**Digital Soft Power Clashes**

**A Study of Messaging During Covid-19**

**Draft Paper.**

**Please Contact the Corresponding Author for Citation Information.**

Di Wu, Tongji University

Efe Sevin, Towson University, esevin@towson.edu

Abstract

This study looks at how countries formulate and articulate their digital public diplomacy messages within the context of Covid-19 which came both as an external shock and a crisis for states’ images and reputations. We position the communicative outcomes of this pandemic as an exploratory case to discuss how countries use social media to engage with target audiences surrounding contentious topics. We study American and Chinese messaging on Twitter about Covid-19 employing an analytical model developed from the signalling theory. Using a dataset of 1512 tweets coming from nine different American and Chinese accounts, we investigated their signal reliability and strength. Our findings indicate that while the two countries were both on the offense and defence simultaneously, they adopted different strategies and tactics in terms of signalling.

Keywords

Twitter, digital diplomacy, Covid-19, signalling, China, US

# 1 Introduction

Since the initial cases of unknown cause pneumonia were reported in late 2019,[[1]](#footnote-1) our personal and professional lives have been altered over and over by COVID-19-related measures and changes. It is not surprising that a pandemic lasting well over two years has influenced virtually all aspects of our lives. Our field of study, public diplomacy, was no exception to these changes. As the famous quote by Edward R. Murrow claims, public diplomacy relies on the last three feet, referring to interpersonal contacts and communications.[[2]](#footnote-2) When health officials recommended the public maintain a six feet social distance among individuals, it became impossible to engage in many public diplomacy activities, ranging from student exchanges to cultural festivals. Digital platforms turned out to be a substitute, helping countries present their narratives - how they wanted to frame COVID-19 and their responses in their stories.

Virtual three feet discussions have already been a part of public diplomacy.[[3]](#footnote-3) Digital public diplomacy was unavoidable as more aspects of social life were being penetrated by new technologies.[[4]](#footnote-4) COVID-19, we argue, accelerated this process at least in terms of soft power efforts. However, first of all, the alternative – the last physical three feet - was no longer a viable option. Second, as people spend more time in front of their computers and on digital platforms, these platforms also increased their prominence as information resources.[[5]](#footnote-5) Nations also felt the need to engage with their audiences and manage their images digitally.[[6]](#footnote-6) In order to do so, they had to navigate this relatively new communication environment with increasing uncertainty and a new agenda.

In this study, we look at how the US and Chinese used Twitter for digital public diplomacy during the Covid-19 pandemic. We aim to understand how countries formulate and articulate their messages, and how - or sometimes whether - these messages come together to produce a coherent narrative. Specifically, we are exploring their signalling strategies and tactics, focusing on signalling cost and strength. The rest of the paper is arranged as follows. First, it introduces the background of our research, which combines the impact of Covid-19 and US-China strategic competition. Next, the paper reviews the literature on digital public diplomacy and the signalling theory with a discussion on the analytical model. Then it explains the research methodology before moving on to the empirical findings, discussions of the findings and implications. Last, the paper concludes with a summary and limitations.

# 2 Background

## 2.1 *The Impact of COVID-19*

COVID-19 pandemic presented a global challenge, one that required coordination and cooperation to tackle. On one hand, COVID-19 was not the beginning point of these discussions. There have indeed been debates on preparing for the next pandemic and on ensuring vaccine access equity among global public health and diplomacy circles.[[7]](#footnote-7) On the other hand, with the reality of the pandemic, these debates moved beyond the boundaries of certain epistemic communities in the last three years. As the topic started to dominate basically all aspects of our lives, public health was not the only outcome of our efforts to combat COVID-19 but also their reputations became under scrutiny.[[8]](#footnote-8) From a public diplomacy perspective, what followed was a crowded stage of countries articulating their role in this fight against COVID-19, making the last few months an important period to study. There has already been a considerable number of works looking at how the pandemic has affected public diplomacy.[[9]](#footnote-9) While we build on this nascent body of work, we differentiate our study by highlighting the antagonistic messaging strategies. We are not arguing COVID-19 solely yielded competitive or argumentative messages. Indeed, we have seen moves towards cooperation between countries as well as messaging promoting such cooperative projects.[[10]](#footnote-10) Yet, especially in the case of the two countries we are studying, COVID-relevant messaging presents a unique opportunity to examine soft power clashes.

## 2.2 *US-China Strategic Competition*

The US-China relations are the main focus of our study. In 2018, the US National Defence Strategy redefined the US-China relationship as strategic competition. The purpose is to “counter the PLA’s technological advancements, force development, and growing international presence and assertiveness.”[[11]](#footnote-11) China has been framed as an adversarial country in the US foreign policy. It is argued that China “directly challenge[s] an international order based on democratic norms, respect for human rights, and peace.”[[12]](#footnote-12) Moreover, the US is also concerned with the country’s increasing regional influence. Former Vice President Pence clearly stated that the US chose competition over cooperation with China, outlining various policy disagreements ranging from military presence to intellectual property rights.[[13]](#footnote-13) The most prominent case of their competition is the US-China trade war. Then US President Trump accused China of unfair trading practices and intellectual property theft and the US Department of the Treasury designated China as a currency manipulator whereas China believed that America was attempting to contain its rise as a global economic power.[[14]](#footnote-14)

This confrontational mode of the bilateral relationship became worse during the Covid-19 pandemic. The US and China have signalled a conflict-based approach since the early days of the pandemic. There have been back-and-forths between the spokesperson of the Chinese Ministry of Foreign Affairs and the US officials. The US side blamed the Chinese for the virus. The Chinese criticized the US for being unilateral and unproductive in pandemic management. On August 2nd, 2020, former US President and Twitter influencer Donald Trump tweeted that there were "Big China Virus outbreaks all over the World, including nations which were thought to have done a great job" and proclaimed "U.S.A will be stronger than ever before, and soon!" While neither his Twitter account nor his presidency lasted long into 2021 to see how the US fared during the pandemic, his words point to a conflict and competition-based approach to digital diplomacy.

China responded to Trump's Twitter diplomacy with more assertive messaging, creating an antagonistic atmosphere. Hua Chunying, the Spokesperson of the Chinese Foreign Ministry, tweeted “While life is returning to normal in China, confirmed cases in US is around 6.29 million & total death 180k+. China managed to bring #COVID19 under control before 0.006% of the population got infected. In contrast, up to 2% of Americans have contracted the virus & it's still spreading.” In general, the US adopted a confrontational policy towards China, including the strategy during the pandemic. China refused to define the bilateral relationship as competition, which shows its defensive stance yet assertive attitude.

In short, Sino-American relations during COVID-19 present a noteworthy opportunity to observe determinants of digital diplomacy around contentious topics. While COVID-19 is not the sole cause of the competition or contention between these parties, the pandemic and subsequent attempts to tackle it required a robust digital response. In the next section, we review the literature on digital public diplomacy and signalling which lays out the foundation of our research.

# 3 Signalling in Digital Public Diplomacy

In the last two decades, the development of new technologies has shifted how people communicate and organize. New platforms and devices have greatly impacted public diplomacy or diplomacy in general. This has led to several changes. First, more and more international actors rely on social media to engage with their audience.[[15]](#footnote-15) Second, the line between communication with domestic and foreign publics is becoming blurry.[[16]](#footnote-16) Third, instant responses and feedback are expected given the fast-paced nature of online communication and news production.[[17]](#footnote-17) In fact, a few studies in the literature of public diplomacy presume that its practice will be more interactive - using these digital platforms not only to broadcast messages without regard to audiences[[18]](#footnote-18) but rather conforming with the expectations of audiences from these platforms and their interactive nature.[[19]](#footnote-19) These changes were indeed followed closely by scholars. In our study, we initially rely on the existing knowledge of digital public diplomacy and expectations of how states interact with each other on social media platforms. As is explained in the next section, these interactions are built on information asymmetry. Not unlike within traditional diplomacy, actors do not have the same level of information about their and each others’ motivations. We bring in signalling theory to further explain expected behaviour in such situations and to complete our analytical framework.

## 3.1 *Digital Public Diplomacy*

Despite its relatively short history, scholars have provided numerous definitions and labels for the employment of digital media platforms for diplomacy. While providing an inclusive summary of the field is beyond the scope of this paper,[[20]](#footnote-20) it is important to delineate our operationalization. First, we intentionally use digital public diplomacy as opposed to digital diplomacy to connote we are not interested in consular or state-to-state level implications. Rather, we see digital platforms as means to “greatly enhance the communicative outreach”[[21]](#footnote-21) of states in their public diplomacy campaigns. Moreover, public diplomacy has an inherent connection with credibility of actors.[[22]](#footnote-22)

This idea makes digital public diplomacy “a mode of official self-representation”[[23]](#footnote-23) where actors attempt to change perceptions and public debate in other societies.[[24]](#footnote-24) While these digital narratives provide “powerful representations of the state identity that attract and persuade foreign publics towards desired state ends”[[25]](#footnote-25); their creation, dissemination, and at times even their subject are not limited to the country engaging in digital public diplomacy. Rather, countries show attempts to portray others as they wish.[[26]](#footnote-26) Previous studies have shown that there is not necessarily a high level of formal interactions, such as mentions or direct responses,[[27]](#footnote-27) among actors. Yet, diplomatic actors are known to use digital platforms to interact with both traditional and untraditional actors with the former label covering other state representatives and the latter non-official and unaffiliated online actors.[[28]](#footnote-28)

Consequently, in our study, we focus on how countries see themselves and their own role as well as others/others' roles in the story on digital platforms since COVID-19 helped accelerate the digitalization of public diplomacy methods. Additionally, the public's desire to receive information faster during a global crisis further increased the importance of such platforms. In the next section, we introduce signalling theory to account for the balance – or rather lack thereof - of information. Operating under imperfect conditions, actors had access to information about themselves, their actions, and their motives but did not know others’ plans. Uncertainty and no prior experience have contributed to this information vacuum.

## 3.2 *The Signalling Theory*

The signalling theory basically attends to reducing information asymmetry between two parties.[[29]](#footnote-29) The pivotal work of signalling theory is by Spence on labour markets and how job applicants might use signals to reduce information asymmetry in order to be hired.[[30]](#footnote-30) Later the signalling theory extended to many fields, including management and international relations, and foreign policy. Information affects individuals' decision-making processes in various contexts and it is vital to obtain more information to make better decisions.[[31]](#footnote-31) However, as suggested by Stiglitz, “different people know different things,” so information asymmetries exist between those who have it and those who may potentially make better decisions if they had it.[[32]](#footnote-32)

Signals are informational cues of any observable features of an agent which are intentionally displayed for the purpose of desired outcomes from receivers.[[33]](#footnote-33) Signalling refers to actions that insiders or signallers take to intentionally communicate positive, imperceptible qualities of the insider in order to influence the views and behaviours of receivers.[[34]](#footnote-34) Signallers are insiders who obtain information that is not available to outsiders or receivers. Receivers are outsiders who lack information about the organization in question but would like to receive this information.[[35]](#footnote-35) Signals convey information about signallers’ characteristics and receivers examine them to evaluate the credibility and validity of a signaller’s qualities.[[36]](#footnote-36) Receivers make decisions based on the information obtained from the signals sent by signallers. However, these two actors may not share interests. As BliegeBird and Smith explained, signallers and receivers have partially competing objectives, therefore successful deception would benefit the signaller at the expense of the receiver.[[37]](#footnote-37)

Signalling environment means the context of signalling. Environment plays an important role as distortion may affect the observability of the signals.[[38]](#footnote-38) Signals do not transmit in a vacuum. Instead, it requires receivers to receive and process signals operating in complex information environments.[[39]](#footnote-39) Signalling environment such as the case analysed by Spence can be "quiet" as the assessment of job applicants is based on a limited amount of information (their resumes).[[40]](#footnote-40) For other instances, especially in more recent studies of signalling, the Internet and social media is a noisy or crowded signalling environment where many types of signalling happen. Many signallers may not even be aware they are communicating signals. Conversely, signal receivers are often given more information than they can process.[[41]](#footnote-41)

The signalling theory suggests that two factors determine the effectiveness of signalling. First, many scholars have argued that signal cost attributes to the credibility of signals. Signal cost refers to the resource costs of the sender in both sending the signal,[[42]](#footnote-42) as well as the perceived cost of implementation of the signal content.[[43]](#footnote-43) Some signals are costly to produce, which helps to distinguish high-quality signallers from low-quality signallers.[[44]](#footnote-44) For instance, in the field of commerce, some sellers may refuse to invest in technological tools that are expensive to provide real-time information to buyers. It shows that these sellers do not wish to stay in the business for long, signalling low-quality sellers. As a result, signalling cost is the expense to produce credible signals. The more costly the signal, the more likely the signaller is credible and reliable.

Second, strong signals or signals more readily detected by the receiver facilitate resource mobilization.[[45]](#footnote-45) In other words, signal strength also affects the effectiveness of signalling or the objective of signalling. Scholars define signal strength from the perspectives of signaller and receiver. On the one hand, signal strength is described as how important, or salient, the signal is for a signaller.[[46]](#footnote-46) On the other hand, signal strength is determined by the characteristics of the individual receiving the signal.[[47]](#footnote-47) In general, strong signals may be more readily detected by the receiver than other signals.[[48]](#footnote-48)

Diplomatic signalling literature follows the various strategies diplomats have been using to convey their messages on public platforms even before the launch of digital platforms.[[49]](#footnote-49) These signals help scholars to go beyond solely the declarations of diplomats and politicians for more inclusive explanations. While studies in this field are instrumental in explaining the rhetoric in more traditional diplomatic processes, the digital dynamic was different. For instance, an important concept in signalling literature is periphrasis - “a form of diplomatic expression which permits controversial things to be said in a way understood by all but without needless provocation”[[50]](#footnote-50). Moreover, with the changing environment that heavily relies on digital platforms, especially during the pandemic, diplomatic signalling may be even more diverse and complex. The next section reviews the literature on digital diplomacy and we try to connect signalling and digital diplomacy through the idea of information asymmetry.

## 3.3 *Analytical model*

This study applies the signalling theory to explain digital diplomacy. We argue that digital platforms are becoming commonplaces for actors to express their preferred status in international relations. Signalling is technically a kind of communication as political actors are transmitting messages with the expectation of changing perceptions and behaviours of other actors.[[51]](#footnote-51) Within the context of our research, we posit tweets are signals since they constitute an action on behalf of a country, make information available to others, and attempt to shape a country’s image perception.[[52]](#footnote-52)

Based on the two important factors of signalling theory discussed above, we develop an analytical model with specific indicators for digital diplomacy (See Table 1). The amalgamation of digital platforms and diplomacy warrants a closer look at signalling since the diplomacy aspect brings in a relatively ritualized set of signals[[53]](#footnote-53) whereas new digital ecology disrupts communications as we know it[[54]](#footnote-54). Signalling theory can be applied to digital diplomacy because essentially the communication between the governmental actors and foreign publics aims to erase information asymmetry as the former makes information available to the latter. Governments wish to send more signals to foreign publics for the main purpose of shaping their perception either through telling their stories and explaining foreign policy or projecting soft power. The goal is to eliminate information asymmetry on policy and other governmental actions.

Table Analytical Model of Signalling

|  |  |  |
| --- | --- | --- |
|  | **Theory** | **Indicators** |
| **Signaller** | Status | Followers |
| **Signal Content** | Credibility | Internal retweets |
| Unique information | Informing |
| Strength | Explicit with Mention |
| **Signalling Environment** | Network embeddedness | Network centrality, and hashtags |

Our analytical model contains three areas in which signalling cost and strength take effect: signaller, signal content, and signalling environment.[[55]](#footnote-55) We argue that political actors operate in an informational asymmetry since target audiences do not know how actors see themselves and others in global politics. Tweets constitute these attempts to reduce the asymmetry or signals. For signaller, we discussed the particular standing of the person or entity behind the Twitter accounts. In each instance, we relied on account descriptions provided on Twitter as well as prior research on these accounts. ​​As Nye suggested, the role of credibility becomes an even more important soft power resource in the digital age.[[56]](#footnote-56)

In terms of signal content, we conceptualized signal content primarily on the significance of the subject matter. We operationalized significance in two ways. On one hand, we looked at whether the content shared was coming from a reliable resource – whether a tweet was retweeted from a reliable source. On the other hand, we looked at whether it would be difficult for other actors to imitate the signal. This is measured by the indicator of informing. Compared to argumentative signals that focus on confrontation rhetoric, informative signals contain messages about concrete activities or stories that are costly to produce. In terms of signal strength, we examine whether the tweets explicitly mentioned the other. Last, for the signalling environment, we looked at how well connected these political actors are and whether they engage in discussions around hashtags. We operationalized network embeddedness through internal retweeting, network centrality, and hashtags. The extent to which signalling minimizes information asymmetry depends on the signalling environment, either within an organization or between organizations.[[57]](#footnote-57)

# 4 Methodology

We argue that Chinese and American digital rhetoric during COVID-19 constitutes an exploratory case to study signalling on social media platforms. According to Swedberg, an exploratory study is an attempt to discover new and interesting results through a research topic.[[58]](#footnote-58) Our study is exploratory because it is both a topic that has not been researched before and we attempt to answer the question based on limited resources. In this section, we explain our empirical design.

## 

## 4.1 *Research Questions*

In our study, we aim to explain the determinants of messaging strategy in digital public diplomacy surrounding contentious topics. Consequently, we ask how states use digital diplomacy to reduce information asymmetry, or in other words, how states engage in signalling. Therefore, our research question is:

RQ1: *How did the US and China signal their stances via digital public diplomacy in the case of COVID-19?*

To answer this question, we proposed two specific questions based on our analytical model of signalling. We focus on the quality and strength of the digital messaging of the US and China public diplomacy.

RQ2: *How reliable were the digital messaging of US and Chinese public diplomacy in the case of COVID-19?*

RQ3: *How strong was the digital massaging of US and Chinese public diplomacy in the case of COVID-19?*

For scope, we focus on the US and Chinese digital diplomacy on Twitter after the outbreak of the COVID-19 pandemic in 2020. There are several reasons for it. First, as discussed above, social media after the outbreak of COVID-19 resonates with the asymmetric signalling environment. As the media environment changes, states’ behaviour should alter accordingly in theory. Second, US and Chinese digital diplomacy engage a relational or even rival relationship on Twitter. This context adds a layer to the signalling environment.

## 

## 4.2 *Case Selection*

During pandemic lockdowns, various blogs and internet observatories reported states turning to digital platforms to share their achievements.[[59]](#footnote-59) Yet, the plethora of data created additional challenges for reporting such digital narratives. More often than not, we found it difficult - if not virtually impossible - to identify the organization responsible for promoting such information. While existing studies turn to the accounts of diplomats and diplomatic agencies,[[60]](#footnote-60) the medical nature of the crisis at hand brought additional bodies to the forefront, such as public health institutes, and ministries of health. While they actively share information about their countries’ COVID-19 responses, their structure varies considerably. For instance, the United States has at least two institutions, The Centres for Disease Control and Prevention (CDC) and The National Institute of Allergy and Infectious Diseases (NIAID), actively communicating on Twitter. The National Health Commission or Chinese Centre for Disease Control and Prevention did not have a Twitter presence. Donald Trump’s heavy reliance on Twitter and his sui generis use of the platform further complicates a structured comparison across countries.[[61]](#footnote-61)

To create a comparable dataset, we followed a purposive sampling strategy. We included Twitter accounts belonging to organizations facing foreign audiences. Our purpose here was to introduce as many different perspectives as possible to the dataset without compromising feasibility. First, we adopt the results from a study by Huang and Wang which argues that the three social media accounts directly managed by the MFA were the central kitchen of information production of Chinese digital diplomacy on Weibo and Twitter.[[62]](#footnote-62) It includes the Spokesperson Office on Twitter as well as the Chinese mission to the UN. Including media outlets (e.g., Voice of America or Xinhua) increased the number of observations considerably, however, did not provide any meaningful insights into rhetorical clashes since journalistic priorities dictated message formation. Including CDD or NIAID brought in messages focusing on domestic audiences. We eventually decided on including nine accounts (see Table 2). From China, we included the Ministry of Foreign Affairs (@MFA\_China), its spokesperson (@SpokespersonCHN), State Council of Information (@chinascio), and missions in the United Nations (@CHN\_UN\_NY, Chinamission2un). For the US, we included the White House (@WhiteHouse45), Secretary of State (@SecPompeo), mission in the United Nations (@U.S.UN), and President (@realdonaldtrump).

Table Case Twitter Accounts and IDs

|  |  |  |
| --- | --- | --- |
| **Account Name** | **Account ID** | **Description** |
| Chinese Mission to the UN | @Chinamission2un | Permanent Mission of the People's Republic of China to the United Nations. |
| Chinese State Council of Information | @chinascio | State Council Information Office of China |
| Spokesperson of Chinese Mission to the UN | @CHN\_UN\_NY | Spokesperson of the Permanent Mission of China to the United Nations |
| Chinese Ministry of Foreign Affairs | @MFA\_China | Spokesperson of the Ministry of Foreign Affairs of China |
| Spokesperson of Chinese Ministry of Foreign Affairs | @SpokespersonCHN | Director General, Information Department, China |
| Donald Trump | @realdonaldtrump | Former President of the United States |
| US Secretary of State Mike Pompeo | @SecPompeo | Former Secretary of the State of the United States |
| US mission to the UN | @USUN | Permanent Mission of the United States to the United Nations |
| The White House | @WhiteHouse45 | Office of the President of the United States |

## 

## 4.3 *Data*

Our final dataset included 1512 tweets (See Table 3). Tweets sent by Chinese and Americans are about equal. Through Twitter’s API, we can scrape the latest 3,200 tweets from any public account’s profiles. For virtually every other account we have included in our study, 3,200 tweets covered the entire period of COVID-19. With Donald Trump, 3,200 tweets covered less than three months. We used a publicly available Twitter archive for his tweets (<https://www.thetrumparchive.com/>). We carried out two rounds of data cleaning. First, we looked at the availability of data as we wanted to make sure all nine accounts had activities in the period we studied. Since Trump's account was suspended on January 8th, 2021; we chose this date as the end part. We identified an increase in the volume of tweets sent about COVID-19 around August and decided to use five months, starting with August 8th, 2020, and ending with January 8th, 2021. Second, we removed all tweets that did not discuss COVID-19.

Table Number of Tweets per Account (China = 742, US=770)

|  |  |
| --- | --- |
| **Accounts** | **Number of Tweets** |
| Chinese Mission to the UN (@Chinamission2un) | 178 |
| Chinese State Council of Information (@chinascio) | 125 |
| Spokesperson of Chinese Mission to the UN (@CHN\_UN\_NY) | 126 |
| Chinese Ministry of Foreign Affairs (@MFA\_China) | 129 |
| Donald Trump (@realdonaldtrump) | 181 |
| US Secretary of State Mike Pompeo (@SecPompeo) | 40 |
| Spokesperson of Chinese Ministry of Foreign Affairs (@SpokespersonCHN) | 184 |
| US mission to the UN (@USUN) | 83 |
| The White House (@WhiteHouse45) | 466 |

## 

## 4.4 *Coding*

We used the official descriptions on these nine accounts, as well as other accounts mentioned in our dataset, to explain signallers. Signal content and signalling environment required manual coding (see Table 4). We assert that countries simultaneously create relations and messages while signalling on social media platforms.[[63]](#footnote-63) Consequently, we focus on both content and relationships. In our case analyses, an actor and its opponent may develop various self-presentation strategies based on different situations. This is also supported by Cull’s recent work on reputational security that states considered themselves as successes and others as failures as their rhetorical strategies used during the COVID 19 pandemic.[[64]](#footnote-64) Using Mor’s self-representation tactics and Cull’s rhetorical strategies, we identify five such strategies, four of which are competitive and one is informative.[[65]](#footnote-65) We label all non-competitive tweets – tweets that do not present arguments but state solely facts – as “informative”. For competitive tweets, we initially look at whether the content is geared towards defending the sender or attacking other actors. Within defensive tweets, we labelled the content as "blame avoidance" if the objective is to stop the loss of reputation and "credit gain" if the objective is to garner more public support. Within offensive tweets, we had two more labels, "credit denial" and "blame imposition" with the former denying support for competitors and the latter portraying the competitors as threats.

Table Codebook of Content and Relationship

|  |  |
| --- | --- |
| **Content** | **Relationship** |
| Blame avoidance | Explicit with Mention |
| Credit gain | Explicit with Hashtag |
| Credit denial | Implicit within text only |
| Blame imposition | Implicit no mention within text |
| Informing | Other |
| Other | No mention |

For network, we looked at the mention dynamics in tweets and came up with five self-explaining categories. If another actor is targeted through a mention or a hashtag, we used “explicit with mention” or “explicit with hashtag” labels respectively. If an actor is solely named within a text, we label it as “implicit within text only”. In cases where an actor is targeted without being explicitly named, we used “implicit no mention within text” (See Appendix 2 for frequencies).

# 5 Results

The results of our findings are presented in this section via three indicators: signaller, signal content, and signal environment. As explained above, the signallers are official accounts of the US and Chinese diplomatic bodies, so they are credible from this perspective. We also looked at their followers to see whether they are impactful by the number of signal receivers. Then we investigated signal content by signal reliability and signal uniqueness through retweeting analysis and content coding. Lastly, we scrutinized the signal environment via network centralities and hashtag coding.

## 

## 5.1 *Signaller*

Our first finding is about the signallers, the official Twitter diplomatic accounts of the American and Chinese governments. These accounts are all verified by Twitter, so technically they are all credible in terms of their account nature. Signal strength can also be measured by each account's followers. It shows how widespread their tweets can be. Comparing the US and Chinese accounts, the American accounts have more followers than the Chinese ones, especially Donald Trump and the White House (SeeFigure 1).

Figure US and Chinese Diplomatic Twitter Accounts Followers

## 5.2 *Signal Content*

To better examine signal cost and strength, we also looked at signal content. First, we studied retweeted accounts to understand whether the source of information is reliable. Second, we focused on the tweets within the code “informing” as we believe that facts and events are more costly than arguments (see Appendix). Third, we evaluate signal strength by assessing their networking tactics. In other words, we think that tweets mentioning other accounts directly are stronger than those implicitly talking about others.

### 5.2.1 Signal Reliability

Retweeting on Twitter is a function in which a user can share another user's content with their own followers. While the reasons for retweeting range from spreading information to showing support among others,[[66]](#footnote-66) eventually, retweeting makes content available to further audiences. In our case, this function meant signalling content was not crafted by the signaller which makes the source of information another account. In order to find the information resource, we looked at retweets in two different ways. Data retrieved for *@realdonaldtrump* included “RT” in the text of tweets whereas other accounts did not. For the former account, we searched for the characters RT in tweets. For the remaining accounts, we look at how many times a text was included in the dataset since additional inclusions of the same text meant original content was retweeted.

Table Top 5 Retweet Relations per Country

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **China** | | | **USA** | | |
| Original Tweet | Retweeted By | Freq | Original Tweet | Retweeted By | Freq |
| Spokesperson of Chinese Mission to the UN | Chinese Mission to the UN | 52 | The White House | The White House | 15 |
| Spokesperson of Chinese Ministry of Foreign Affairs | Spokesperson of Chinese Mission to the UN | 27 | US Secretary of State Mike Pompeo | US mission to the UN | 5 |
| Spokesperson of Chinese Ministry of Foreign Affairs | Chinese Mission to the UN | 21 | The White House | US mission to the UN | 4 |
| Spokesperson of Chinese Ministry of Foreign Affairs | Chinese Ministry of Foreign Affairs | 18 | US mission to the UN | US mission to the UN | 3 |
| Chinese Ministry of Foreign Affairs | Spokesperson of Chinese Mission to the UN | 16 | Donald Trump | Donald Trump | 2 |

We have observed that accounts included in the study retweeted other accounts from their own countries. There was no cross-country retweet. US accounts had 135 retweets with 105 coming from Donald Trump's retweets. White House's account received the most retweets with 24 tweets. Chinese accounts had 161 retweets. 70 of these retweets were for the MFA Spokesperson account. This account was frequently and widely retweeted by others. Additionally, we see United Nations-relevant accounts to be active. In each case, UN missions were actively retweeted and were retweeted by other accounts from the country. Last, in American practice, we also observed self-retweets usually a few days after the original content. One final observation worth mentioning was based on Donald Trump’s usage. Out of his 105 retweets, nearly half (47) came from his election campaign, office, or party accounts. Table 6 shows accounts retweeted by him with bold names showing accounts affiliated with the Trump administration and campaign while two accounts italicized are suspended for violating Twitter policies.

Table Retweeted Accounts by Donald Trump

|  |  |  |
| --- | --- | --- |
| **Account Names** | **Account IDs** | **Retweeted Times** |
| **The White House** | **WhiteHouse** | 9 |
| **Congressman Andy Biggs** | **RepAndyBiggsAZ** | 9 |
| Pfizer Inc. | pfizer | 9 |
| **Ron DeSantis, 46th Governor of Florida** | **GovRonDeSantis** | 9 |
| *Current suspended* | *Lrihendry* | 4 |
| Marc Siegel M.D. | DrMarcSiegel | 4 |
| Reuters | Reuters | 4 |
| **Mike Braun, Senator for Indiana** | **SenatorBraun** | 4 |
| **Kellyanne Conway** | **KellyannePolls** | 3 |
| *Current suspended* | *littllemel* | 3 |
| **Trump War Room** | **TrumpWarRoom** | 3 |
| Dr. David Samadi | drdavidsamadi | 2 |
| **Donald Trump** | **realDonaldTrump** | 2 |
| **Nan Hayworth, M.D.** | **NanHayworth** | 2 |
| **Ari Fleischer, Former White House Press Secretary** | **AriFleischer** | 2 |
| **Senate Republicans** | **SenateGOP** | 2 |
| **Richard Walters, Former Chief of Staff at GOP** | **rww\_gop** | 2 |

### 5.2.2 Signal Uniqueness

We coded our tweet data into two broad categories: argumentative and informative. We define argumentative tweets as the ones that explicitly use words rather than facts to impose blame and deny credit of others and avoid blame and gain credit for themselves (see Table 4). The informative tweets carry information about facts, including events and activities such as meetings, aids, the progress of vaccine development, and the number of people who have been vaccinated. We consider such information represents actions that are costly to produce or imitate, which makes them more credible. Figure 2 shows the accounts’ numbers of tweets in the two categories. Chinese diplomatic accounts were more balanced in terms of producing informative and argumentative tweets. The Chinese State Council of Information tends to create more credible signals than other Chinese accounts, whereas the Chinese mission to the UN and Chinese Ministry of Foreign Affairs spokesperson like to use less costly signals. On the US side, the result meets our expectations that Donald Trump, Secretary Pompeo, and the US mission to the UN all tweeted more argumentatively than informatively. The White House is more balanced as it sent out tweets of the two categories more or less equally.

Figure China and US Digital Diplomacy Signal Uniqueness (Twitter Content)

We also coded our data by their relationship building and operationalized it through tweets’ mentioning (see Table 4). We paid special attention to “explicit with mention” as it demonstrates the signal strength or whether it can be easily detected by the other actor or the public (See Appendix 2). Figure 3 shows the results of “explicit mentioning.” In general, Chinese Twitter accounts mentioned the American accounts more often. For instance, in total, the spokesperson for and Chinese Mission to the UN explicitly mentioned other accounts 41 times. They use the function of mention (@) more often than other accounts. American accounts in general do not like to use this function. Donald Trump did not care about mentioning others, though he implicitly mentioned China many times. Mike Pompeo and US mission to the UN used the function mention 5 times each.

Figure US and China Digital Diplomacy Signal Strength (Twitter Mention)

## 5.3 *Signal Environment*

Social media is a special signalling environment. As mentioned above, social media is a crowded and complex environment that includes multiple actors and multiple signals. While we predominantly rely on network variables to explain the signal environment, we also highlight how Twitter is seen in both countries to provide a contextual description.

### 5.3.1 Contextual Environment

Twitter is one of the most popular social media platforms with nearly half a billion active monthly users.[[67]](#footnote-67) However, China is a peculiar case since the platform is not publicly accessible from the country. Existing research comparing Chinese internet users with other countries has entertained the idea of using Weibo while using Twitter for other countries.[[68]](#footnote-68) While such a comparison choice makes sense when the focus is on Chinese domestic audiences, these groups – in other words, a country’s own domestic constituents – do not carry weight in diplomatic signalling. As Twitter has been widely accepted and studied as a digital diplomacy platform, we use Twitter as our signalling context.

In addition to the lack of Chinese domestic audience, two more characteristics of this context should be noted. First, Donald Trump had an unprecedented – if not still unique – style on Twitter,[[69]](#footnote-69) which “reveals a political leader who revels in conflict, embraces self-promotion, and eschews normative standards of behaviour.”[[70]](#footnote-70) His online persona was deemed as a deviation from presidential norms[[71]](#footnote-71) and rhetoric.[[72]](#footnote-72) Second, a character of American Twitter diplomacy identified by Shahin and Huang is that the US has been adopting an antagonistic or confrontational approach to China and Chinese accounts.[[73]](#footnote-73) This is in comparison with American Twitter diplomacy towards other countries, such as Britain and India.

### 5.3.2 Network Environment

We examined the network of US and Chinese accounts by following and followers as well as explicit mention for their centralities (see Table 7). From the perspective of following and followers, the US mission to the UN has the highest degree centrality. The White House has the highest closeness centrality and the US mission to the UN has the highest betweenness centrality. In terms of explicit mention, the Spokesperson of the Chinese Mission to the UN has the highest degree centrality. US mission to the UN, the Spokesperson of the Chinese Ministry of Foreign Affairs, and Mike Pompeo all have higher closeness centralities. US mission to the UN and Mike Pompeo have the highest betweenness centrality.

Table Twitter Accounts’ Centralities

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Accounts** | **Following & Follower** | | | **Explicit Mention** | | |
| **Degree** | **Closeness** | **Betweenness** | **Degree** | **Closeness** | **Betweenness** |
| US mission to the UN | 5947 | 0.639875 | 26481428.7 | 6 | 1 | 6 |
| Chinese Ministry of Foreign Affairs | 5195 | 0.428758 | 8323523.19 | 5 | 0.692308 | 0 |
| Chinese Ministry of Foreign Affairs spokesperson | 5190 | 0.428198 | 8394062.56 | 1 | 1 | 0 |
| Chinese State Council of Information | 5183 | 0.426195 | 10023406.8 | 0 | 0 | 0 |
| US Secretary of State Pompeo | 5048 | 0.255015 | 8761765.3 | 6 | 1 | 6 |
| The White House | 5013 | 1 | 178279.124 | 0 | 0 | 0 |
| Chinese Mission to the UN, Spokesperson | 2601 | 0.497271 | 15228294.3 | 10 | 0.777778 | 0 |

When it comes to “explicit with hashtags,” the Chinese accounts tend to use more hashtags to explicitly mention the American accounts (see Figure 4). In total the Chinese accounts explicitly used hashtags to mention the US 19 times, while the number of American accounts is 5 times. The Spokesperson of the Chinese Ministry of Foreign Affairs mentioned the American accounts more frequently, 9 times. The White House and Donald Trump did not care to use hashtags to explicitly mention China. US mission to the UN and Mike Pompeo did use hashtags several times.

Figure US and China Digital Diplomacy Signal Embeddedness (Hashtags)

# 6 Discussion and Implications

Our study aims to explain how countries engage with target audiences surrounding contentious topics. We posit COVID-19 constitutes an exploratory case since it both accelerated the digitization of public diplomacy messaging and itself was a contentious topic between China and the US. When articulating our research question, we clarified engagement by bringing in our analytical framework based on digital diplomacy and signalling. We looked at the account descriptions of actors involved, their Twitter-based relationships (e.g., retweet, mention), and content.

In terms of signaller, we observed that American accounts in general had more followers. One of the key reasons is their domestic followers. Twitter is blocked in China and ordinary Chinese citizens do not use it as social media, whereas Twitter is one of the top social media platforms used by Americans. It may also indicate that the main target of American tweets was the domestic audience, though they have international impacts.

In terms of signal reliability, our findings showed that there was almost an echo chamber in retweets. There was no cross-country retweet. Donald Trump's account was an extreme example that it even tweeted discredited and suspended accounts to bolster arguments. American accounts also retweeted their own content. Given the fact that these retweets came a few days after the original tweet, they might be considered an agenda-setting attempt by reintroducing the same topics and messages. In both Chinese and American cases, we have observed a content creation centre as the accounts belonging to the White House and the Spokesperson of Chinese MFA had most of the retweets. It means that their messaging on Twitter mainly relied on their own credibility. When it comes to signal uniqueness, the Chinese are more balanced in terms of sending informative and argumentative tweets, while the American accounts are more emphasized on arguments than presenting facts. It suggests that Chinese messaging was more unique or costly than American ones. For signal strength, Chinese accounts also used more explicit mentioning than Americans on Covid-related tweets. It shows that these tweets may be more easily detected by receivers and the messages may be more impactful.

In terms of signal environment, we run into the same domestic constituent issue. Twitter is popular among American audiences – and is popular as a communication platform among American political candidates. We have, for instance, observed that American accounts were more prolific than their Chinese counterparts. Moreover, their messaging surrounding COVID-19 sometimes solely targeted American domestic audiences to showcase their successes, probably with the objective of gaining support in the 2020 elections. Surprisingly, Chinese accounts used hashtags more often than American accounts when they talk about Covid-19. It means that Chinese messages on Covid-19 may be more embedded in the network and may be more visible than American tweets.

To summarize, our study found mixed results of the signalling strategies and tactics of Chinese and American digital diplomacy on Twitter. To put it simply, Chinese accounts like to use more facts, explicit mention, and hashtags while the Americans tend to use arguments. On the other hand, they share similarities; both countries tend to retweet within themselves. In general, we were not able to identify a coherent narrative. Rather, actors on both sides moved between argumentative and informative messages. We postulate that the relatively faster pace of digital diplomacy combined with the information asymmetry made it difficult for countries to craft long-term strategies. Rather, they produced short-term signals within the environment. Moreover, the contentious nature of topics pushes countries to be on the offense and defence simultaneously. Across the board, we have observed accounts providing support for their countries' policies as well as attacking the other. Within this perspective, digital public diplomacy goes beyond solely sharing one's policy positions and attempts to discredit other positions.

Our study also shed light on the issue of domestic-foreign audience differentiation. Existing studies tend to portray digital diplomacy as a way to engage with domestic and foreign audiences simultaneously with the same messages[[74]](#footnote-74) or create parallel strategies.[[75]](#footnote-75) We found that American digital messaging provides evidence for both simultaneous and parallel engagement; while Chinese messaging was almost exclusively for foreign audiences.

# 7 Conclusion, Limitations, and Future Research

This study explored how the US and China signalled their stances through digital public diplomacy in the case of Covid-19. We developed an analytical model from the signalling theory to explain their digital diplomacy on Twitter when the pandemic started. The model focuses on the signaller, the signal content, and the signal environment. While both the US and Chinese were not efficient in leveraging outside credible resources, their signalling tactics were different. The Chinese diplomatic accounts tended to communicate more facts than arguments, and they used more networking means to directly engage with the targets. The American diplomatic accounts have more audience and network structural power, thanks to the blockade of Twitter in China. They also like to argue than present facts.

Our research is not without its limitations. Our case selection in terms of digital media platforms, countries, and accounts involved might have limited our ability to generalize our findings. Furthermore, we relied on signalling to build the basis of the analytical model. In other words, we assumed an information asymmetry and actors' willingness to overcome the issue helped shape their messaging strategy. Last, our network analysis was limited to the data collected. Future research can overcome some of our limitations by incorporating additional country cases and crafting a better comparative case selection in terms of accounts and platforms. While we used COVID-19 as an exploratory case, longitudinal studies will be instrumental in testing our arguments.

# Bibliography

Albishri, O., S. Tarasevich, P. Proverbs, S. K. Kiousis and A. Alahmari. ‘Mediated Public Diplomacy in the Digital Age: Exploring the Saudi and the US Governments’ Agenda-Building During Trump’s Visit to the Middle East ’. *Public Relations Review* 45(4) (2019), 101820.

Anholt, S. *Competitive Identity: The New Brand Management for Nations, Cities and Regions* (London: Palgrave Macmillan, 2006).

Anspach, N. M. ‘Trumping the equality norm? Presidential tweets and revealed racial attitudes ’. *New Media & Society* 23(9) (2021), 2691-2707. <https://doi.org/10.1177/1461444820936292>

Basuroy, S., K. K. Desai and D. Talukdar. ‘An Empirical Investigation of Signaling in the Motion Picture Industry ’. *Journal of marketing research* 43(2) (2006), 287-295.

BBC. ‘A Quick Guide to the US-China Trade War’. 16 January 2020. *BBC*. <https://www.bbc.com/news/business-45899310>.

Bjola, C. ‘Digital diplomacy as world disclosure: the case of the COVID-19 pandemic ’. *Place Branding and Public Diplomacy* 18(1) (2022), 22-25. <https://doi.org/10.1057/s41254-021-00242-2>

Bjola, C., J. Cassidy and I. Manor. ‘Public Diplomacy in the Digital Age ’. *The Hague Journal of Diplomacy* 14(1-2) (2019), 83-101.

Bjola, C. and M. Holmes. *Digital diplomacy* (New York: Routledge, 2015).

BliegeBird, R. and E. Smith. ‘Signaling Theory, Strategic Interaction, and Symbolic Capital ’. *Current Anthropology* 46(2) (2005), 221-248. <https://doi.org/10.1086/427115>

Blumstein, D. T., S. Atran, S. Field, M. Hochberg, D. Johnson, R. Sagarin, R. Sosis, B. Thayer, J. Fearon and O. Morin. ‘The Peacock’s Tale: Lessons from Evolution for Effective Signaling in International Politics (with comment) ’. *Cliodynamics* 3(1) (2012), 191-214.

CDC. ‘CDC Museum COVID-19 Timeline’. January 5 2022. *Centers for Disease Control and Prevention*. <https://www.cdc.gov/museum/timeline/covid19.html>.

Chen, A. and V. Molter. ‘Mask Diplomacy: Chinese Narratives in the COVID Era’. 16 June 2020. *Stanford University Freeman Spogli Institute for International Studies*. <https://fsi.stanford.edu/news/covid-mask-diplomacy>.

Clarke, I. and J. Grieve. ‘Stylistic variation on the Donald Trump Twitter account: A linguistic analysis of tweets posted between 2009 and 2018 ’. *PLOS ONE* 14(9) (2019), e0222062. <https://doi.org/10.1371/journal.pone.0222062>

Cohen, R. *Theatre of Power: The Art of Diplomatic Signaling* (London: Longman, 1987).

Connelly, B. L., S. T. Certo, R. D. Ireland and C. R. Reutzel. ‘Signaling Theory: A Review and Assessment ’. *Journal of Management* 37(1) (2011), 39-67. <https://doi.org/10.1177/0149206310388419>

Cull, N. J. ‘WikiLeaks, public diplomacy 2.0 and the state of digital public diplomacy ’. *Place Branding and Public Diplomacy* 7(1) (2011), 1-8. <https://doi.org/10.1057/pb.2011.2>

Cull, N. J. ‘From soft power to reputational security: rethinking public diplomacy and cultural diplomacy for a dangerous age ’. *Place Branding and Public Diplomacy* 18(1) (2022), 18-21.

Drover, W., M. S. Wood and A. C. Corbett. ‘Toward a Cognitive View of Signalling Theory: Individual Attention and Signal Set Interpretation ’. *Journal of Management Studies* 55(2) (2018), 209-231.

Duncombe, C. ‘Digital Diplomacy: Emotion and Identity in the Public Realm ’. *The Hague Journal of Diplomacy* 14(1-2) (2019), 102-116. <https://doi.org/https://doi.org/10.1163/1871191X-14101016>

Fidler, D. P. ‘<https://www.cfr.org/report/challenges-global-health-governance>’. May 24 2010. *Council on Foreign Relations*. <https://www.cfr.org/report/challenges-global-health-governance>.

Fuchs, C. *Communicating COVID-19: Everyday Life, Digital Capitalism, and Conspiracy Theories in Pandemic Times* (Bingley, UK: Emerald Publishing Limited, 2021).

Gambetta, D. ‘Signaling’. In *The Oxford Handbook of Analytical Sociology*, eds., P. Bearman and P. Hedström (Oxford University Press, 2011).

Gilboa, E. ‘Digital Diplomacy’. In *The SAGE Handbook of Diplomacy*, eds., C. M. Constantinou, P. Kerr and P. Sharp (Los Angeles: SAGE, 2016), 540–551.

Graham, S. E. ‘Emotion and Public Diplomacy: Dispositions in International Communications, Dialogue, and Persuasion1 ’. *International Studies Review* 16(4) (2014), 522-539.

Gulati, R. and M. C. Higgins. ‘Which ties matter when? the contingent effects of interorganizational partnerships on IPO success ’. *Strategic Management Journal* 24(2) (2003), 127-144. <https://doi.org/https://doi.org/10.1002/smj.287>

Hallen, B. L. ‘The Causes and Consequences of the Initial Network Positions of New Organizations: From Whom Do Entrepreneurs Receive Investments? ’. *Administrative Science Quarterly* 53(4) (2008), 685-718. <https://doi.org/10.2189/asqu.53.4.685>

Huang, Z. A. and R. Wang. *Exploring China’s Digitalization of Public Diplomacy on Weibo and Twitter: A Case Study of the U.S.–China Trade War* (Vol. 15) [digitalization, public diplomacy, domestic dimension, social media, China, trade war](2021). <https://doi.org/https://ijoc.org/index.php/ijoc/article/view/15105>

Huang, Z. A. and R. Wang. ‘Exploring China’s Digitalization of Public Diplomacy on Weibo and Twitter: A Case Study of the US–China Trade War ’. *International Journal of Communication* 15 (2021), 28.

Ittefaq, M. ‘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(1) (2019), 49-69. <https://doi.org/10.17477/JCEA.2019.18.1.049>.

Jiménez-Martínez, C. ‘The public as a problem: protest, public diplomacy and the pandemic ’. *Place Branding and Public Diplomacy* 18(1) (2022), 33-36. <https://doi.org/10.1057/s41254-021-00235-1>

Johnston, E. ‘Russia’s Twitter Diplomacy in the COVID-19 Era’. 18 September 2020. *The Fletcher School, Tufts University*. <https://sites.tufts.edu/fletcherrussia/russias-twitter-diplomacy-in-the-era-of-covid-19/>.

Kampf, R., I. Manor and E. Segev. ‘Digital Diplomacy 2.0? A Cross-national Comparison of Public Engagement in Facebook and Twitter ’. *The Hague Journal of Diplomacy* 10(4) (2015), 331-362. <https://doi.org/https://doi.org/10.1163/1871191X-12341318>

Kavalski, E. ‘Quo Vadis Cooperation Between China and Eastern Europe in the Era of COVID-19? ’. *World Affairs* 184(1) (2021), 33-56. <https://doi.org/10.1177/0043820021991116>

Kiehl, W. P. *The Last Three Feet: Case Studies in Public Diplomacy* (Washington, DC: Public Diplomacy Council, 2012).

Kim, E., Y. Sung and H. Kang. ‘Brand Followers’ Retweeting Behavior on Twitter: How Brand Relationships Influence Brand Electronic Word-of-mouth ’. *Computers in Human Behavior* 37 (2014), 18-25. <https://doi.org/https://doi.org/10.1016/j.chb.2014.04.020>

Kim, S., K. H. Sung, Y. Ji, C. Xing and J. G. Qu. ‘Online firestorms in social media: Comparative research between China Weibo and USA Twitter ’. *Public Relations Review* 47(1) (2021), 102010. <https://doi.org/https://doi.org/10.1016/j.pubrev.2021.102010>

Landers, R. N. and G. B. Schmidt. ‘Social Media in Employee Selection and Recruitment: Current Knowledge, Unanswered Questions, and Future Directions’. In *Social Media in Employee Selection and Recruitment: Theory, Practice, and Current Challenges*, eds., R. N. Landers and G. B. Schmidt (London: Springer, 2016), 343-368.

Lee, S. T. and H. S. Kim. ‘Nation branding in the COVID-19 era: South Korea’s pandemic public diplomacy ’. *Place Branding and Public Diplomacy* 17(4) (2021), 382-396. <https://doi.org/10.1057/s41254-020-00189-w>

Lester, R. H., S. T. Certo, C. M. Dalton, D. R. Dalton and A. A. Cannella Jr. ‘Initial Public Offering Investor Valuations: An Examination of Top Management Team Prestige and Environmental Uncertainty ’. *Journal of Small Business Management* 44(1) (2006), 1-26.

Manor, I. ‘Are We There Yet: Have MFAs Realized the Potential of Digital Diplomacy?: Results from a Cross-national Comparison ’. *Diplomacy and Foreign Policy* 1(2) (2016), 1-110.

Manor, I. ‘What Embassies Tweet About During COVID-19. ’. April 6 2020. *Exploring Digital Diplomacy*. <https://digdipblog.com/2020/04/06/what-embassies-tweet-about-during-covid-19/comment-page-1/>.

Manor, I. and R. Crilley. ‘The Mediatisation of MFAs: Diplomacy in the New Media Ecology ’. *The Hague Journal of Diplomacy* 15(1-2) (2019), 66-92.

Manor, I. and J. Pamment. ‘At a Crossroads: Examining Covid-19’s Impact on Public and Digital Diplomacy ’. *Place Branding and Public Diplomacy* 18(1) (2022), 1-3. <https://doi.org/10.1057/s41254-021-00249-9>

Manor, I. and E. Segev. ‘Social Media Mobility: Leveraging Twitter Networks in Online Diplomacy ’. *Global Policy* 11(2) (2020), 233-244.

Mavlanova, T., R. Benbunan-Fich and M. Koufaris. ‘Signaling theory and information asymmetry in online commerce ’. *Information & Management* 49(5) (2012), 240-247. <https://doi.org/https://doi.org/10.1016/j.im.2012.05.004>

Melissen, J. *Beyond the New Public Diplomacy* (Clingendael Institute, 2011).

Mor, B. D. ‘The Rhetoric of Public Diplomacy and Propaganda Wars: A View from Self-Presentation Theory ’. *European Journal of Political Research* 46(5) (2007), 661-683. <https://doi.org/10.1111/j.1475-6765.2007.00707.x>

Nye, J. S. ‘Soft Power and Public Diplomacy Revisited ’. *The Hague Journal of Diplomacy* 14(1-2) (2019), 7-20. <https://doi.org/https://doi.org/10.1163/1871191X-14101013>

Pain, P. and G. Masullo Chen. ‘The President Is in: Public Opinion and the Presidential Use of Twitter ’. *Social Media + Society* 5(2) (2019), 2056305119855143. <https://doi.org/10.1177/2056305119855143>

Pamment, J. ‘Diplomacy and Digitization: A Profession Adapting to New Networks of Power ’. *Revista Mexicana de Política Exterior*(113) (2018), 1-15.

Pence, M. ‘Remarks by Vice President Pence on the Administration’s Policy Toward China’. 2018. *The White House*. <https://trumpwhitehouse.archives.gov/briefings-statements/remarks-vice-president-pence-administrations-policy-toward-china/>.

Pu, X. *Rebranding China: Contested Status Signaling in the Changing Global Order* (Stanford: Stanford University Press, 2019).

Ramaswami, A., G. F. Dreher, R. Bretz and C. Wiethoff. ‘Gender, Mentoring, and Career Success: The Importance of Organizational Context ’. *Personnel Psychology* 63(2) (2010), 385-405. <https://doi.org/https://doi.org/10.1111/j.1744-6570.2010.01174.x>

Rynes, S. L., R. D. Bretz Jr and B. Gerhart. ‘The Importance of Recruitment in Job Choice: A Different Way of Looking ’. *Personnel psychology* 44(3) (1991), 487-521.

Seib, P. *Real-Time Diplomacy: Politics and Power in the Social Media Era* (New York: Palgrave Macmillan, 2012).

Seo, H. ‘The “Virtual Last Three Feet”: Understanding Relationship. Perspectives in Network-Based Public Diplomacy’. In *Relational, Networked and Collaborative Approaches to Public Diplomacy: The Connective Mindshift*, eds., R. S. Zaharna, A. Arsenault and A. Fisher (New York: Routledge, 2013), 157–169.

Sevin, E. ‘Digital Diplomacy as Crisis Communication: Turkish Digital Outreach after July 15 ’. *Mexican Journal of Foreign Policy* 113 (2018), 185-207.

Sevin, E. and I. Manor. ‘From embassy ties to Twitter links: Comparing offline and online diplomatic networks ’. *Policy & Internet* 11(3) (2019), 324-343.

Shahin, S. and Q. E. Huang. ‘Friend, Ally, or Rival? Twitter Diplomacy as “Technosocial” Performance of National Identity ’. *International Journal of Communication* 13 (2019), 19.

Somerfield, K., K. Mortimer and G. Evans. ‘The Relevance of Images in User-generated Content: a Mixed Method Study of When, and Why, Major Brands Retweet ’. *International Journal of Internet Marketing and Advertising* 12(4) (2018), 340-357. <https://doi.org/10.1504/ijima.2018.095360>

Spence, M. ‘Job Market Signaling ’. *The Quarterly Journal of Economics* 87(3) (1973), 355-374. <https://doi.org/10.2307/1882010>

Spence, M. ‘Signaling in Retrospect and the Informational Structure of Markets ’. *The American Economic Review* 92(3) (2002), 434-459.

Stiglitz, J. E. ‘Information and the Change in the Paradigm in Economics ’. *The American Economic Review* 92(3) (2002), 460-501.

Stolee, G. and S. Caton. ‘Twitter, Trump, and the Base: A Shift to a New Form of Presidential Talk? ’. *Signs and Society* 6(1) (2018), 147-165. <https://doi.org/10.1086/694755>

Swedberg, R. ‘Exploratory Research’. In *The Production of Knowledge: Enhancing Progress in Social Science*, eds., C. Elman, J. Gerring and J. Mahoney (Cambridge: Cambridge University Press, 2020), 17-41.

Taj, S. A. ‘Application of signaling theory in management research: Addressing major gaps in theory ’. *European Management Journal* 34(4) (2016), 338-348. <https://doi.org/https://doi.org/10.1016/j.emj.2016.02.001>

The White House. ‘United States Strategic Approach to the People’s Republic of China’. 2020. *The White House*. <https://trumpwhitehouse.archives.gov/wp-content/uploads/2020/05/U.S.-Strategic-Approach-to-The-Peoples-Republic-of-China-Report-5.24v1.pdf>.

US Department of State and USAID. ‘Joint Strategic Plan FY 2018—2022’. 2018. *Department of State and USAID*. <https://www.state.gov/wp-content/uploads/2018/12/Joint-Strategic-Plan-FY-2018-20>.

US Department of the Treasury. ‘Treasury Designates China as a Currency Manipulator’. 2019. *US Department of the Treasury*. <https://home.treasury.gov/news/press-releases/sm751>.

Xu, Y. and M. Löffelholz. ‘Multimodal Framing of Germany’s National Image: Comparing News on Twitter (USA) and Weibo (China) ’. *Journalism Studies* 22(16) (2021), 2256-2278. <https://doi.org/10.1080/1461670X.2021.1994445>

Zaharna, R. S. ‘Words as Bridges: Information- versus Relations-based Rhetorical Strategies in the War on Terror’. International Studies Association, Chicago, IL, 1-3 March 2007. <https://observer.american.edu/soc/faculty/upload/zaharna-isa-bridges-07.pdf>.

Zmud, R. W., T. Shaft, W. Zheng and H. Croes. ‘Systematic Differences in Firm's Information Technology Signaling: Implications for Research Design ’. *Journal of the Association for Information Systems* 11(3) (2010), 149-181.

**Appendix 1** US and China Digital Diplomacy Signal Contents

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Argumentative** | **Informative** | **Grand Total** |
| **Chinese Mission to the UN** | **81** | **97** | **178** |
| Explicit with Hashtag | 1 |  | 1 |
| Explicit with Mention | 8 |  | 8 |
| Implicit no mention within text | 9 |  | 9 |
| Implicit within text only | 11 |  | 11 |
| No mention | 52 | 97 | 149 |
| **Chinese State Council of Information** | **49** | **76** | **125** |
| Implicit no mention within text | 2 |  | 2 |
| Implicit within text only | 1 |  | 1 |
| No mention | 46 | 76 | 122 |
| **Spokesperson of Chinese Mission to the UN** | **76** | **50** | **126** |
| Explicit with Hashtag | 3 |  | 3 |
| Explicit with Mention | 33 |  | 33 |
| Implicit no mention within text | 6 |  | 6 |
| Implicit within text only | 10 |  | 10 |
| No mention | 24 | 50 | 74 |
| **Chinese Ministry of Foreign Affairs** | **68** | **61** | **129** |
| Explicit with Hashtag | 5 | 1 | 6 |
| Explicit with Mention | 3 |  | 3 |
| Implicit no mention within text | 5 |  | 5 |
| Implicit within text only | 10 |  | 10 |
| No mention | 45 | 60 | 105 |
| **Donald Trump** | **117** | **64** | **181** |
| Implicit within text only | 15 | 1 | 16 |
| No mention | 7 | 26 | 33 |
| Other | 95 | 37 | 132 |
| **US Secretary of State Mike** **Pompeo** | **28** | **12** | **40** |
| Explicit with Hashtag | 2 |  | 2 |
| Explicit with Mention | 3 | 2 | 5 |
| Implicit within text only | 8 |  | 8 |
| No mention | 12 | 8 | 20 |
| Other | 3 | 2 | 5 |
| **Spokesperson of Chinese Ministry of Foreign Affairs** | **85** | **99** | **184** |
| Explicit with Hashtag | 8 | 1 | 9 |
| Explicit with Mention | 1 |  | 1 |
| Implicit no mention within text | 14 |  | 14 |
| Implicit within text only | 13 |  | 13 |
| No mention | 49 | 98 | 147 |
| **US mission to the UN** | **59** | **24** | **83** |
| Explicit with Hashtag | 3 |  | 3 |
| Explicit with Mention | 5 |  | 5 |
| Implicit no mention within text | 9 |  | 9 |
| Implicit within text only | 19 |  | 19 |
| No mention | 21 | 21 | 42 |
| Other | 2 | 3 | 5 |
| **The White House** | **229** | **237** | **466** |
| Implicit no mention within text | 1 |  | 1 |
| Implicit within text only | 12 |  | 12 |
| No mention | 52 | 51 | 103 |
| Other | 164 | 186 | 350 |
| **Grand Total** | **792** | **720** | **1512** |

**Appendix 2** US and China Digital Diplomacy Signal Networking

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Explicit with Hashtag** | **Explicit with Mention** | **Implicit no mention within text** | **Implicit within text only** | **No mention** | **Other** |
| **China Total** | **19** | **45** | **36** | **45** | **597** |  |
| Chinese Mission to the UN | 1 | 8 | 9 | 11 | 149 |  |
| Chinese State Council of Information |  |  | 2 | 1 | 122 |  |
| Spokesperson of Chinese Mission to the UN | 3 | 33 | 6 | 10 | 74 |  |
| Chinese Ministry of Foreign Affairs | 6 | 3 | 5 | 10 | 105 |  |
| Spokesperson of Chinese Mission to the UN | 9 | 1 | 14 | 13 | 147 |  |
| **US Total** | **5** | **10** | **10** | **55** | **198** |  |
| Donald Trump |  |  |  | 16 | 33 | 132 |
| US Secretary of State Mike Pompeo | 2 | 5 |  | 8 | 20 | 5 |
| US mission to the UN | 3 | 5 | 9 | 19 | 42 | 5 |
| The White House |  |  | 1 | 12 | 103 | 350 |
| **Grand Total** | **24** | **55** | **46** | **100** | **795** | **492** |

1. CDC, 2022. [↑](#footnote-ref-1)
2. Kiehl, 2012. [↑](#footnote-ref-2)
3. See Seo, 2013. [↑](#footnote-ref-3)
4. Pamment, 2018. [↑](#footnote-ref-4)
5. Fuchs, 2021. [↑](#footnote-ref-5)
6. Manor and Pamment, 2022. [↑](#footnote-ref-6)
7. Fidler, 2010. [↑](#footnote-ref-7)
8. Lee and Kim, 2021. [↑](#footnote-ref-8)
9. Such as Bjola, 2022; Jiménez-Martínez, 2022. [↑](#footnote-ref-9)
10. Kavalski, 2021. [↑](#footnote-ref-10)
11. The White House, 2020, 13. [↑](#footnote-ref-11)
12. US Department of State and USAID, 2018, 28. [↑](#footnote-ref-12)
13. Pence, 2018. [↑](#footnote-ref-13)
14. BBC, 2020; US Department of the Treasury, 2019. [↑](#footnote-ref-14)
15. Bjola and Holmes, 2015. [↑](#footnote-ref-15)
16. Ittefaq, 2019; Sevin, 2018. [↑](#footnote-ref-16)
17. Seib, 2012. [↑](#footnote-ref-17)
18. Melissen, 2011. [↑](#footnote-ref-18)
19. Manor, 2020. [↑](#footnote-ref-19)
20. See Gilboa, 2016. for a longer discussion [↑](#footnote-ref-20)
21. Duncombe, 2019, 109. [↑](#footnote-ref-21)
22. Cull, 2011. [↑](#footnote-ref-22)
23. Graham, 2014, 536. [↑](#footnote-ref-23)
24. Huang and Wang, 2021. [↑](#footnote-ref-24)
25. Duncombe, 2019, 115. [↑](#footnote-ref-25)
26. Anholt, 2006. [↑](#footnote-ref-26)
27. Kampf, et al., 2015. [↑](#footnote-ref-27)
28. Bjola, et al., 2019, 99. [↑](#footnote-ref-28)
29. Spence, 2002. [↑](#footnote-ref-29)
30. Spence, 1973. [↑](#footnote-ref-30)
31. Connelly, et al., 2011. [↑](#footnote-ref-31)
32. Stiglitz, 2002, 469. [↑](#footnote-ref-32)
33. Gambetta, 2011; Taj, 2016. [↑](#footnote-ref-33)
34. Zmud, et al., 2010. [↑](#footnote-ref-34)
35. Connelly, et al., 2011. [↑](#footnote-ref-35)
36. Mavlanova, et al., 2012. [↑](#footnote-ref-36)
37. BliegeBird and Smith, 2005. [↑](#footnote-ref-37)
38. Connelly, et al., 2011. [↑](#footnote-ref-38)
39. Drover, et al., 2018. [↑](#footnote-ref-39)
40. Spence, 1973. [↑](#footnote-ref-40)
41. Landers and Schmidt, 2016. [↑](#footnote-ref-41)
42. Basuroy, et al., 2006. [↑](#footnote-ref-42)
43. Mavlanova, et al., 2012. [↑](#footnote-ref-43)
44. Mavlanova, et al., 2012. [↑](#footnote-ref-44)
45. Hallen, 2008. [↑](#footnote-ref-45)
46. Ramaswami, et al., 2010. [↑](#footnote-ref-46)
47. Connelly, et al., 2011. [↑](#footnote-ref-47)
48. Gulati and Higgins, 2003. [↑](#footnote-ref-48)
49. Cohen, 1987. [↑](#footnote-ref-49)
50. Cohen, 1987, 34. [↑](#footnote-ref-50)
51. Sartori, 2007. [↑](#footnote-ref-51)
52. Pu, 2019. [↑](#footnote-ref-52)
53. Blumstein, et al., 2012. [↑](#footnote-ref-53)
54. Manor and Crilley, 2019. [↑](#footnote-ref-54)
55. Connelly, et al., 2011. [↑](#footnote-ref-55)
56. Nye, 2019. [↑](#footnote-ref-56)
57. Lester, et al., 2006; Rynes, et al., 1991. [↑](#footnote-ref-57)
58. Swedberg, 2020. [↑](#footnote-ref-58)
59. Chen and Molter, 2020; Johnston, 2020; Manor and Segev, 2020. [↑](#footnote-ref-59)
60. Albishri, et al., 2019; Bjola and Holmes, 2015; Sevin and Manor, 2019. [↑](#footnote-ref-60)
61. Stolee and Caton, 2018. [↑](#footnote-ref-61)
62. Huang and Wang, 2021. [↑](#footnote-ref-62)
63. Zaharna, 2007. [↑](#footnote-ref-63)
64. Cull, 2022. [↑](#footnote-ref-64)
65. Mor, 2007. [↑](#footnote-ref-65)
66. Kim, et al., 2014; Somerfield, et al., 2018. [↑](#footnote-ref-66)
67. (Statista Research Department, 2022) [↑](#footnote-ref-67)
68. Huang and Wang, 2021; Kim, et al., 2021; Xu and Löffelholz, 2021. [↑](#footnote-ref-68)
69. Clarke and Grieve, 2019. [↑](#footnote-ref-69)
70. Pain and Masullo Chen, 2019, 9. [↑](#footnote-ref-70)
71. Anspach, 2021. [↑](#footnote-ref-71)
72. Stolee and Caton, 2018. [↑](#footnote-ref-72)
73. Shahin and Huang, 2019. [↑](#footnote-ref-73)
74. Manor, 2016. [↑](#footnote-ref-74)
75. Duncombe, 2019. [↑](#footnote-ref-75)