2021. *China’s Civilian Army: The Making of Wolf Warrior Diplomacy*. Oxford: University Press.
63. Mattingly, Daniel C., and James Sundquist. 2022. When does public diplomacy work? Evidence from China’s “wolf warrior” diplomats. *Political Science Research and Methods*. Cambridge University Press: 1–9.
64. Menon, Shivshankar. 2016. China, the World and India. *China Report* 52: 129–137.
65. MoFA of China. 2020. Position Paper of the People’s Republic of China On the 75th Anniversary of the United Nations. *Ministry of Foreign Affairs of The People’s Republic of China*. Available at: https://www.fmprc.gov.cn/mfa_eng/wjdt_665385/2649_665393/202009/t20200910_679639.html. Accessed 22 Jul 2022.
66. Natarajan, Kalathmika. 2014. Digital Public Diplomacy and a Strategic Narrative for India. *Strategic Analysis* 38: 91–106.
67. Nye, Joseph S. 2004. *Soft power: The means to success in world politics*, 1st ed. New York: Public Affairs.
68. Oh, Hyelim, Khim-Yong Goh, and Tuan Q. Phan. 2023. Are You What You Tweet? The Impact of Sentiment on Digital News Consumption and Social Media Sharing. *Information Systems Research* 34. INFORMS: 111–136.
69. Ouyang, Peng, Jian-Jun. Wang, and Ai-Chih Jasmine. Chang. 2022. Patients need emotional support: Managing physician disclosure information to attract more patients. *International Journal of Medical Informatics* 158: 104674.
70. Palmer, Alex W. 2021. The Man Behind China’s Aggressive New Voice. *The New York Times*, July 7, sec. Magazine.
71. Papageorgiou, Maria, and Daniella Melo. 2022. China as a Responsible Power Amid the COVID-19 Crisis: Perceptions of Partners and Adversaries on Twitter.
72. Pennycook, Gordon, Ziv Epstein, Mohsen Mosleh, Antonio A. Arechar, Dean Eckles, and David G. Rand. 2021. Shifting attention to accuracy can reduce misinformation online. *Nature* 592. Nature Publishing Group: 590–595.
73. People’s Daily. 2016. “Hu Jintao Wenxuan” Disan Juan Zhuyao Pianmu Jieshao [Introduction to the Main Articles in the Third Volume of “Selected Works of Hu Jintao”]. *People’s Daily*, September 23.
74. Praveen, Sv., Rajesh Ittamalla, and Gerard Deepak. 2021. Analyzing the attitude of Indian citizens towards COVID-19 vaccine – A text analytics study. *Diabetes & Metabolic Syndrome: Clinical Research & Reviews* 15: 595–599.
75. Qin, Qian, Ziyu Li, and Xiaotong Jiao. 2021. Public Opinion on the Death Penalty in Mainland China and Taiwan. *China Report* 57: 327–345. <https://doi.org/10.1177/00094455211023909>.
76. Rawnsley, Gary. 2012. Approaches to soft power and public diplomacy in China and Taiwan. *The Journal of International Communication* 18. Routledge: 121–135.
77. Roetzel, Peter Gordon. 2019. Information overload in the information age: A review of the literature from business administration, business psychology, and related disciplines with a bibliometric approach and framework development. *Business Research* 12: 479–522.
78. Santoni, Victor, and Samuel Rufat. 2021. How fast is fast enough? Twitter usability during emergencies. *Geoforum* 124: 20–35.
79. Saxton, Gregory D., and Chao Guo. 2014. Online stakeholder targeting and the acquisition of social media capital. *International Journal of Nonprofit and Voluntary Sector Marketing* 19: 286–300.
80. Sevin, Efe, and Diana Ingenhoff. 2018. Public Diplomacy on Social Media: Analyzing Networks and Content. *International Journal of Communication* 12: 23.

81. Shen, Yaxin. 2015. Xi Jinping Zhihui Jiangshu Zhongguo Gushi Rang Shijie Dudong Zhongguo [Xi Jinping wisely tells the “China Story,” enabling the world to understand China]. *People.cn*. December 23.
82. Signitzer, Benno H., and Timothy Coombs. 1992. Public relations and public diplomacy: Conceptual convergences. *Public Relations Review* 18: 137–147.
83. Smith, Stephen N. 2021. China’s “Major Country Diplomacy”: Legitimation and Foreign Policy Change. *Foreign Policy Analysis* 17: orab002.
84. Sørensen, Camilla T.N. 2015. The Significance of Xi Jinping’s “Chinese Dream” for Chinese Foreign Policy: From “Tao Guang Yang Hui” to “Fen Fa You Wei.” *Journal of China and International Relations*. Journal of China and International Relations: Vol 3 No 1 (2015).
85. Stevens, Keith, Philip Kegelmeyer, David Andrzejewski, and David Buttler. 2012. Exploring topic coherence over many models and many topics. In *Proceedings of the 2012 joint conference on empirical methods in natural language processing and computational natural language learning*, 952–961.
86. Strauß, Nadine, Sanne Kruike-meier, Heleen van der Meulen, and Guda van Noort. 2015. Digital diplomacy in GCC countries: Strategic communication of Western embassies on Twitter. *Government Information Quarterly* 32: 369–379.
87. Sullivan, Jonathan, and Weixiang Wang. 2022. China’s “Wolf Warrior Diplomacy”: The Interaction of Formal Diplomacy and Cyber-Nationalism. *Journal of Current Chinese Affairs*: 18681026221079841.
88. Taylor, Ian, and Zhangxi Cheng. 2022. China as a ‘rising power’: why the status quo matters. *Third World Quarterly* 43. Routledge: 244–258. <https://doi.org/10.1080/01436597.2021.2005462>.
89. Turcsanyi, Richard Q., Kamil Liškutin, and Michal Mochtak. 2023. Diffusion of Influence? Detecting China’s Footprint in Foreign Policies of Other Countries. *Chinese Political Science Review* 8: 461–486.
90. Twitter. 2022. New user FAQ. *Help Center*.
91. Uysal, Nur, and Jared Schroeder. 2019. Turkey’s Twitter public diplomacy: Towards a “new” cult of personality. *Public Relations Review* 45: 101837.
92. Valenzuela, Sebastián, Teresa Correa, and Homero Gil de Zúñiga. 2018. Ties, Likes, and Tweets: Using Strong and Weak Ties to Explain Differences in Protest Participation Across Facebook and Twitter Use. *Political Communication* 35. Routledge: 117–134.
93. Wang, Wenbin. 2021. Foreign Ministry Spokesperson Wang Wenbin’s Regular Press Conference on June 2, 2021. *Ministry of Foreign Affairs of The People’s Republic of China*. June 2.
94. Wang, Rui, and Weiai Wayne Xu. 2022. Hashtag framing and stakeholder targeting: An affordance perspective on China’s digital public diplomacy campaign during COVID-19. *Journal of Information Technology & Politics* 0. Routledge: 1–19.
95. Wang, Qiang, Wen Zhang, Jian Li, Feng Mai, and Zhenzhong Ma. 2022. Effect of online review sentiment on product sales: The moderating role of review credibility perception. *Computers in Human Behavior* 133: 107272.
96. Waters, Richard D., and Jensen M. Williams. 2011. Squawking, tweeting, cooing, and hooting: Analyzing the communication patterns of government agencies on Twitter. *Journal of Public Affairs* 11: 353–363.
97. Westcott, Ben, and Jiang Steven. 2020. China is embracing a new brand of foreign policy. Here’s what wolf warrior diplomacy means. *CNN*, May 29.
98. Wigand, F. Dianne Lux. 2010. Twitter in Government: Building Relationships One Tweet at a Time. In *2010 Seventh International Conference on Information Technology: New Generations*, 563–567. Las Vegas, NV, USA: IEEE.
99. Wohlforth, William C. 2009. Unipolarity, Status Competition, and Great Power War. *World Politics* 61. [Cambridge University Press, Trustees of Princeton University]: 28–57.
100. Xi, Jinping. 2013. Xi Jinping: Yishi Xingtai Gongzuo shi Dang de Yixiang Jidian Zhongyaoe Gongzuo [Xi Jinping: Ideological Work is an Extremely Important Work of the Party]. *Xinhua Net*. August 20.
101. Xi, Jinping. 2021. Xi Focus: Xi stresses improving China’s international communication capacity. *Xinhua Net*. June 1.
102. Xuetong, Yan. 2014. From Keeping a Low Profile to Striving for Achievement. *The Chinese Journal of International Politics* 7. Oxford University Press: 153–184.
103. Yan, Xuetong, and Xuefeng Sun, ed. 2005. *Zhongguo jueqi qi zhanlie [The rise of China and its strategy]*. Shi Jie Zheng Zhi Yan Jiu Cong Shu = Series of World Politics. Beijing: Peking University Press.
104. Zampieri, Marcos, Shervin Malmasi, Preslav Nakov, Sara Rosenthal, Noura Farra, and Ritesh Kumar. 2019. SemEval-2019 Task 6: Identifying and Categorizing Offensive Language in Social

- Media (OffensEval). In *Proceedings of the 13th International Workshop on Semantic Evaluation*, 75–86. Minneapolis, Minnesota, USA: Association for Computational Linguistics.
105. Zeng, Jing. 2020. Twitter has become a new battleground for China's wolf-warrior diplomats. *The Guardian*. December 2.
106. Zhao, Suisheng. 2016. China as a Rising Power Versus the US-led World Order. *Rising Powers Quarterly* 1: 13–21.

Linjiang Guo is a Ph.D. student at the University of Technology Sydney, where he is pursuing his academic endeavors. His research focus lies in the fields of reinforcement learning and social computing, both of which captivate his intellectual curiosity.

Qin Qian (Him Ceon) is currently a Ph.D. candidate and Casual Academic at the School of Social Sciences, University of New South Wales, Australia. Qian's research interests cover International Relations, UN System, International Law, SDG and Development Studies. He previously worked for different agencies within the UN System where he gained practical expertise in global governance. Additionally, he is an active member of the Australian Political Studies Association and the Asian Studies Association of Australia.