Partisanship over security: Public narratives via Twitter on foreign interferences in the 2016 and 2020 U.S. presidential elections
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Abstract
Using a mixed methods approach, we explore the main narrative themes conveyed by the public, via microblogging platform Twitter, in regard to foreign interferences in the U.S. presidential elections of 2016 and 2020. Our findings show that rather than expressing serious concerns about foreign threats to the United States’ democracy and its electoral process, the tweets reflected the political polarization that has come to characterize the American public. Rather than perceiving the interferences as a national security issue, the public appeared to selectively use the foreign threats to bolster their partisan positions.

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Introduction
With advancements in computer technology and global information infrastructures over the past few decades, foreign governments and agents have rapidly increased their online information warfare strategies and tactics (Ventre, 2016). Russia, China, and Iran have been identified as major players in using computational propaganda, defined as the “use of algorithms, automation, and human curation to purposefully manage and distribute misleading information over social media networks” [1]. Ample evidence exists that Russia under the leadership of Vladimir Putin, in particular, has increasingly used social media platforms to disseminate disinformation, or false information intentionally presented as credible news, with the malicious intent to cause sociopolitical disruptions in other countries and expand its geopolitical power (Ajir and Vailliant, 2018).
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During the 2016 U.S. presidential election, Russia used a multifaceted cyber campaign to disrupt the electoral process and fuel social divisions within the United States through inflammatory social media messages (U.S. Congress, 2019–2020). The Kremlin leveraged its connection with the Internet Research Agency (IRA), located in St. Petersburg, Russia, to orchestrate the release of thousands of fake Facebook and Twitter accounts (Mueller, III, 2019). Former Central Intelligence Agency Acting Director Michael Moore characterized the interference as the “political equivalent of 9/11” (Tenova, et al., 2018). Some scholars have suggested that such interference led to the election of President Trump in 2016 (Jamieson, 2018).

In the midst of the 2020 U.S. presidential election, U.S. intelligence issued accounts of Russia, along with China and Iran, ramping up their disinformation capabilities as lead ups to the 2020 U.S. presidential election (Hosenball and Mason, 2020; Nakashima, et al., 2020). In his 7 August 2020 public statement, National Counterintelligence and Security Center Director William Evanina suggested that the state actors are aiming to “sway U.S. voters’ preferences and perspectives” and “increase discord in the United States (ODNI, 2020). Congressional leaders asked the intelligence community to release additional declassified information in order to “inoculate voters” against the disinformation attempts (Barnes, 2020).

Any kind of foreign interference in a country’s democratic processes, particularly elections, is a critical national security issue with vast implications on the stability of that country (Bentzen, 2020; Office of the Director of National Intelligence, 2017; Tenova, et al., 2018). However, given the non-kinetic, online nature of these foreign threats, how the public is perceiving these interferences is an area that requires further research. The “rally-round-the-flag” phenomenon evident during conventional global conflicts (Feinstein, 2020; Mueller, 1994) might not be readily apparent when it comes to cyber threats to democracies by foreign entities.

To shed light on this area, we examined public Twitter posts originating in the United States that pertained to foreign interferences in the 2016 and 2020 U.S. presidential elections. The number of individuals turning to social media to gather information and voice political opinions has dramatically increased over the past decade (Anderson, et al., 2018). For many, social media has become an indispensable means by which they are able to publicly express their own political viewpoints (Sunstein, 2007). In examining the public Twitter posts, we kept in mind the political climate of the country during both elections and the possibility of partisanship and political polarization coming into play in the public’s interpretations of the foreign interferences.

In this paper, we first provide a discussion of the notion of social media as being part of the public sphere. We then introduce the concept of political polarization and explain how the intensification of partisanship has led to increases in political polarization in the United States. The implications of this polarization on public views involving foreign electoral interferences are presented before our study’s research questions, method, and findings are provided and discussed.

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Social media and the public sphere

Over time, scholars (e.g., Dutton and Blank, 2011; Jenkins, 2006) have argued for the potential of the Internet, including social media sites, to broaden the public sphere. Much of the research has been inspired by Jürgen Habermas (1984–1987) and his notions of communicative action and the life world. Critical of the role of the state and capitalism in shaping public discourse, Habermas envisioned a public sphere in which rational political debate could take place unfettered by elite powers. By engaging in rational discussions and critical debates, Habermas believed that the public could overcome the constraints of ideological discourse and could act as counterpoints to the discourse offered by governing authorities (Habermas, 1991).
Although Habermas’ notion of a public sphere soon came under criticism as simply a utopian ideal given existing power relations in any society, with the introduction of the Internet and social media, researchers began to revisit the possibility of Habermas’ vision of an ideal public sphere (Halpern and Gibbs, 2013). Acknowledging Habermas’ original notion of the public sphere as inadequate in capturing the complexities associated with information and communication technologies, researchers have modified the concept of the public sphere and have adapted it to the current social media environment that now exists (Bruns and Highfield, 2015). For example, Dutton (2013) has veered away from the public sphere concept and has introduced the concept of the Fifth Estate. Taking a social science perspective, Dutton describes the Internet as a Fifth Estate that creates spaces of information access and public interactions that are not tied to geographical or institutional networks. Emphasizing the communicative role of the Internet, Dutton (2013) writes that individuals now have the power to “use the Internet to move across, undermine and go beyond the boundaries of existing institutions, thereby opening new ways of increasing the accountability of politicians, press, experts and other loci of power and influence”.

Researchers (e.g., Bennett, 2008; Groshek and Al-Rawi, 2013; Vromen, et al., 2015) who have focused on the liberating nature of the Internet and social media maintain that the Web has afforded ordinary citizens the means by which to disseminate their own perspectives, engage in sound deliberation on contested topics, and to facilitate collective action. For instance, Groshek and Al-Rawi (2013) examined public sentiments expressed on both Facebook and Twitter during the 2012 U.S. presidential campaign. The researchers found both similarities and divergences in sentiments conveyed across social media spaces. In addition, all presidential candidates were framed in non-critical ways on social media.

Other researchers (Jamieson and Capella, 2008; Sunstein, 2007), however, have raised concerns about the Internet, particularly social media, contributing to deep divisions within societies. Rather than promoting constructive dialogue, social media is viewed as reinforcing so-called ideological bubbles or “echo chambers” in which liked-minded individuals virtually congregate, share ideas, and mutually support each other’s views (Jamieson and Cappella, 2008). Because individuals have the power to select which information sources they access and which online groups they engage with, the concern is that they might avoid information that contradicts their own belief systems and, instead, gravitate toward those that match their own. According to Sunstein (2017), by sharing or replying to online political information that reinforces certain beliefs and attitudes held within their like-minded group, a sense of group identification is strengthened. Hence, exacerbating political polarization and threatening democracies (Sunstein, 2017, 2007).

**Political polarization**

Although political polarization can be viewed as a neutral concept that captures differences in public attitudes on issues and that can potentially serve a positive purpose by mobilizing people toward needed societal change (McCoy, et al., 2018), it becomes problematic when the polarization itself leads to unwieldy opposing factions that threaten the stability of democratic institutions. Increases in political polarization have been detected at a global scale often in conjunction with the rise in populist sentiments and elite polarization (Carothers and O’Donohue, 2019; Somer and McCoy, 2019).

Within the context of the United States, political polarization has intensified over the past few decades (Abramowitz and Saunders, 2008). Some scholars have attributed this division to the growth in partisan divide over core ideological values that have been facilitated by elite polarization (Hetherington, 2001). By tapping into core values, partisanship as a social identity has strengthened over the years (Green, et al., 2002; Iyengar, et al., 2012). This form of partisanship, entrenched in an individual’s social identity, has been termed expressive partisanship (Huddy, et al., 2015). Expressive partisanship is not viewed as simply signifying political party affiliation. Instead, it is understood as a deeply ingrained part of a person’s own sense of self in which in-group/out-group dynamics come into play (Huddy, et al., 2015; Huddy and
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To better understand expressive partisanship, it is important to become familiar with the concept of social identity. First introduced by Henri Tajfel, social identity theory posits that individuals have a natural drive to categorize themselves into social groups out of a desire for social belonging; the groups confer upon them a degree of security and self-worth (Abrams and Hogg, 1990; Tajfel and Turner, 1986). As a result of in-group/out-group designations and group membership identification, biased perceptions of group members emerge (Gaertner and Dovidio, 2000; Tajfel and Turner, 1986). Under the social identity-based understanding of partisanship, individuals internalize their partisan identity and develop an emotional attachment to their party; any party failure or victory becomes personal (Huddy and Bankert, 2017). Individuals are “motivated to defend their party’s positions and status, which results in the biased processing of information” [3].

The implications of expressive partisanship and increases in political polarization in regard to governmental efforts to thwart foreign cyber threats to a country’s democratic institutions are vast. If members of the public are allowing their own sense of partisan loyalty to influence their perceptions of national security threats, efforts to combat disinformation campaigns and electoral interferences by foreign governments become even more challenging.

For our study, we explored the possibilities of expressive partisanship and political polarization coming into play in shaping expressed stances via Twitter in regard to foreign interferences in the U.S. presidential elections in 2016 and 2020. We did so by first conducting a thematic analysis of the Twitter posts related to Russia’s interference in the 2016 election in order to reveal narrative themes emerging from the posts. We then focused on the 2020 election and combined a topic analysis of the Twitter posts together with thematic analyses of samples of the posts to, again, uncover narrative themes.

Importantly, while our work is focused on expressed partisanship, it is distinctly different than much of the literature on online polarization. Polarization is often measured and framed through the structure of social ties on given social networks. For example, a common measure of polarization is the modularity of a network (Newman, 2006), a measure of how significant of a difference there is between the expected number of connections between users and the actual number of connections between users. However, there has been debate to what extent this measure is of polarization — sharply contrasting sets of opinions between groups, as networks in non-polarized contexts can also demonstrate high modularity due to community structure (Matakos, et al., 2017). While polarization and modularity in a network space are certainly correlated, there are more direct measures of polarization on social networks that utilize the structure of the network of social ties, such as the analysis of the boundary between partitioned groups in a network (Matakos, et al., 2017; Guerra, et al., 2013). Ultimately, all network-based metrics of polarization are largely dependent on the relationship modeled in the network. For example, highly separated groups in a network of retweets on Twitter (asymmetric relationships) are very different from highly separated groups in a friendship network on Facebook (symmetric relationships). While these types of metrics are important to our understanding of polarized opinion formation, even relevant in our given context of foreign inference and media manipulation (Stewart, et al., 2017; Starbird, 2018), they are distinctly different from the goals of our work. Namely, our exploration of the publicly expressed narratives on Twitter, which may demonstrate polarization through Twitter content. Whether these publicly expressed opinions are formed within high homophily in the network space or are influenced by contrasting opinion leaders in partitioned groups is not within the scope of our work.

For this particular study, we were foremost interested in the narratives of the public involving foreign electoral interferences because we believed this would provide a depth of understanding in regard to what might be shaping their expressed opinions via Twitter and whether or not indications of partisanship-based polarization existed. Narrative inquiries allow researchers to decipher the “stories” the public are telling to convey meaning (Cobly, 2014). It permits researchers to peel back the layers of meaning embedded in a text to arrive at deeper understandings of the way that an individual perceives and represents the world.
Research questions

Our overarching goal for this study was to garner an understanding of the public discourse in regard to the foreign meddling in the 2016 and 2020 U.S. presidential elections in order to provide insight into the major narratives used and unearth the underlying convictions of those crafting the narratives. Possibilities of unified voices against foreign intrusion on a key democratic process versus fractured voices reflecting political polarization were considered. To guide us in the effort to reveal the main narratives manifested in the Twitter posts and any indicators of unified versus polarized sentiments, the following are the research questions we posed:

RQ1: What narrative themes are manifested in the public’s Twitter posts regarding the 2016 Russian-linked Facebook ads issue?
RQ2: What narrative themes are manifested in the public’s Twitter posts regarding foreign interferences in the 2020 U.S. presidential election?
RQ3: Are there any parallel themes from the 2016 and 2020 Twitter posts?

Methods and analysis

Our study consisted of two phases. The first focused on the public’s Twitter posts regarding the disclosure of Russian-linked Facebook advertisements that appeared prior to, during, and following the 2016 U.S. presidential election. On 10 May 2018, Democrats serving on the U.S. House Permanent Select Committee on Intelligence released 3,517 Facebook advertisements that were purchased by the Kremlin-linked Internet Research Agency (IRA) from June 2015 to August 2017 (Guynn and Weise, 2018). The ads were part of the Russian government’s concerted efforts to incite divisions within the United States and interfere in the 2016 U.S. presidential election (U.S. Congress, 2019–2020). The second phase of the study focused on the examination of public tweets pertaining to news of interferences by Russia, China, and Iran on the 2020 U.S. presidential election.

Phase I: Thematic tweet analysis — Russian interference in the 2016 U.S. presidential election

To address the question of what narrative themes are manifested in the public’s Twitter posts regarding the 2016 Russian-linked Facebook ads issue, a thematic analysis of Twitter posts pertaining to the release of the ads was conducted. An inductive approach was used in the analysis. In other words, the data (i.e., Twitter posts) were not placed into a pre-existing notion of existing codes or conceptual frameworks. Instead, the themes were allowed to emerge through a recursive process of deep reading and interpretation. This approach was viewed as appropriate given that we wanted to discover consistently appearing patterns of meaning in the data.

To gather the initial set of Twitter posts, Salesforce’s Social Studio software program was used. The time frame used for the search was from 10 May 2018 (Date of release of Russia-linked Facebook ads) to 10 August 2018 (Approximately one month following the release). The search took place in non-real time in the month of October 2018, and the keywords used were Russia or Russian and Facebook ads or Facebook advertising. The search was also narrowed to the United States as the geographical location and the English language. In Social Studio, the geographical region of tweets is classified based on three indicators:
geographical coordinates, location listed in the user’s profile, and time zone set by the Twitter user. Specifically, if a Twitter user enables the tweet location feature, geographical coordinates can be provided. In addition, Social Studio also checks location information entered by Twitter users in their profiles and time zone set by the users in their Twitter accounts to pinpoint the geographic location of a specific tweet or a Twitter profile.

The search process generated a total of 3,651 tweets. From this pool of tweets, those from official news media outlets’ Twitter accounts (e.g., New York Times, CNN), journalists, and public officials were excluded. In this way, we were able to examine how the public, broadly meaning Twitter users who are not journalists or prominent social figures, but members of the general online community, reacted to the news of the Russian-linked Facebook ads and their release. All duplicate tweets and retweets were also removed. This narrowing process resulted in a total of 778 tweets for analysis.

The steps used to qualitatively analyze the tweets were guided by the thematic analysis phases offered by Braun and Clarke (2008) and the features provided by the software program, NVivo12. NVivo12 assists in the importation, aggregation, and coding of data for the purposes of a thematic analysis. It allows researchers to systematically tag text within the data set. The tags, labeled as nodes, can be then examined to reveal potential themes.

The analysis involved first a thorough deep read of each post before tagging each as code. The codes were then carefully examined to decipher patterns that indicated potential themes. Following the identification of patterns (themes), codes were combined under the identified themes and labels were provided for each theme. In searching for the themes, special attention was paid to the information included, language choices used, any included hashtags and/or tags, and the existence of analogies or metaphors. Past tweets of the individual who posted the message were also examined to derive a better sense of the meaning the twitterer was attempting to convey to the reader. This process also allowed us to help validate that the individual posting was a member of the public. It should be noted that in the analysis, posts were found that conveyed information in a straightforward manner, such as where individuals could find information pertaining to the release of the Russian Facebook ads. Those posts were tagged as neutral in nature.

**Phase II: Topic and thematic tweet analyses — Foreign interferences in the 2020 U.S. presidential election**

In order to identify the narrative themes manifested in the public’s Twitter posts regarding foreign interferences in the 2020 U.S. presidential election and to uncover any parallel themes from those posts and the 2016 posts, a mixed method approach was used in this study’s second phase. Because of the large size of the Twitter data set that was generated by Salesforce’s Social Studio in regard to foreign interferences in the 2020 election, a computer-assisted quantitative approach was first used to identify the broad topics of the posts, followed by a thematic analysis of tweet samples from each topic area.

To secure the initial data set, a search of the Twitter posts was conducted in non-real time at the end of November 2020, using Social Studio with the search timeframe of 24 July 2020 (date on which the National Counterintelligence and Security Center (NCSC) Director William Evanina publicly shared the intelligence community’s concern regarding interferences in the 2020 electoral process by China, Russia, and Iran) to 18 November 2020 (two weeks following election day). With the United States specified as the geographical location and English as the language, the keywords used for the search were: Russia and election, China and election, Iran and election. Retweets were excluded. The total number of posts returned by the search was 159,139, which was then filtered and analyzed as described below.

**Data filtering**

As stated earlier, our goal was to understand narratives manifested from the public. To approximate this, we performed a two-step filtering process on our Twitter data. First, we removed all tweets from accounts verified by Twitter. We assumed that the majority of journalists, academics, and other opinion leaders would fall into this group. As per Twitter, verified accounts are “of public interest” and “must be authentic,
notable, and active” (Twitter, 2021). Second, we removed all tweets from bot accounts. To find bot accounts, we use Botometer (Sayyadiharikandeh, et al., 2020), a state-of-the-art Twitter bot detection tool. Specifically, any account in our data set that was predicted to be an automated account by the Botometer classifier was removed from our data set. After removing both sets of users (verified and bots), we were left with a set of accounts which we loosely assumed were the public. In total we found 2,236 verified accounts and 11,530 bot accounts in our data set, leaving us with 145,373 “public” accounts to analyze.

**Topic modeling**

As a first step in our analysis, we identified topics in the Tweet data using a Latent Dirichlet Allocation (LDA) topic model (Blei, et al., 2003). In short, LDA is a generative statistical model that is commonly used to group unobserved groups of documents (in this case, tweets) based on the words observed in each document. Each document becomes a mixture of topics (groups), where a distribution of topics can be mapped to each document. Each topic can then be interpreted by a human annotator using the frequency of words in each topic. Standard preprocessing steps for topic modeling were used, including word tokenization and the removal stop words (Schofield, et al., 2017).

The number of topics in an LDA model is a tunable parameter (typically called $k$). A standard grid search method was used to find the ideal number of topics in the model. Specifically, a search over values of $k$ is used to find the model which produces the best topic prediction probability on a held-out sample of words (in other words, the model that produces the minimum perplexity and maximum log likelihood). Using this method, we found that the ideal number of topics was three. Given the short text of tweets and the specific search criteria used in our data collection, the small number of topics found in the data was expected.

After the topic model was produced, we mapped each tweet to the dominant topic in the topic distribution of the document. Hence, each tweet was mapped to one of the three topics. We used this topic to tweet mapping to begin our qualitative analysis. Notably, the topic groups had very little overlap, making this reduction to one topic per document reasonable.

The three topics were broadly interpreted as: 1. Russian interference and Trump’s Impeachment; 2. Russian interference and 2020 voting; and, 3. Chinese interference. We found that the majority of the data mapped to topic 1, with 226K tweets in topic 1, 13K tweets in topic 2, and 27K tweets in topic 3. A visualization of the topics can be found in Figure 1.
Thematic analysis

A random sample of 500 tweets from each of the identified topics was then qualitatively analyzed to reveal the narrative themes. The same thematic analysis method described above for the 2016 election tweets was employed. Once again NVivo12 and the thematic analysis guidelines provided by Braun and Clarke (2008) were utilized. Profiles of the twitterers were examined along with their past tweets to confirm that they were members of the general public. Similar to what was found with the 2016 data, straightforward posts were also discovered with the 2020 data. Those posts were tagged as neutral and were determined as not feeding into the substantive themes.

Findings

Phase I: Tweets & Russian interference in the 2016 U.S. presidential election

The first phase of this study was designed to answer research question one that asked what narrative themes were manifested in the public’s Twitter posts regarding the 2016 Russian-linked Facebook ads issue. The
thematic analysis from this phase revealed six main themes as listed below (Please see Appendix A for examples of each theme).

- Russia did not affect election outcome
- Russia is not a threat to the U.S.
- Russia’s disinformation is a real problem
- Hypocrisy of liberals/democrats
- Conspiracies led by Hillary, DNC, Obama administration
- Democrats/liberals focusing on Russia’s ads are missing real national threats — China and illegal immigrants

Phase II: Tweets & foreign interferences in 2020 U.S. presidential election

The aim of the second phase of this study was to answer research question two that asked what narrative themes were manifested in the public’s Twitter posts regarding foreign interferences in the 2020 U.S. presidential election. As explained in the method’s section, from the LDA topic model, the major identified topics were: Topic 1 — Russian interference & Trump’s impeachment; Topic 2 — Russian interference & 2020 voting; Topic 3 — Chinese interference. The revealed themes under each of the identified topics are presented below (See Appendix B for examples of each theme). Clear indications of political leanings were conveyed in the Twitter posts through word choices, phrases, and hashtag usages. Thus, the presentation of the findings is organized as such.

**Topic 1 — Russian interference & Trump’s impeachment**

Trump-leaning themes:

- Bogus impeachment part of Democrat corruption
- U.S. will be under communist China control if Biden wins (also appearing in Topic 3)
- Big tech helping Biden to win (also appearing in Topic 3)
- Mainstream media helping Biden to win (also appearing in Topic 2)
- China created virus to help Biden win (also appearing in Topic 2)
- Biden and Democrats in collusion with China (also appearing in Topic 3)
- Rigged election (also appearing in Topic 2)
- Russian interference is a hoax (also appearing under Topic 2)

Biden-leaning themes:

- Trump needs to be impeached
- America will be destroyed under Trump
- Trump is unfit to lead
- Trump and Republicans taking no action on foreign election interference
- Trump and his team colluding with Russia (also appearing under Topic 2)
- No election fraud (also appearing under Topic 2)

**Topic 2 — Russian interference & 2020 voting**

Trump-leaning themes:

- Deep state plotting against Trump
- China and Democrats — Working together to help Biden win
- China created virus to help Biden win (also appearing under Topic 1)
- Mainstream media helping Biden to win (also appearing under Topic 1)
- Rigged election (also appearing under Topic 1)
- Russian election interference is a hoax (also appearing under Topic 1)
- Iran interfering in election to help Biden
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Biden-leaning themes:

- Barr and Trump don’t want mail-in ballots because Russia can’t hack paper
- Russia actively interfering in 2020 election as it had in 2016 election (also appearing under Topic 3)
- Trump is a Russian asset
- Trump and his team colluding with Russia (also appearing under Topic 1)
- Election fraud doesn’t exist (also appearing under Topic 1)
- Russia wants to sow chaos in the U.S.
- Trump and Republicans actively trying to steal election

**Topic 3 — Chinese interference**

Trump-leaning themes:

- U.S. will be under communist China control if Biden wins (also appearing under Topic 1)
- China as source of election fraud
- Biden and Democrats in collusion with China (also appearing under Topic 1)
- China is biggest threat to election
- China is a threat to national security
- Hunter Biden links with China
- China created virus to help Biden win (also appearing under Topic 1 and Topic 2)
- Mainstream media helping Biden to win (also appearing under Topic 1 and Topic 2)
- Big tech helping Biden to win (also appearing under Topic 1)

Biden-leaning themes:

- Trump spreading disinformation about China to stoke fear and win election
- Russia actively interfering in 2020 election as it had in 2016 election (also appearing under Topic 1)
- Russia wants Trump to win
- A Trump win would be dangerous

**Comparison of tweets on foreign interferences**

Research question three asked if any parallel themes existed from the Twitter posts regarding foreign interferences in the two presidential elections. In contrast to the main narrative themes found regarding Russia’s election interference in 2016, in which anti-Democrat themes predominated, the 2020 election themes reflected voices from both sides of the aisle. Although the U.S. intelligence community made public that Russia, China, and Iran were actively attempting to undermine the democratic electoral process (Office of the Director of National Intelligence, 2020), those individuals who appeared to be Trump-leaning focused on the electoral threats from China while portraying Russia’s election interference as a hoax. The Biden-leaning twitterers tended to highlight Russia’s interference while suggesting collusion between Russia, Trump, and members of the GOP.

**Discussion and conclusion**

The overall findings from this study appear to suggest that partisan identification served as a prism through which foreign interferences in the two U.S. presidential elections were viewed. The twitterers seem to have selectively used information on foreign threats to the U.S. electoral process to reinforce support for their choice of presidential candidate. While some of the narratives do express concern for national security, particularly in the broader 2020 data set, those concerns are not distributed evenly across partisan lines. On one hand, Republican-leaning frames demonstrate concerns about threats from China (and some concerns
about Iran, although small in number in the data set), while on the other hand, Democrat-leaning frames largely demonstrate concerns about threats from Russia. Ultimately, suggesting that neither partisan group is concerned about the complete picture of national security threats to the U.S., but rather those threats that serve partisan identification.

Of those narratives that do not express concern for foreign threats to national security, several point to concerns about domestic threats rather than foreign threats. This domestic focus is particularly true of the Trump-leaning themes from both 2016 and 2020. For example, in 2016 we see concerns about the Democrats as a threat to security. In 2020, we see concerns centered around multiple domestic entities, such as the mainstream media, big technology companies, the “deep state”, and again the Democrats. This domestic focus also occurs widely in the Biden-leaning themes from 2020, although the focus is on one entity: Donald Trump.

What may be even more concerning is that many narratives across partisan leanings, both those expressing concern for national security and those that are not, are not based on high veracity information, but rather conspiracy theories or false/misleading information. The most obvious example of this in the found narratives are those concerned about the “deep state” — a conspiracy theory that suggests secret collusion within the U.S. political system. This concept is often tied to the discredited far-right conspiracy theory, QAnon, a security threat in its own right (Amarasingam and Argentino, 2020).

In viewing this study’s findings from the lens of expressive partisanship and the growth in affective polarization, it becomes clear that persuading the public that cyber disinformation campaigns and election interferences by foreign actors pose significant national security risks is a formidable task. To assist in countering foreign government attempts to use disinformation and cyber technology to disrupt democratic processes, perhaps it is not enough to rely on general announcements that the U.S. intelligence community has evidence of foreign interference. To the extent feasible, specific strategies and tactics being employed by the foreign actors and the potential dire consequences of such actions on the United States as a country need to be clearly explicated. For as research in intergroup conflict has shown (e.g., Gaertner and Dovidio, 2000), if a common superordinate identity can be penetrated or reinforced, even polarized groups have the capability of coming together to work in unity against a common threat.

Furthermore, counter-disinformation campaigns should be micro-targeted. Similar to the types of algorithms used in marketing to customize content for targeted customer segments, public service messaging regarding disinformation and foreign interferences in democratic processes needs to be crafted based on knowledge of segment behavior patterns and demographics. Understanding what types of messages would resonate with different social groups and then launching campaigns based on that knowledge would be more effective than disseminating broad-based messages on foreign attempts to undermine U.S. democracy. Within these campaigns, efforts could also be made to seek out commonalities in certain held beliefs and political attitudes among different online groups. Strategies and messages could then be designed to tap into those commonalities that underscore the unity of the nation.

Finally, as means of tackling public vulnerabilities to foreign disinformation campaigns and election interferences, new educational strategies could be developed that target young adults. In view of the finding that partisanship and political polarization appear to be impacting how individuals interpret foreign interferences in the democratic process, it would be prudent to begin inculcating in people the dire implications of such interferences on democratic processes from an earlier age. For according to Prior and Stroud (2015), research has shown that partisan beliefs begin to take shape in early adulthood. The two scholars suggest that to stem partisan-based polarization, it would be effective to focus on younger age groups. They write, “To create less reflexively partisan reasoning habits, targeting young citizens with interventions seems promising” [4]. Thus, a combined campaign that discourages reflexive partisanship while educating on the need to thwart foreign attempts to disrupt democratic processes might prove to be effective.

This study is not without limitations. The random sample of the 2020 Twitter posts selected for the thematic
analysis might not be representative of the entire data set. Furthermore, although several steps were taken to eliminate bots and non-public twitterers from the corpus, the possibility exists that a number of such posts might have remained undetected and included in the samples used for analysis. Finally, assumptions of political candidate leanings of the twitterers were made based on the text included in the tweets and the tweets’ emerging themes.

In spite of these limitations, it is hoped that the study offers insight into public online discourse regarding foreign efforts to undermine the electoral process in the United States. It is also hoped that the study reinforces the value of using a mixed method approach when having the objective of understanding embedded topics and themes within a large data set.

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Ariadne Vromen, Michael A. Xenos, and Brian Loader, 2015. “Young people, social media, and connective action: From organizational maintenance to everyday political talk,” Journal of Youth Studies, volume 18, number 1, pp. 80–100.

Appendix A: Theme examples — Phase I: Tweets & Russian interference in 2016 U.S. presidential election

Russia did not affect election outcome

- “Okay. I’m done with this garbage. Russia did NOT meddle in our elections”
- “Oh brother, are you seriously suggesting these Facebook ads are the reason Pres Trump won the election? How about this — you guys ran the worst candidate in history. Run anyone else, you probably win. Russia had nothing to do with it”

Russia is not a threat to the U.S.

- “Creating a dozen Facebook ads is not attacking our country. Also we still have no actual objective and tangible evidence that Russia did anything else than that. People have literally lost their minds with this stuff”
- “This Russian hysteria has truly gotten out of hand. Any day now shitlibs will start punching anyone speaking Russian in the face”

Russia’s disinformation is a real problem

- “Get a grip. Russia’s disinformation campaign is helping to make those problems much worse. They helped usher in an extremely anti-poor and authoritarian administration so fuck you edgy contrarianism”
- “Nothing like politics to induce people to gloss over extremely serious issues in the service of counting coup. ‘Russia may have meddled’ is a titanic understatement for the spycraft and infiltration carried out by a foreign power”

Hypocrisy of liberals/Democrats

- “8 years of social meddling. And somehow we are outraged about Facebook ads sponsored by Russia? More and more were finding out Obama’s administration was dirty as Sin”
- “Dems in Congress had Pakistani spies on their payroll Senator Feinstein had a Chinese spy on her payroll ... they just let them go, did nothing about it Now they want illegal foreigners to have the right to vote ... yet they continue to harp and honk about Russia Hypocrites”

Conspiracies led by Hillary, DNC, Obama administration

- “There is no evidence of ‘Russia meddling’ except Facebook ads. Hillary invented it out of whole cloth as an excuse as to why she lost the election. Trump asked for proof. He was brave to do so. before publicly chastising nuclear armed world leaders for crimes we should demand evidence”
- “Baloney! Where’s the proof Russia hacked the DNC when they NEVER even examined their servers? Where’s proof of anything other then a few Facebook ads? I said it from day 1 it wasn’t RUSSIA! The only proof of collusion and interference is with the DNC, CLINTON, OBAMA, and ... .”

Democrats/liberals focusing on Russia’s ads are missing real national threats

- “While the @DNC-Media is focused on Russia (for a few Facebook ads before and AFTER the election), the REAL THREAT IS CHINA!”
- “More Worried about ILLEGAL ALIENS and FBI INTERFERING in our Elections than Russia”
Appendix B: Theme examples — Phase II: Tweets & foreign interferences in 2020 U.S. presidential election

Topic 1 — Russian interference & Trump’s impeachment

Trump-leaning themes:

Bogus impeachment part of Democrat corruption

- “scam impeachment & we’re really take this scam election seriously?”
- “look at what they’ve done ... russia russia russia, impeachment impeachment impeachment, covid covid covid!! yeah I think they would do anything to steal the election. their already in the gutter why crawl out now”

U.S. will be under communist China control if Biden wins (also appearing in Topic 3)

- “the democrats do hate america, they show it everyday. look at their cities. if they win this election then kiss america goodbye. biden will take advantage of by ‘the squad’ and america will be sold to china”
- “welcome to communist china, i mean the usa”

Big tech helping Biden to win (also appearing in Topic 3)

- “wow ... if you think the Ukraine story is big, rudy said the china one dwarfs ukraine. Big tech’s censorship offensive is meant to get out ahead of this inbound nuke obviously to protect jb and influence election”
- “#potus must postpone the election until 2022. until internet section 230 reform is in place we will have full time election interference from within from #bigtech and the #msm. forget about #russia and #china the hotbed of interference is in America!”

Mainstream media helping Biden to win (also appearing in Topic 2)

- “media elected president sleepy @jobiden fraud”
- “cnn and social media giants are absolutely guilty of election interference!”

China created virus to help Biden win (also appearing in Topic 2)

- “joe, thank china for inventing and exporting the china flu used as a pretext for corrupt mail in ballot programs in many states to steal the election from trump! ps: you’ll never be our president”
- “covid-19 ... i believe it was orchestrated 2 happen within same year of presidential 2020 election ... doesn’t biden/Obama have connections 2 china?”

Biden and Democrats in collusion with China (also appearing in Topic 3)

- “the dems colluded with the chinese in the release of the virus to interfere with the election”
- “we must wake up all americans. show them how evil and corrupt the democrats are. they are controlled by the communist, including communist china, that is trying to steal this election”

Election is rigged (also appearing in Topic 2)

- “china hired biden in 2017, they’ve rigged this election and here we are”
- “@joebiden @kamalaharris screw you two!! your not or president. you both are corrupt and we will soon find out!!! how you rig the election!! china is behind it”
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Russian interference is a hoax (also appearing under Topic 2)

- “don’t threaten us bitch — we’re not scared! you pushed the Russia hoax for 4 years. We’re auditing this election”
- “democrats are always saying trump is destroying our democracy. which is funny. ya know what destroys a democracy? pushing the Russia conspiracy theory endlessly to delegitimize the election and trump’s presidency for 4 years”

Biden-leaning themes:

Trump needs to be impeached

- “he needs to be impeached again/removed!”
- “he must be removed now! impeach him again”

America will be destroyed Under Trump

- “it is embarrassing that we call him our president. he was right about one thing in 2016 and more so now, other countries are laughing. i remember after the last election was called and there was a clip of a bar in Russia playing we are the champions, it makes me sad”
- “@realdonaldtrump youre party is actively working to take away a free and fair election, the only reason you’d do this is because you’re losing! so now you’re working to destroy @usps. the @gop wants to burn america to the ground and build russia 2.0”

Trump is unfit to lead

- “the snowflake-in-chief didn’t like the article they published about the election polling that said @joebiden is viewed more favorable than the guy who allows Russia to put bounties on their heads”
- “trump doesn’t care about 200000 americans dead from covid, he doesn’t care about the millions needing extended unemployment benefits, he doesn’t care that Russia is interfering in our election processes. Trump only cares about being re-electing and we will deny!”

Trump and Republicans taking no action on foreign election interference

- “all of our govt intelligence agencies agreed Russia interfered in the 2016 election, but trump didn’t move heaven and earth to make sure it doesn’t happen again”
- “moscow mitch was briefed along with the gang of 8 in 2016 regarding russia interfering in election. mcconnell said to shut it down an take zero action. Once again, read history. republicans are the obstructionist no matter how hard you try and flip it!”

Trump and his team colluding with Russia (also appearing under Topic 2)

- “it was trump who spied on obama and then went to russia to have the election rigged. trump is a low down despicable magget that needs to go to prison!!!!!”
- “putin wants #traitortump to stay in office. russia is actively trying to screw with our election. they are telling us not to vote by mail. They are telling us that @joebiden is not mentally fit to run this country. tell putin to go pound sand”

No election fraud (also appearing under Topic 2)

- “@donalddjtrumpjr I know your simple mind wouldn’t possibly comprehend the difference between a ‘rigged’ election and election interference. It’s really not even a question as to whether Russia interfered, america’s own intelligence says so.”
- “the incredibly nave belief in asshole trump’s election fraud crap. who wants to tell these fools that donnie’s 2016 campaign manager is in prison having plead guilty to conspiracy against the united
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Topic 2 — Russian interference & 2020 voting

Trump-leaning themes:

Deep state plotting against Trump

- “#coupvid19 sent by china & deep state ops to implode us/world gains prior to election and allow for unsolicited ballots for massive mail-in fraud”
- “mccabe & former fbi dir comey & cia brennan, with obama in the loop, are ‘dirty cops’ who sought to stage a coup after hillary lost the 2016 election & tried to tie then-candidate trump to russia as a means of distracting the public from her use of a private email server”

China and Democrats — Working together to help Biden win

- “not today, china, you’re not hacking me and changing my vote to socialist biden”
- “so dominion is the election software: Pelosi and feinstein have a vested interest in the company, the software is also connected to china and george soros”

China created virus to help Biden win (also appearing under Topic 1)

- “was #covid19 meant to steal the election and hide the real threat?”
- “china released this virus intentionally, it was planned and timed to have the biggest impact possible on the 2020 election. you will never convince me that democrats didn’t have a hand in it and that is the exact reason they and their fake news cronies are pushing it 24/7”

Mainstream media helping Biden to win (also appearing under Topic 1)

- “biden didn’t win the election. it’s official until dec 14. by that time it will be clear just the fake Russia collusion story the fake election story will be exposed. cnn is nothing more then a disinformation agency working with the democratic party.”
- “an knee pads harris says russian are taking over our election. the Russia, Russia, Russia bogus attacks on our voting never happened. not one vote changed, but behind the scenes it’s really china, with fakebook, googles, twiter, democrats, antifa an most all the msm screwing us”

Election is rigged (also appearing under Topic 1)

- “#americawakup true voter fraud is mail-in votes, casting votes with no voter id or creating fake id’s to steal votes to gain power!! dept. of homeland security seized 20k counterfeit u.s. driver license from china!”
- “since when does the @nba, china & its player’s union, arbitrarily dictate uses of large areas to supersede previously designated, secure local polling locations, two months before a general election in america?? #voterfraud”

Russian election interference is a hoax (also appearing under Topic 1)

- “democrats have near total control of all mechanisms of power, influence, information & communication & leverage these mechanisms to manipulate millions, they used it to sell the fake Russia conspiracy & use it now to suppress election fraud. America is under attack from within”
- “you can’t win an election fairly so you are distorting the truth. it’s russia hoax all over again. btw that was a proven hoax”

Iran interfering in election to help Biden
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“china and iran are trying to interfere with the election as well”
- “us intel has evidence that china, russia, iran & others have already used social media media to push for the election of @joebiden. #dems project their own crimes & misdeeds onto @realdonaldtrump”

Biden-leaning themes:

Barr and Trump don’t want mail-in ballots because Russia can’t hack paper
- “@realdonaldtrump trying so hard to suppress mail_in voting during a pandemic, that trump ignored and killed close to 180k ppl. Is it because you cannot electronically hack paper?”
- “trump & barr know that russia can’t hack the mail-in ballots, that’s why they’re so against them”

Russia actively interfering in 2020 election as it had in 2016 election (also appearing under Topic 3)
- “we know russia is engaging in social media influence campaigns”
- “while twitter/other sites did block mgs w disinformation w luv from russia for few days prior to us election, blocked sites were in English text. these same social media sites didn’t block sites w spanish text. fl anyone!! Dems have to fight back!”

Trump is a Russian asset
- “free and fair elections will strengthen us against putin’s effort to absorb the country into Russia.”
- “trump & others who pushed the Ukraine tale are boosting kremlin propaganda designed to confuse & to cover up putin’s attack on US”

Trump and his team colluding with Russia (also appearing under Topic 1)
- “trump abusing the intelligence community in an attempt to keep them quiet about russia election hacks”
- “reason is when you ask Russia to interfere in an election so you can get the wheels turning on a private business venture in Moscow that will benefit you and the kremlin/putin”

Election fraud doesn’t exist (also appearing under Topic 1)
- “@realdonaldtrump hilary conceded the day after the election. the ‘russia hoax’ investigation resulted in multiple felony charges for people close to trump. dominion systems scan paper ballots, so full paper backup exists for verification. stop spreading lies”
- “the video showing ballot stuffing from a michigan polling place, is actually from Russia, there is no evidence of fraud involving ballots in the u.s. presidential election”

Russia wants to sow chaos in the U.S.
- “the Russians are actively, and on more levels, interfering in the 2020 election, and trump & his co-conspirators are participating. russia has declared war on the u.s.”
- “russia trying to stoke u.s. racial tensions before election, officials say russian intelligence services are trying to incite violence by white supremacist groups to sow chaos in the united states”

Trump and Republicans actively trying to steal election
- “this election is going to be close enough that a handful of swing states are going to decide things, and trump will have barr’s doj stop the counting of mail-in ballots while he is still in the lead based on in/person voting along. we are living in putin’s Russia”
- “this from our president, who accepted 2016 russian & wikileaks interference, tried forcing Ukraine to put out misinformation and biden in 2020 & pressured china to interfere also, he does nothing to
assist absentee voting logistics, trump actively seeks to rig 2020 election”

**Topic 3 — Chinese interference**

**Trump-leaning themes:**

*U.S. will be under communist China control if Biden wins (also appearing under Topic 1)*

- “See how Chinese are interfering in America’s election, they invested hundreds of million dollars to bribe American vote for Biden, they desperately want Biden wins, because Biden is a CCP agent; Biden wins China wins”

*China as source of election fraud*

- “The communist party of China has full control over the Lincoln project so they can have a voice in our next election. Plus use the Lincoln project to help Joe Biden cheat”
- “Communist China materially interfered w/our election”

*Biden and Democrats in collusion with China (also appearing under Topic 1)*

- “This election is about China being the dominant world power. The Dems have aligned themselves with Chinese interests”
- “Joe Biden is an illegitimate president who was selected through blue state election fraud and is a paid tool of Communist China”

*China is biggest threat to election*

- “Iran is a vassal state of Russia cancels it out as a threat and also means Russia can’t oppose Biden without stepping on their toes. This leaves China as the sole threat to the US election and with their technical capacity, they’re relatively dangerous”
- “#Pompeo warns that China poses bigger threat to US election than Russia”

*China is a threat to national security*

- “#China’s anti-Trump election raises new alarm, as #DNI calls country biggest threat”
- “China a competitor, not a threat? Chinese hackers target US defense, national security networks ahead of election day”

*Hunter Biden links with China*

- “5 ways Hunter Biden’s business deals helped China, hurt US.”
- “@joebiden is ‘compromised’ and #Bidencrimefamily is lying about Joe’s knowledge of Hunter’s deals with #China”

*China created virus to help Biden win (also appearing under Topic 1 and Topic 2)*

- “As 2nd wave CV19 spreads don’t forget how it all started: engineered in China & connected to Bidens”
- “Talk about US election interference ... #Wuhanvirus #Xivirus #Chinavirus #China #Covid19 @Coronavirus”

*Mainstream media helping Biden to win (also appearing under Topic 1 and Topic 2)*

- “Thousands of fake IDs shipped here from China ahead of election — media says it must be Putin!”
- “Report: Big tech, media ‘stole the election’ by burying Biden-China scandal”
Big tech helping Biden to win (also appearing under Topic 1)

- “zukerberg is tied to the joe biden ccp connection via the hunter biden hard drive contents. big tech and masters of the universe exercising censorship”
- “united nations trying to influence us election against trump this is exactly what democrats accused Russia of doing. United nations — supported by the big tech companies and bill gates with his coconspirator — Klaus schwab from the world economic forum”

Biden-leaning themes:

Trump spreading disinformation about China to stoke fear and win election

- “trump halted funding for research on remdesivir in April because the research involved cooperation with china and he wanted to bolster his claim covid-19 came from a chinese lab”
- “trump pushes misleading claim china is stoking protests to help biden win election”

Russia actively interfering in 2020 election as it had in 2016 election (also appearing under Topic 1)

- “trump’s fbi director warns of russia’s ‘very active’ efforts to influence election”
- “I think at this point in time everyone knows Russia attempted to sway the election. others did too. guess what? they’re doing it again”

Russia wants Trump to win

- “Russia wants their man back”
- “current and former u.s. national security and counterintelligence officials have warned that Russia is using its allies in Ukraine to feed disinformation to trump’s associates-including information that is meant to hurt biden’s changes of election”

A Trump win would be dangerous

- “trump ‘considered striking iran’s nuclear sites’ after election loss. what a dangerous man. it’s all about him”
- “conflicts escalate, trump tries to gain element of surprise on china & fires first nuke. I fear nuclear holocaust follows. everyone fears wondering how in the world did we get here? — this is why this election is vital! courageously #vote — no matter what. #nevertrump”

Editorial history

Received 5 April 2021; revised 22 May 2021; accepted 22 July 2021.

To the extent possible under law, this work is dedicated to the public domain.

Partisanship over security: Public narratives via Twitter on foreign interferences in the 2016 and 2020 U.S. presidential elections
by Catherine A. Luther, Benjamin D. Horne, and Xu Zhang.
First Monday, volume 26, number 8 (August 2021).
doii: http://dx.doi.org/10.5210/fm.v26i8.11682