

# S-400s, Disinformation, and Anti-American Sentiment in Turkey

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**Abstract:** As social and political discourse in most countries becomes more polarized, anti-Americanism has risen not only in the Middle East and Latin America but also among the U.S. allies in Europe. Social media is one platform used to disseminate anti-American views in NATO countries, and its effectiveness can be magnified when mass media, public officials, and popular figures adopt these views. Disinformation, in particular, has gained recognition as a cybersecurity issue from 2016 onward, but disinformation can be manufactured domestically in addition to being part of a foreign influence campaign. In this paper, we analyze Turkish tweets using sentiment analysis techniques and compare the model's results to the manual investigation based on qualitative research. We investigate institutional conditions, social and mass media control, and the state of political discourse in Turkey and focus on narratives pertaining to the purchase of S-400 missiles from Russia by Turkey, as well as the actors spreading these narratives, analyzing for popularity, narrative type, and bot-like behavior. Our findings suggest that although anti-American sentiment has held relatively steady in Turkey since 2003, the tightening of control over mass media networks in Turkey and the adoption of conspiratorial rhetoric by President Erdogan and his allies in the AKP from 2014 onward amplified anti-American sentiment and exacerbated negative sentiment on social media by pitting users against one another. This study and its findings are important because they highlight the importance of social and psychological components of cybersecurity. The ease by which disinformation efforts, influence operations, and other "softer" forms of cyber- and information warfare can be carried out means that they will only grow more common.

**Keywords:** Social Media Analysis, Disinformation, Natural Language Processing, Anti-Americanism, Astroturfing

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## 1. Introduction

Anti-Americanism, defined as "consistent opposition to U.S. policy" (Lawson & Hudson, 2015), is nothing new in NATO countries, but has typically fluctuated depending on the U.S. President and the nature of their presidency. According to the Pew Research Center's Global Indicators Database, the percentage of respondents with a positive view of the U.S. in Germany, France, and Spain fell to about 30-50% from 2001-2008, rose to roughly 50-70% from 2009-2016, and then fell back to 30-50% from 2017-2020. In the Republic of Turkey, however, anti-American sentiment has held steadily negative since 2003, with the percentage of respondents with positive views of the U.S. never exceeding 30% (Pew Global Indicators Database, 2021). Since 2014, anti-American sentiment has been amplified because of pervasive Turkish control over mass media, and subsequent attempts to control social media. This paper examines the role of disinformation in social media in perpetuating anti-American sentiment, especially in the case of the S-400 purchase. It defines and examines disinformation and discusses the information environment in Turkey. It examines Turkey's tightening control over social media sources combined with the increasingly conspiratorial nature of political discourse since 2014. It analyzes political rhetoric in social media, using the purchase of S-400 missiles and subsequent events surrounding them as a case study, incorporating sentiment analysis data to analyze each event's impact on public opinion of the U.S.

## 2. Background

### 2.1 Disinformation and the Information Environment

With cyberspace now being widely recognized as a fifth domain of operations (Welch, 2011), disinformation has been effectively weaponized by state and non-state actors to pursue strategic goals. Often referred to as "fake news," disinformation refers to the production and targeted dissemination of misleading content to "generate profits, pursue political goals, or maliciously deceive" (Humprecht, Esser, and van Aelst, 2020). Social media bots, troll armies, and astroturfing techniques feature very heavily in disinformation campaigns (Kirdemir, 2020).

Disinformation campaigns are not a new phenomenon; during the Cold War, the Soviet Union made use of “active measures” in order to discredit Western politicians and inflame tensions both within target states and between them (Mahairas and Dvilyanski, 2018). However, social media platforms, Twitter among them, have received attention as vectors for disinformation as early as 2010 (Chamberlain). Twitter has received particular attention due to the brevity of posts or “tweets” at 280 characters, the follower/retweet system allowing a tweet or hashtag to rapidly grow in popularity, and the application programming interface (API) allowing for automated posting and datamining (Chamberlain, 2010).

The effectiveness of a disinformation campaign or influence operation depends heavily on the vulnerability of an actor's information ecosystem. The information ecosystem, or information environment, is a broad analytical paradigm that refers to how information is distributed, who has access to this information, who has ownership of infrastructure and channels, how information is used, who or what influences the shape of information, what information is trusted, and the impact of information (Susman-Peña, 2015). Political polarization and hyper-partisanship, a hostile state of political discourse, and regulatory capture of media news networks by the state are all characteristics of a vulnerable information ecosystem, which can then be polluted by disinformation (Kirdemir, 2020).

Although the proliferation of disinformation on social media by state and non-state actors is well-documented, less clear is the relationship between authoritarian or hybrid regimes and social media platforms and their users. Russia continues to make use of active measures against foreign and domestic opponents, utilizing bot farms to spread pro-Kremlin propaganda on Twitter (Abrams, 2016), but Russia requires all social media data on Russian citizens to be stored within its borders and bans members of the military from holding social media accounts (Allen and Moore, 2018), and as a result of the Russian invasion of Ukraine, the majority of social media activity in Russia now takes place on Telegram (Roach, 2022), despite efforts by Russia to ban it. Meanwhile, efforts to study Chinese social media activity are stymied by a strict regime of censorship and monitoring referred to as the “Great Firewall of China,” but occasional glimpses into the Chinese government's social media activities reveal a concentrated effort to distract and dilute public discourse by hiring men and women to post messages defending the government and its leaders, referred to as “50c party posts” due ostensibly to being paid 50 cents per post (King, Pan, and Roberts, 2017).

The authoritarian turn taken by Turkish President Recep Tayyip Erdogan allows for easy insight into the practices of anocratic and autocratic regimes on social media. Although Twitter is subject to stringent censorship laws in Turkey, and Turkey even went so far as to temporarily block Twitter in March 2014, Twitter's openness relative to other social media platforms allows for better observation of practices and actors on Turkish social media. Notably, Turkish censorship and practices towards its opposition resemble that of Russia and China, offering insight into the social media practices of the latter two states towards their domestic audiences that otherwise would not be available. Because of this, studying Turkey's social media environment offers insight into the ways that anti-American sentiment is disseminated and promoted by government entities and the ways in which this sentiment affects both the relationship between public officials and domestic audiences and relations with the U.S.

## 2.2 Turkey's Information Environment

Turkey's information ecosystem has proven vulnerable to disinformation, and domestic and foreign actors have taken advantage. The Turkish news media has undergone regulatory capture by Erdogan and the Justice and Development Party (AKP). Prior to 2013, Turkish media was relatively open, although there were instances of self-censorship over topics considered taboo, such as the family of Erdogan, who was prime minister at the time. The Gezi Park Protests of 2013 heralded a significant change in Turkey's relationship with its news media (Weise, 2018) and opposition. As the protests were anti-authoritarian, pro-Western, and most of all anti-Erdogan, they were squashed by the police force - but mainstream news networks did not cover the protests at all, with CNN Turk instead broadcasting a documentary about penguins, a decision that was received with much ridicule from journalists and news networks elsewhere (Oktem, 2013).

The nature of the Gezi Park protests led Erdogan to adopt increasingly adversarial language concerning NATO and the West from 2014 onward, language that took on a conspiracist aspect when Erdogan mentioned a “üst akıl (mastermind)” a sinister conspiracy aimed at undermining or destroying Turkey (Akyol, 2016). This conspiracist language, as well as the tendency to designate foreign enemies as being behind Turkey's domestic

woes, became more prominent in the aftermath of the coup attempt in July 2016. Using the coup attempt as a pretext, Erdogan both intensified his rhetoric against the United States and NATO and tightened his grip on major media news networks in Turkey, purging journalists and network owners unfriendly to his party (AKP) and replacing them with family members and political allies; in August 2018, the Turkish government was estimated to control 85% of all news media networks in Turkey, according to Turkish-French journalist Erol Onderoglu (Weise, 2018). The majority of mass media in Turkey began loudly parroting Erdogan's accusations; as such, the Turkish government has been actively participating in the production and dissemination of disinformation over mass media, exacerbating the existing political polarization and toxic political discourse in Turkey (Kirdemir, 2020).

Erdogan's influence over media has not been limited to mass media; the AKP has also gradually tightened restrictions on social media since the coup attempt, with the latest attempt being a law to punish those who spread what Turkey defines as disinformation with up to five years in prison (Wilks, 2021). In addition, the AKP has, in the past, employed a troll army of roughly 6,000 users, known as "AK Trolls", to harass opponents on Twitter (Benedictus, 2016).

### **3. Methodology**

We identify a pivotal event in U.S.-Turkey relations, the purchase of the S-400 missile system from Russia, and analyze the social media narrative around the purchase and later events involving the S-400s. To do this, we collect and translate large volumes of Turkish tweets discussing both the S-400 purchase and the U.S. in general. We then use Afinn sentiment analysis to determine the average sentiment score for all tweets collected on a given day. Following this, we perform qualitative analysis on selected individual tweets for their narrative content and identify the actors creating these tweets based on class (government official, academic, journalist, etc.) and authenticity (human, bot, fake account, etc.).

#### **3.1 The S-400 Case Study**

On July 12, 2019, Turkey received its first shipment of Russia's S-400 air defense system, which President Erdogan had signed a deal to purchase in September 2017. Although later events, such as U.S. President Joe Biden's recognition of the Armenian Genocide on April 24, 2021 would exceed it in negative sentiment, this purchase and delivery was the culmination of steadily degrading relations between Turkey and the United States since the attempted coup on July 15, 2016 in Turkey. In the aftermath of the delivery, government officials and pro-Erdogan actors sought to justify the purchase, citing the necessity of the S-400 in vague terms, deflecting attention away from the decision by singling out foreign and domestic enemies and taking advantage of the poor domestic information environment in order to spread disinformation. These justifications, especially the singling out of political foes through disinformation, inflame the already-existing anti-American sentiment in Turkey.

The S-400 purchase is a persistent issue in U.S.-Turkey relations, and as such, we analyze sentiment data and media narratives around three time periods in particular: the month of July, 2019, during which Turkey received the S-400 missiles and was removed from the F-35 project as a result; February 20, 2020, during which time Turkish positions in Syria were attacked by Syrian and Russian jets, and Turkey demanded Patriot missiles from the U.S. despite already having the S-400s; and the month of December, 2020, in which the U.S. sanctioned Turkey for their purchase of the S-400s.

#### **3.2 Dataset**

Narrative examination of Turkish Twitter activity surrounding the S-400s involved the manual collection, translation, and analysis of tweets during each time period. These tweets were collected at varying thresholds of popularity (fewer than 100 favorites, more than 1,000 favorites, more than 5,000 favorites, more than 25,000 favorites, etc.) and accounts for tweets made by both government officials, AKP members, academics, journalists, and ordinary members of the public. By examining the language used and identifying keywords, we categorize tweets as promoting "national defense necessity", "national pride", or "attacking opponents" narratives. These categories are not mutually exclusive as some users like former Ankara mayor Gokcek used a combination of these narratives (Gökçek, 2019)

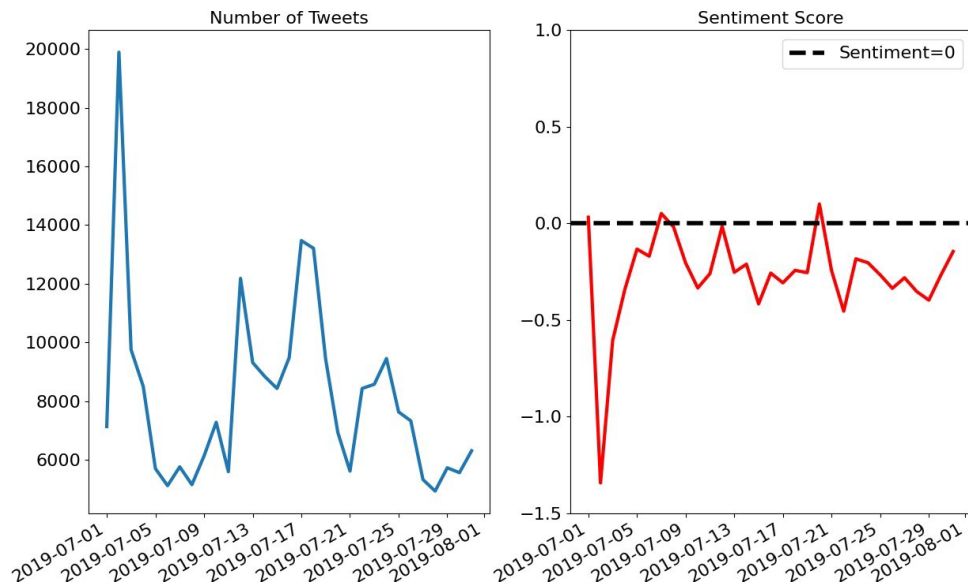
The official position taken by the Turkish government, both before and after the delivery, is that the S-400 missiles are necessary for Turkey's national security. This was the position taken by Turkish Interior Minister

Süleyman Soylu in the pro-government newspaper *Yeni Şafak*, claiming that Turkey could be attacked by long-range missiles (Ahval News, 2019). Similarly, Turkey’s Defense Minister Hulusi Akar described the position as “national matter” and an exercise of “sovereignty rights”(Daily Sabah, 2021). As such, we find that most Turkish public officials push the national defense necessity narrative in their tweets. At the lower levels of the Turkish public, however, attacks on foreign and domestic enemies are more prominent.

#### 4. Results

Thanks to the ML supported analysis, we were able to categorize the dominant narratives in anti-American public opinion. We find that national pride and attacks on foreign and domestic opponents were the dominant narratives surrounding the S-400 purchase and related events, and these narratives were predominant among sockpuppet accounts as well. However, we also found significant anti-Erdogan activity on February 20, and the tweets and accounts do not easily fit the qualitative analysis since they do not defend Erdogan at all, although they still contribute to the sentiment score. This can be viewed as an indicator supportive of the observation of domestic political alliances against the U.S. within Turkey.

As seen in the graphs below, we were able to look into three specific events the months where these events took place. The first one is July 2019 when the S-400s have been delivered and Turkey was removed from the F-35 program, the second month is February 2020 when Turkey asked the U.S. to station Patriot missiles on its southern border, and the third period is December 2020 when the United States imposed sanctions on Turkey in response to Turkey’s purchase and continued ownership of the S-400s. In each of these periods, the discourse in twitter had changing sentiment scores, and the combination of narratives as well as users (human or bot activity) behind the tweets changed in terms of their dominance.

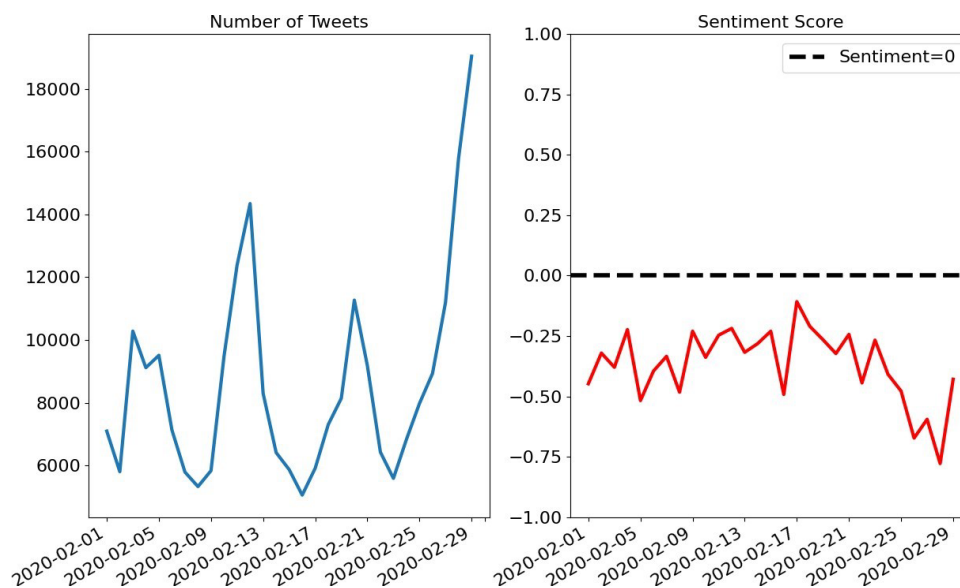


**Figure 1: Total number of tweets collected per day and Sentiment Score of tweets dealing with U.S. related topics per day in July 2019**

When the S-400s arrived in Turkey on July 12, 2019, national pride as a narrative or justification for their purchase became prominent in addition to the national security narrative and recrimination of perceived enemies. Journalist and AKP deputy Şamil Tayyar extolled the historic nature of the purchase, claiming that Turkey will have had “a military promotion” and urging the public to be vigilant against “traitors” (Tayyar, 2019). There is also evidence for the presence of fake accounts pushing a pro-Erdogan viewpoint. “Hrant Enveryan” identifies himself as an Armenian living in Turkey and an “academic” from Bogazici University. However, Bogazici University has no record of any Hrant Enveryan, and Enveryan has since deleted any mention of Bogazici University from his Facebook and Twitter accounts; furthermore, his profile picture is that of Turkish-Armenian journalist Hrant Dink, who was famously assassinated in January 2007 (Medium, 2020). Enveryan (2019) attacked the CHP for speaking out against the purchase, claiming that the CHP were “paranoid” and against the purchase “from day one”, but that “if it was statues instead of #S400, the CHP would have declared it a holiday.”

A week after the delivery of the S-400s, the U.S. removed Turkey from the F-35 program for as long as the S-400s remained on Turkish soil. Turkish social media users reacted negatively, but some bot activity was detected as well. The account of Medya Muhtari ("Media Manager"), a user supposedly offering "digital news and commentary" (Dijital Haber ve Yorum), was created in August 2016, and has a personal website whose domain has expired, mediamuhtari.com. The account has a score of 2.2 on Botometer; in addition, it has a 54% bot score according to BotSight, indicating a "bot with human characteristics". Medya Muhtari commented on the U.S. decision to remove Turkey from the F-35 program supposedly after Turkey had already ordered most or all of them:

*"The expected sanctions on the S400s have been announced! Trump: Because Turkey bought S400, we will punish by not giving more than 100 F35 planes!" \*Turkey's orders through 2024 is a total of 100 F-35s! Is there a better USA than this!" (Muhtari, 2019)*



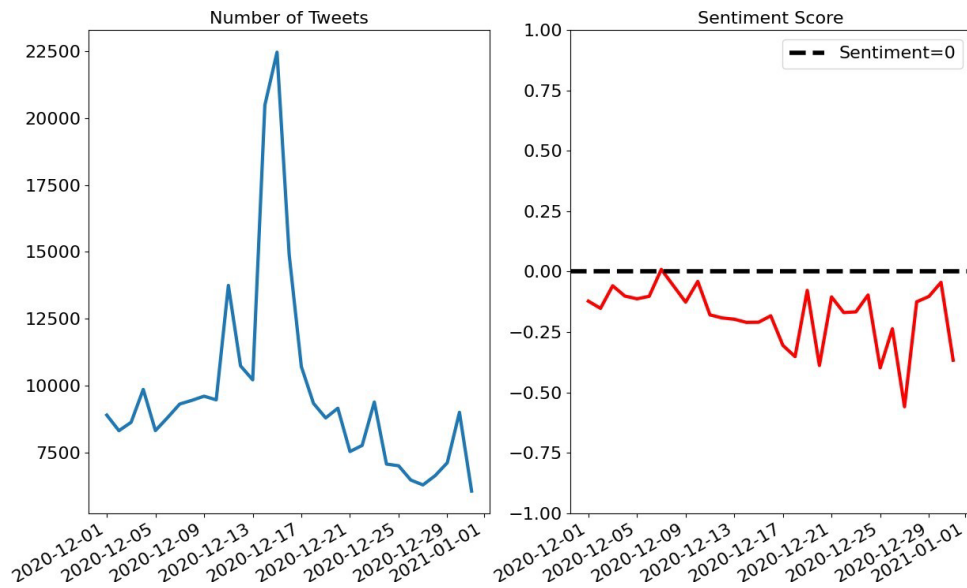
**Figure 2: Total number of tweets collected per day and Sentiment Score of tweets dealing with U.S. related topics per day in February 2020**

On February 20, 2020, with hostilities escalating between Turkish troops in Syria's Idlib governorate and Syrian government forces, Turkey asked the U.S. to station Patriot missiles on its southern border (Hacaoglu, 2020). This request was met with ridicule from Turkish Twitter users; journalist Levent Gültekin (2020) summarized the criticisms of Erdogan's opponents towards this move and in general:

*"Pay a billion dollars 6 months ago and buy S400 from Russia and now order Patriot from the USA. This decision is without foresight, it is so irrational, it is to maintain a foreign policy like a chicken with its head cut off... and they shamelessly shout at us that 'we know what we are doing'."*

Pro-Erdogan accounts were not completely absent, however, as one of the very first replies to Gültekin's tweet came from Emine Celik, an account with a rating of 2.3 on Botometer and a 53% human score on BotSight, indicating a "human with some bot-like characteristics". Çelik came out in defense of Turkish defense minister Hulusi Akar, claiming that the news was a hoax (2020). There was bot activity around this topic as well, but unusually, not all bot activity was pro-Erdogan. Ekrem Koca, an account with a 3.1 rating on Botometer and a 75% bot rating on BotSight, indicating a likely bot, came out against Turkey's foreign policy choices:

*"How can you spend a fortune on s400s and then now buy the Patriot from the U.S. This is not acceptable foreign relations. You can't be enemies with your friends of yesterday. This is absurd. It is a pity, the people of this country will pay for these mistakes." (Koca, 2020)*



**Figure 3: Total number of tweets collected per day and Sentiment Score of tweets dealing with U.S. related topics per day in December 2020**

On December 14, 2020, the United States imposed sanctions on Turkey's weapons procurement sector in response to Turkey's purchase and continued ownership of the S-400s. The response from both government officials and the general public was negative; Turkish presidential spokesperson Fahrettin Altun condemned the sanctions in a four-tweet thread, blaming the United States for appeasing shadowy "anti-Turkey lobbies" instead of "fighting terrorists" and declaring that Turkey "takes all necessary steps to ensure its national security and to promote regional and global security" (2020). Bayram Şenocak, a member of the AKP's Central Decision Board (Merkez Karar Yonetim Kurulu), condemned the United States for its desire to undermine Turkey's defense industry, without the S-400s factoring into it:

*"S-400 is an excuse. The main reason for the sanctions decision of the USA is that the share of locality in the defense industry in Turkey has increased from 20 percent to 70 percent, and that the effectiveness of our domestic weapons in Libya, Syria and most recently in Karabakh has attracted the commercial interest of the countries." (Şenocak, 2020)*

## 5. Conclusion and Future Work

Our study used a combination of AI/ML and manual investigations to determine certain dates/times and narrative types in feeding or exacerbating public opinion in social media. Within a specific case, we were able to determine the trend in sentiments and emotions in a U.S. ally. This study argues that further AI/ML techniques and a combination of them with consequent manual analysis and scaling of the study to include other U.S. allies will provide a tool for understanding to what extent each narrative shapes anti-American sentiment in U.S. allies. Furthermore, the narratives are generally indicator of domestic groups or political actors causing anti-American sentiment and such an AI/ML supported analysis can be utilized to understand the specific agendas created by each domestic political actor in a country.

Turkish sentiment on Twitter has been consistently negative, with notable dips whenever an incident with the United States occurs and users react to it. The conspiracist angle, which remained on the fringe until Erdogan adopted it from 2014 onward, has filtered down to other members of the AKP and the general public, with Turkish Twitter users regularly accusing the domestic opponents, the United States, and NATO of trying to undermine Turkey. The national defense necessity narrative is much-promoted by the Turkish government and was initially parroted by Erdogan's supporters on Twitter, but has become less common outside of the government circles since the February 20 request for Patriot missiles. The national pride narrative is still present, but has not been associated with the S-400 missiles themselves since the sanctions imposed on December 14.

Bot activity is rampant, as are fake accounts created to promote pro-Erdogan messages. At the same time, however, the backlash to the request for Patriot missiles demonstrates that opposition to Erdogan has not been fully snuffed out on social media. Rather, the arguments between pro- and anti-Erdogan users and bots likely

contribute to the consistent negative sentiment scores for Turkish tweets per day. Both the arguments and the negative sentiment scores are a product of the poor information environment in Turkey; although Erdogan, try as he might, cannot exert as much control over social media as he can over mass media news networks, the consequences of his attempts to do so, as well as the AKP's control over mass media and the extreme state of political polarization and political discourse in Turkey, can be seen in how Turkish Twitter users interact with one another.

This paper has provided a comparatively small glimpse into the larger issue of disinformation and anti-American sentiment in Turkey. Avenues for future research include expanding the scope of study beyond the dates provided and even beyond the S-400s case and studying the presence and effects of foreign disinformation narratives and influence operations used in Turkey. This study can also be used as a model for similar studies in other U.S. allies where anti-Americanism is fed by several domestic actors and has been expressed in different narratives. Understanding of the actors and the narratives is crucial in crafting relevant foreign policy tools and the response to changes in overall public opinion shaped by misinformation and disinformation campaigns.

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## References

- Abrams, S. (2016) "Beyond Propaganda: Soviet Active Measures in Putin's Russia," *Connections*, 15(1). Available at: <https://www.jstor.org/stable/26326426>.
- Akyol, M. (2016) *The tin-foil hats are out in Turkey*, *Foreign Policy*. Available at: <https://foreignpolicy.com/2016/09/12/the-tin-foil-hats-are-out-in-turkey/> (Accessed: October 5, 2022).
- Allen, T.S. and Moore, A.J. (2018) "Victory without casualties: Russia's information operations," *The US Army War College Quarterly: Parameters*, 48(1). Available at: <https://doi.org/10.55540/0031-1723.2851>.
- Altun, F. (2020) *The decision by the United States to sanction Turkey over its purchase of the S-400...* Twitter. Available at: <https://twitter.com/fahrettinaltun/status/1338588508483690496> (Accessed: October 5, 2022).
- Benedictus, L. (2016) *Invasion of the troll armies: from Russian Trump supporters to Turkish state stooges*, *The Guardian*. Guardian News and Media. Available at: <https://www.theguardian.com/media/2016/nov/06/troll-armies-social-media-trump-russian> (Accessed: October 5, 2022).
- Celik, E. (2020) *Pardon Siz Savunma Bakanligindan Daha mi Iyi Bileceksiniz...* Twitter. Available at: <https://twitter.com/senkimsinyarte/status/1230544258840629250> (Accessed: October 5, 2022).
- Chamberlain, P.R. (2010) "Twitter as a Vector for Disinformation," *Journal of Information Warfare*, 9(1). Available at: <https://www.jstor.org/stable/26480487>.
- Daily Sabah (2021) Turkey exercised sovereignty rights with S400s, Akar says, *The Daily Sabah*, Available at: <https://www.dailysabah.com/politics/diplomacy/turkey-exercised-sovereignty-rights-with-s-400-akar-says>
- Enveryan, H. (2019) *CHP Genel Başkan Yardımcısı ünâ çeviköz...* Twitter. Available at: <https://twitter.com/enveryan/status/1131546160630571008> (Accessed: October 5, 2022).
- Global indicators database (2021)*, *Pew Research Center's Global Attitudes Project*. Available at: <https://pewrsr.ch/3OZQLN1> (Accessed: October 5, 2022).
- Gökçek, İ.M. (2019) *Emekli tümgeneral Beyazıt karakaş'dan S-400...* Twitter. Available at: <https://twitter.com/06melihgokcek/status/1125174808994623488> (Accessed: October 5, 2022).
- Gültekin, L. (2020) *6 ay önce Milyar Dolar ödeyip rusya'dan S400 al şimdi de Abd'den Patriot Siparişi et...* Twitter. Available at: <https://twitter.com/acikcenk/status/1230517625039405062> (Accessed: October 5, 2022).
- Hacaoglu, S. (2020) *Turkey seeks U.S. patriot missiles to deter Russia in Syria*, *Bloomberg*. Available at: <https://www.bloomberg.com/news/articles/2020-02-20/turkey-asks-u-s-for-patriot-missiles-to-deter-russia-in-idlib> (Accessed: October 5, 2022).
- Humprecht, E., Esser, F. and Van Aelst, P. (2020) "Resilience to online disinformation: A framework for cross-national comparative research," *The International Journal of Press/Politics*, 25(3), pp. 493–516. Available at: <https://doi.org/10.1177/1940161219900126>.
- King, G., Pan, J. and Roberts, M.E. (2017) "How the Chinese government fabricates social media posts for strategic distraction, not engaged argument," *American Political Science Review*, 111(3), pp. 484–501. Available at: <https://doi.org/10.1017/s0003055417000144>.
- Kirdemir, B. (2020). *Exploring Turkey's Disinformation Ecosystem: An Overview*. Centre for Economics and Foreign Policy Studies. Available at: <http://www.jstor.org/stable/resrep26087>
- Koca, E. (2020) *Sen Kalk Dünyanın Parasına rusya'dan S-400 siparişi ver, şimdi de Abd'den...* Twitter. Available at: <https://twitter.com/EkremKocaEsk/status/1230601490294870016> (Accessed: October 5, 2022).

- Lawson, C.W. and Hudson, J. (2015) "Who is Anti-American in the European Union?," *SAGE Open*, 5(2), pp. 1–15. Available at: <https://doi.org/10.1177/2158244015584163>.
- Mahairas, A. and Dvilyanski, M. (2018) "Disinformation – Дезинформация (Dezinformatsiya)," *The Cyber Defense Review*, 3(3). Available at: <https://www.jstor.org/stable/26554993>
- Muhtarı, M. (2019) *Ve S400 konusunda, abd'den beklenen yaptırım geldi!...* Twitter. Available at: <https://twitter.com/MediaMuhtari/status/1151201325436329986> (Accessed: October 5, 2022).
- Nielsen, F. (2016) *Fnielsen/afinn: AFINN sentiment analysis in Python, GitHub*. Available at: <https://github.com/fnielsen/afinn> (Accessed: October 5, 2022).
- Oktem, K. (2013) *Why Turkey's mainstream media chose to show Penguins rather than protests, The Guardian*. Guardian News and Media. Available at: <https://www.theguardian.com/commentisfree/2013/jun/09/turkey-mainstream-media-penguins-protests> (Accessed: October 5, 2022).
- Roach, S. (2022) In Russia, telegram has become the messaging app of choice. Protocol. Available at: <https://www.protocol.com/bulletins/telegram-whatsapp-meta-russia> (Accessed: November 17, 2022).
- Şenocak, B. (2020) *S-400 bahanedir. Abd'Nin Yaptırım Kararının Asıl Gereçesi...* Twitter. Available at: <https://twitter.com/bayramsenocak/status/1338595873048186885> (Accessed: October 5, 2022).
- Susman-Peña, T. (2015) *Why Information Matters: a Foundation for Resilience, UNHCR Innovation*. Available at: [https://unhcr.org/innovation/wp-content/uploads/2017/10/150513-Internews\\_WhyInformationMatters.pdf](https://unhcr.org/innovation/wp-content/uploads/2017/10/150513-Internews_WhyInformationMatters.pdf) (Accessed: October 6, 2022).
- Suspicious twitter accounts claiming to be Armenians from Turkey spur nationalist rhetoric (2020) Medium. DFRLab*. Available at: <https://medium.com/dfrlab/suspicious-twitter-accounts-claiming-to-be-armenians-from-turkey-spur-nationalist-rhetoric-2ff7eb883576> (Accessed: October 5, 2022).
- Tayyar, Ş. (2019) *S-400 Sevkiyatı Başladı. Tarih Yeniden Yazılıyor...* Twitter. Available at: <https://twitter.com/samiltayyar27/status/1149652257853460484> (Accessed: October 5, 2022).
- Turkey could deploy S-400 missiles in Libya, columnist says (2020) Ahval News*. Available at: <https://ahvalnews.com/turkey-s-400/turkey-could-deploy-s-400-missiles-libya-columnist-says> (Accessed: October 5, 2022).
- Weise, Z. (2018) *How did things get so bad for Turkey's journalists?, The Atlantic*. Atlantic Media Company. Available at: <https://www.theatlantic.com/international/archive/2018/08/destroying-free-press-erdogan-turkey/568402/> (Accessed: October 5, 2022).
- Welch, L.D. (2011) *Cyberspace: the fifth operational domain, Institute for Defence Analyses*. Available at: <https://www.ida.org/-/media/feature/publications/2/20/2011-cyberspace---the-fifth-operational-domain/2011-cyberspace---the-fifth-operational-domain.ashx> (Accessed: October 6, 2022).
- Wilks, A. (2021) *Turkey's plans for new social media restrictions threaten five years in prison for spreading fake news, Al-Monitor*. Available at: <https://www.al-monitor.com/originals/2021/08/turkeys-plans-new-social-media-restrictions-threaten-five-years-prison-spreading> (Accessed: October 5, 2022).