

Information Operations and Online Activism within NATO Discourse

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As social media platforms such as Facebook, Twitter, Reddit, and WhatsApp have been adopted by people all around the world, they have become primary sites for political discourse and political activism. Researchers have noted how these platforms have played varied roles in diverse movements, from the protests and demonstrations of the Arab Spring to Black Lives Matter activism and numerous political campaigns, including those of Barack Obama in 2008 and Donald Trump in 2016.¹

Social media have also become sites for information operations, political propaganda, and disinformation online. In April 2017, Facebook released a report acknowledging that its platform had been used by foreign governments (Russia) and nonstate actors (Wikileaks) to interfere with the 2016 elections in the United States.² Around the same time, researchers in the emerging field of computational propaganda documented the use of algorithmically controlled accounts (bots) and other techniques to spread political messages targeting populations in Brazil, Taiwan, Russia, Ukraine, the United States, and other countries.³ More recently, it has been announced that the US State Department hired SCL (the parent company to Cambridge Analytica) to leverage social media to counteract terrorist propaganda.⁴

These information operations, which are growing as ubiquitous as the tools they leverage, take diverse forms. One emerging vector for information operations is “organic” online activism—that which can

be infiltrated, shaped, and, in some cases, weaponized by “bad actors” with their own political motives. In ongoing research on online information operations and disinformation, researchers in my lab have studied how information operations are integrated into online activist communities within two very different contexts.

In one study, we examined the activities of paid trolls from the Russian government–funded Internet Research Agency (RU-IRA) in St. Petersburg within online discourse about #BlackLivesMatter during 2016.⁵ Using a list of RU-IRA accounts provided to the House Intelligence Community by Twitter and cross-referencing those against accounts active in #BlackLivesMatter tweets, we identified RU-IRA trolls on both sides of the highly polarized conversation.⁶ On the left, the RU-IRA trolls enacted the personas of pro–Black Lives Matter activists and sent messages in support of the movement. On the right, the RU-IRA trolls enacted conservative and alt-right personas who were highly critical of the movement. Although they diverged in support of Black Lives Matter, they converged in criticism of “mainstream” media and in political messaging that supported the election of Donald Trump—through direct support on the right and through anti–Hillary Clinton messaging on the left.

In a second line of research examining online discourse around the White Helmets humanitarian organization in Syria, we have noted how Russian government–controlled media (RT, Sputnik) and other information operators are integrated into a community of online activists and “independent” journalists supporting the Syrian government and President Assad.⁷ In this context, information operations take on multiple forms, including employing paid trolls and dedicated propaganda agents, sharing content across “independent” websites, and seeding and amplifying more “organic” voices that share preferred content.⁸ These activities are in many ways blended into authentic online activism.

This chapter offers an in-depth look at these integrated and, in some ways, indistinguishable phenomena—online activism and information operations—within social media (Twitter) conversations about

the North Atlantic Treaty Organization during spring 2018. NATO is a military alliance among twenty-nine member states in North America and Europe. Initially formed after World War II to provide collective defense against potential attacks by the Soviet Union, since the end of the Cold War NATO's mission has evolved and its membership has grown, in part through the addition of many former Warsaw Pact (Soviet Union-aligned) countries. Russia therefore sees NATO as a threat to its security and other geopolitical interests. In recent years, tensions between Russia and NATO have increased, punctuated by Russian military aggression in Ukraine and its illegal (in NATO's perspective) annexation of Crimea.⁹ Additionally, Russia's efforts to use hybrid warfare techniques that leverage online platforms to manipulate social and political realities in other countries have been documented in multiple contexts (including domestic politics in the United States and the United Kingdom) and are perceived as aggression by NATO and its member states.

During our window of analysis, Russia and NATO were on different sides of conflicts in Ukraine and Syria. Russia was accused of implementing a nerve-agent poisoning attack within a NATO country (the United Kingdom) against one of its former intelligence agents. And US president Trump (who had been a beneficiary of Russia's information operations in the 2016 election) made several public statements seen by many as weakening the NATO alliance. Considering the salience of these acute events, the increasingly contested nature of NATO's standing and role, the now established role of online activity within political discourse, and the rising influence of information operations online, the online conversations around NATO during this time period likely included political messaging, propaganda, and other types of information operations from multiple parties. This chapter provides a detailed description of the structure and dynamics of that specific conversation and contributes broader insight into how specific communities of online accounts (and external websites) work to shape political discourse.

Methods

Online political organizing, information operations, and disinformation are typically multiplatform endeavors that integrate different social media platforms, online websites, private messaging channels, and other resources. In part due to the public availability of tweets, this study focuses specifically on Twitter activity—and then uses that activity to get some sense of the surrounding information space (using links within tweets). We recognize that this provides a limited view of the broader conversation, but it does provide some insight into the structure and dynamics of online political discourse.

For ongoing research, we have been collecting data in real time, using the Twitter streaming API to track specific keyword terms related to breaking news events. The study presented here focuses on tweets that included the term NATO in the text and were sent between February 25, 2018, and June 17, 2018 (a few days after the close of the 2018 NATO summit). We then filtered this dataset to include only English-language tweets, limiting the scope of the investigation to messages written by or for English-speaking audiences. This Spring 2018 NATO Dataset includes 1,353,620 tweets posted from 513,285 distinct accounts.

To understand these data, we used a grounded, interpretative, mixed-method approach, integrating qualitative, quantitative, and visual analyses to examine the data from multiple levels—from “10,000 feet” views to tweet-by-tweet analysis. These analyses include descriptive statistics, network graphs, algorithmic clustering, temporal graphs (appendix A), and content analysis of highly retweeted tweets. We also identified the most influential accounts in terms of retweets (appendix B), the most linked-to web domains (appendix C), and the most frequent terms in account profile descriptions (appendix D) and tweets (appendix E). The raw output of many of these analyses is included in the appendices at the end of this chapter.

Note on Anonymization: Although Twitter data are public, we recognize that some users may not understand that their tweets can be collected, analyzed, and presented as findings in studies like these. For users who might have had an expectation of privacy, we make an effort to anonymize their account names here to protect their identities. This is especially true of citizen activists who could be personally identified by this research in ways that would put them in physical or reputational danger now or in the future. However, we also recognize that it is important to understand *who* some of the pivotal actors are in these networks—to understand how different actors fit into the larger networks and to assess what their underlying intentions might be. We therefore choose not to anonymize accounts associated with organizations (media, government, and nongovernmental organizations, or NGOs) and personal accounts of public individuals, including journalists, political figures, celebrities, and other high-profile media personalities.

The Structure of NATO Discourse on Twitter

Of the 1.3 million tweets we collected, almost three-quarters (73.7 percent) were retweets (where an account simply reposts another account's tweet). Those retweets function to disseminate information, and we can use them to generate a network graph that reveals some of the structure (in terms of common information trajectories) of the NATO conversation. In this graph, nodes are accounts and directional edges are drawn when one account retweets another. These edges appear as thousands of thin lines in figure 5.2. Nodes are sized by the number of retweets that account received (within our data). Edges are sized by the number of times one account retweeted the other. Accounts are then distributed into a layout that pulls together accounts that share edges or have similar edges.¹⁰ For example, the @NATO and @NATOpres accounts are very close together, in part because they retweet each other but also because many of the same accounts retweet both. Finally, we use an

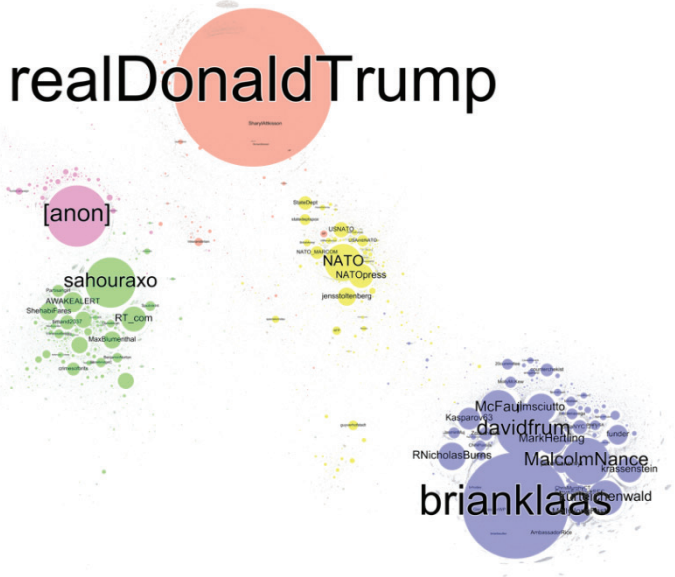


Figure 5.1. Retweet network graph of NATO (spring 2018) tweets (without edges). Source: This graph was created by the author using the Gephi software application. It is based on NATO tweets between February 25 and June 17, 2018. Nodes are accounts.

algorithm to detect “clusters” of accounts with similar edges and then use colors to distinguish between those clusters.¹¹ Above and following are two views of the graph that demonstrate the structure (figure 5.1, without edges) and dynamics (figure 5.2, with edges) based on retweet patterns. (For visual clarity, the graph in the figures has been trimmed to accounts that shared at least two tweets.)

The retweet network graph contains five distinct clusters. About two-thirds of all accounts in our data are grouped into one of those five clusters. (The remainder have been removed from the graph.) Comparing these clusters across multiple dimensions provides insight into the fragmented and contested nature of NATO-related discourse and some of the broader dynamics of political conversations—as well as political activism and information operations—on Twitter in 2018.

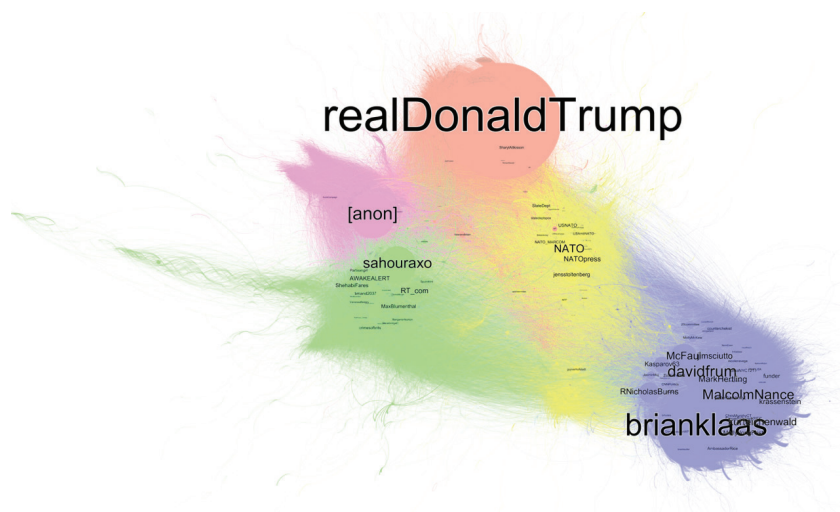


Figure 5.2. Retweet network graph of NATO (spring 2018) tweets (with edges). Source: This graph was created by the author using the Gephi software application. It is based on NATO tweets between February 25 and June 17, 2018. Nodes are accounts. Edges are retweets of one account by another.

Table 5.1 contains some basic statistics that help to describe the relative size and activity of each cluster. The appendices of this chapter include several other comparative views of the data across clusters. In the sections below, we synthesize those analyses to provide an in-depth description of each cluster—including the influential accounts, the communities that take shape around those accounts, and some of the content shared within each cluster.

Blue Cluster: US “mainstream” media and anti-Trump cluster

The Blue Cluster (lower right of the graph) is the largest cluster in terms of both number of accounts and number of tweets. The cluster consists of a core group of influencers surrounded by a large number of accounts that participate in the conversation solely through retweeting. Influential accounts in this cluster (see appendix B) include journalists, political commentators, government representatives and officials, and

Table 5.1 Descriptive Statistics for the Clusters of Accounts Shown in Figures 5.1 and 5.2.

Cluster	No. of Accounts	No. of Tweets	% Retweets	% w/ URL	Tweets per Account
Blue	118,269	427,609	90.0%	12.4%	3.62
Green	72,913	375,457	76.2%	27.8%	5.15
Red	72,216	224,531	82.0%	21.8%	3.11
Yellow	65,803	345,067	78.1%	33.4%	5.24
Pink	21,216	152,365	78.3%	14.1%	7.18

current or former US intelligence professionals. The temporal patterns (see appendix A)—i.e., very low troughs punctuated by very high peaks—underscore the media-driven nature of the NATO conversation within this cluster. In other words, the conversation consists of a large audience reacting to a relatively small set of influential voices.

Interestingly, Blue Cluster influencers include many self-identified conservatives and retired military officers. However, the rank-and-file members of this cluster are largely Democratic in their affiliations. Examining the terms they use in their account profile descriptions (see appendix D) reveals many retweeting accounts that identify with the anti-Trump “resist” movement: 15.3 percent (18,090) of users in this cluster have *resist* or *resistance* in their profiles. Other common profile terms (*liberal*, *democrat*, *progressive*) suggest US left-leaning political identities.

We next use the embedded links in the tweet data (where a tweet links to an external article) to identify the most-cited web domains (see appendix C). For tweets in the Blue Cluster, most external URLs link to Western “mainstream” media (e.g., *Washington Post*, CBS, ABC, CNN, Reuters, BBC).

In terms of the content, tweets in this cluster were predominantly critical of Trump’s rhetoric and actions toward NATO—viewing them as weakening NATO and America’s relationship to traditional (post–World War II) allies, and directly serving the interests of Russia and its leader, Vladimir Putin. The most frequent terms used across all unique

tweets (excluding retweets, see appendix E) are *Trump*, *Putin*, *Russia*, *allies*, and *@realDonaldTrump* (in that order). The following tweet is the most retweeted in the Blue Cluster, receiving more than ten thousand retweets:

@brianklaas (2018-05-31): For decades, Vladimir Putin's main foreign policy goal has been to weaken NATO by driving a wedge between the US & its closest allies. The G-7 summit is a very public display of Trump making Putin's dream come true.¹²

In terms of connection to other clusters, the Blue Cluster is situated most closely to the Yellow Cluster (official NATO accounts). Those two clusters have the most retweet edges between them (of any two clusters): 3.7 percent of retweets from Blue accounts are of Yellow accounts, and 7.8 percent of retweets from Yellow accounts are of Blue accounts (see appendix F), showing relatively significant overlap and information exchange between these two clusters.

Green Cluster: International Left, Anti-NATO Cluster

Green (in the lower left section) is the second-most-active cluster in terms of number of accounts and is quite different from the Blue Cluster with regard to structure and activity as well as political stance. This cluster is international and vocally political. Frequent profile terms (*world*, *truth*, *socialist*, *peace*, *anti-war*, *activist*) suggest a left-leaning orientation, but one that is markedly different from the mainstream American Democratic views held by the Blue Cluster.

Influential accounts include media explicitly associated with Russia's government (@RT_com, @SputnikInt), journalists who write for independent or alternative media (@MaxBlumenthal, @VanessaBeeley, @BenjaminNorton), political commentators (@Sahouraxo, @Partisan-Girl, @ShoebridgeC), and a number of highly engaged "information activists." Several of the political commentators (e.g., Sahouraxo) and information activists are at least partially anonymous—with no clear

connection to a “real world” individual—making it difficult to assess their true affiliations and motivations.

Reflecting an interesting symmetry to the Blue Cluster in terms of divergent political orientations among the influencers, among the top twenty most-retweeted accounts in this ostensibly left-leaning cluster are @ClarkeMicah (British writer Peter Hitchens, a social conservative and critic of “left-wing” politics) and @NinaByzantina (the wife of Richard Spencer, a leader of the US alt-right movement). This intersection of seemingly far-left and alt-right is apparent within the Red Cluster as well and has been remarked upon as an emerging dynamic related to changing distinctions within and between political ideologies. The seam between the Red and Green clusters—i.e., the accounts that interact with accounts in both clusters—is likely to include targeted information operations from Russia and other foreign actors and is a particularly interesting area for future work.

Examining connections between tweets and external websites highlights how Russian government-funded media are integrated into the Green Cluster. More than a quarter (27.8 percent) of tweets from accounts in the Green Cluster contain a URL link, and the list of most tweeted domains features three websites explicitly affiliated with Russia’s government (RT, SputnikNews, and TASS). In total, 14,810 tweets from the Green Cluster link to an article on RT.com. Other highly cited domains include several other websites from the “alternative media ecosystem”¹³ that consistently echo the preferred narratives of Russia’s media apparatus (e.g., GlobalResearch.ca, ZeroHedge, FortRuss, theDuran, 21stCenturyWire). And two of the prominent journalists (@MaxBlumenthal and @VanessaBeeley) have been repeatedly published on Russia’s government-supported media (especially RT).

Considered as a whole, the Green Cluster can be characterized as a heterogeneous assemblage of political agents, government-supported media, “independent” news media, journalists, and online political activists. In many cases, it is difficult to differentiate between authentic grassroots political actors and accounts of political agents who are

affiliated with governments (Russia, Syria) and other political organizations (e.g., Hezbollah). For example, the @sahouraxo account, by far the most influential (in terms of retweets) in the Green Cluster, has several markers suggesting a strong likelihood of being a political agent.¹⁴

In terms of activity, accounts in the Green Cluster are more engaged than other clusters in the NATO conversation, sending significantly more tweets per account. And a much higher percentage of these tweets are “originals” as opposed to retweets. The temporal pattern includes far fewer of the spikes we see in the Blue Cluster but is more sustained over time. When it does peak (for example around March 24, 2018, and April 14, 2018), those peaks are the culmination of several days of activity, although, interestingly, not always related to the same topic.

The content in this cluster is consistently critical of NATO but across a range of different topics, including criticizing past actions by NATO or NATO-affiliated governments in Libya and Yugoslavia/Kosovo and ongoing actions (or inaction) by NATO-affiliated forces in Syria, Yemen, and Afghanistan. For example:

@sahouraxo (2018-03-20): Seven years ago today, Obama, Hillary and their NATO allies claimed they were invading Libya for “humanitarian” purposes—turning a country that had the highest standard of living in Africa into a war-torn failed state now ruled by slave-selling jihadists. <<https://www.rt.com/op-ed/421711-libya-war-gaddafi-intervention/>>¹⁵

@mfa_russia (2018-03-24): Today is the 19th anniversary of #NATO bombing of #Yugoslavia. NATO targeted infrastructure & civilian areas, used depleted uranium, deployed “double-tap” strikes, returning to bomb targets after rescue & ambulance services had arrived. #WarCrimes #Serbia <image of burning buildings> <map of bombing sites>¹⁶

@MaxBlumenthal (2018-04-09): The pattern’s clear now: When the Syrian army advances or liberates cities from NATO/GCC backed insurgents, insurgents allege a chemical attack. Sources are invariably insurgent activists, NATO/GCC backed White Helmets, & SAMS. Independent confirmation is impossible. Bombs away!¹⁷

@RT_com (2018-04-14): Lavrov:

- #Skrípals poisoned with 3-Quinuclidinyl benzilate (“BZ”)
- That’s according to Swiss lab that worked with the samples that London handed over to the @OPCW
- Toxin never produced in Russia
- Was in service in the US, UK & other NATO states <<https://www.rt.com/news/424149-skrípals-poisoning-bz-lavrov/>>¹⁸

Surges in activity (see appendix A) within the Green Cluster occur around each of these events—the anniversaries of the Libya invasion and the bombing in Yugoslavia, a chemical weapon attack in Syria, and the aftermath of the poisoning of former Russian military intelligence officer Sergei Viktorovich Skripal and his daughter. The “collective action” within this cluster leverages anniversaries of past NATO actions as opportunities to increase the visibility of their criticism of the organization. It consistently frames current events in war-torn Syria, Yemen, and Afghanistan through an anti-NATO lens and then amplifies those frames. And in cases like the poisoning of the Skripals, the cluster activates to signal, produce, and spread the preferred narratives of the Russian government (in this case, various denials of Russia’s involvement and the suggested culpability, instead, of NATO countries).

The tweet activity in the Green Cluster can be characterized in some ways as “emergent” in the sense that there is no single force coordinating all of the articles and posts. A close look at the timelines reveals that many information cascades (where a tweet goes “viral” and creates a small spike) are “organic”—i.e., crafted and originally tweeted by a sincere activist. However, even those seemingly organic spikes are influenced in various ways—e.g., through intentional amplification by government-funded media and political operatives.

Our analyses (e.g., of the most influential web domains and accounts) show that Russian government-funded media are deeply integrated into this cluster. Although the online activity here is not fully orchestrated, it is cultivated through Russian government information operations in a number of ways—for example, through the production of

news articles and the use of paid troll accounts that impersonate activists and generate viral content, consistently supporting the visibility of politically aligned journalists (and shaping those alignments) and purposefully amplifying “organic” content that aligns with their strategic narratives and goals.

In terms of connections to other clusters, the Green Cluster has some similarities to the Pink Cluster in terms of being strongly critical of NATO, a similarity we discuss below. Accounts in the Green Cluster also occasionally retweet accounts in the Yellow Cluster, but additional analysis is needed to fully understand what appear to be diverse dynamics within those intersections.

Red Cluster: Pro-Trump and Alt-Right Cluster

The Red Cluster, at the top and center of the graph, is predominantly a pro-Trump cluster of accounts that come together (in terms of network structure) as they amplify the US president’s tweets. The most influential account in this cluster is, by far, @realDonaldTrump. The president’s personal account is retweeted 53,090 times for two tweets criticizing Germany and other EU countries for not contributing enough funding to NATO. Other influential accounts in this cluster include members of the Trump administration (@VP, @PressSec, @StateDept), conservative media and political commentators (@FoxNews, @WiredSources, @SharylAttkisson), conservative activists (@VeteransBritain, @charliekirk11), and a prominent online voice of the alt-right (@JackPosobiec). Interestingly, @sahouraxo, a leading account in the Green Cluster and a likely political agent representing a group hostile to US and NATO interests, is also highly retweeted by accounts in the Red Cluster. In total, 750 accounts (mostly within the Red and Green clusters) retweet at least one of @realDonaldTrump’s tweets and one of @sahouraxo’s tweets, showing an overlap in the active audience (amplifiers) of these two accounts.

The broader audience within this cluster is decisively pro-Trump: 24.47 percent (17,670) of users in this cluster have *MAGA* or *Trump*

in their profiles. Other frequent profile terms indicate explicit support of Trump (*trump2020*, *trumptrain*) and phrases echoing some of his rhetoric (*deplorable*, *americafirst*, *draintheswamp*, *buildthewall*). Beyond Trump-specific keywords, profiles also include identity terms commonly associated with the US conservative brand (*conservative*, *god*, *proud*, *christian*, *american*, *military*, *veteran*), and specific mention of conservative causes such as gun rights (*NRA*, *2A*). A total of 831 accounts in this cluster reference the pro-Trump conspiracy theory *qanon* in their profile descriptions.¹⁹

A significant portion (more than 25 percent) of tweets from this cluster are retweets of Trump's two tweets criticizing NATO countries for not spending enough on defense.

@realDonaldTrump (2018-06-11 01:29): And add to that the fact that the U.S. pays close to the entire cost of NATO—protecting many of these same countries that rip us off on Trade (they pay only a fraction of the cost—and laugh!). The European Union had a \$151 Billion Surplus—should pay much more for Military!²⁰

@realDonaldTrump (2018-06-11 01:42): Germany pays 1% (slowly) of GDP towards NATO, while we pay 4% of a MUCH larger GDP. Does anybody believe that makes sense? We protect Europe (which is good) at great financial loss, and then get unfairly clobbered on Trade. Change is coming!

These tweets constitute the “spike” at the far right of the graph in appendix A (during the NATO summit on June 11). The rest of the activity within the Red Cluster is consistently low volume, with a few much smaller spikes that correspond to White House announcements of Trump's “achievements” regarding diplomacy and trade and media reports supporting his actions. For example, some highly retweeted content credits Trump for pressuring and receiving commitments from NATO countries to increase spending.

The top most-cited domain in this cluster (dailybrian.com) was linked to in a series of spamlike tweets and consistently amplified by a small set of now-suspended accounts. This activity was likely automated—and these accounts therefore bots. We found other evidence of small networks of bots within our dataset (within other clusters as well) but did not determine these to be a dominant aspect of the dynamics we observed. In other words, there are bots—and bots do play a role at certain times, within certain conversations, and in promotion of certain accounts and websites—but bots are only one of many forces at work within this information space.

Other highly tweeted domains include conservative, far-right, and alt-right media outlets. Interestingly, the sixth-most-tweeted domain in the Red Cluster is RT.com (Russia Today), and the top twenty most-tweeted domains also contain two other websites ([ZeroHedge](http://ZeroHedge.com) and [Russia-Insider](http://Russia-Insider.com)) that consistently promote pro-Russian stances and narratives. This suggests that media affiliated with the Russian government media apparatus are influential in this pro-Trump, alt-right cluster (although not as influential as they are in the Green Cluster).

Yellow Cluster: NATO and Other Official Accounts Cluster

This cluster comes together around the intentional messaging of official NATO accounts. Influential voices include NATO-affiliated accounts, the accounts of NATO officials, and accounts associated with government officials and military branches within its member states, as well as journalists and news media. The most-highly-tweeted domains include the official NATO website, the US State Department, and the RAND Corporation (which frequently performs research funded by the US government), as well as social media platforms, “mainstream” news media, and websites specifically dedicated to news about defense in the United States. Frequent profile terms across the cluster suggest

a largely European audience—including accounts from the United Kingdom and elsewhere in Europe—and converging interests in *politics, security, and defence*.

The content produced within and amplified across this cluster is consistently supportive of NATO, including messages intended to garner solidarity from citizens in its member states and around the world. Similar to some of the timing of content in the Green Cluster, thematic content is also used to align with anniversaries of salient historical events. For example:

@NATO (2018-04-04): On this day in 1949, #NATO was founded. Do you remember when your country joined the Alliance? <Embedded video about NATO>²¹

During the early part of our data window (March 2018), tweet activity within this cluster was explicitly critical of Russia for the nerve-agent poisoning attack (inside the United Kingdom) on the Skripals:

@guyverhofstadt (2018-03-13): We stand shoulder to shoulder with the British people. It must be made clear that an attack against one EU & NATO country is an attack on all of us. <<https://www.washingtonpost.com/world/theresa-may-says-highly-likely-russia-is-responsible-for-spys-poisoning/2018/03/12>>²²

Later, during the buildup of attention surrounding the NATO summit in June, a large portion of the content in this cluster leveled criticism at both Putin and Trump for various actions and perceived intentions:

@ZcohenCNN (2018-06-15): Sec. Mattis: Putin seeks to shatter NATO. He aims to diminish the appeal of the western democratic model and attempts to undermine America's moral authority, his actions are designed not to challenge our arms at this point but to undercut and compromise our belief in our ideals²³

@<anonymized> (2018-06-01): Anyone thinking that the UK can rely on special favours from Trump needs to look at how he has turned on Canada. (Remind you that Canada is a NATO ally, Commonwealth country and US's neighbour)²⁴

Within the network graph, the Yellow Cluster functions as somewhat of a bridging cluster, which results in its central positioning within the graph. Accounts in Yellow are relatively highly retweeted by accounts in the other clusters, indicating that this cluster does perform a shaping role within the larger conversation. Information sharing goes the other direction as well, with accounts in Yellow occasionally retweeting content from the Blue, Red, and Green clusters.

The strongest relationship between any two clusters is between the Yellow and Blue clusters (see appendix F). More than 8 percent of retweets from the Yellow Cluster are of accounts within the Blue Cluster, suggesting that the audiences of these two clusters overlap. Some of the most influential accounts between these two clusters retweet each other as well, which facilitates the spread of information from one cluster to another. Similarly, but to a lesser extent, some of the Yellow Cluster influencers are also retweeted by accounts in the Blue Cluster. These effects demonstrate some synergy and mutual shaping between the official messaging of NATO, the Western mainstream media, and liberal democratic audiences.

Pink Cluster: Pro-Kurd and Anti-Erdoğan Activist Cluster

The Pink Cluster is narrowly focused, politically, on support of the Syrian Kurdish people and criticism of Turkish leader Recep Tayyip Erdoğan and the government of Turkey. It is much smaller than the other clusters but (similar to the Green Cluster) has a group of highly active accounts who tweet dozens and even hundreds of times. Common profile terms reveal a large number of accounts associating with and tweeting in support of Kurds, Kurdistan, and the Kurdish cause. Many profiles include non-English terms (primarily Turkish but

other languages as well). The most highly retweeted account, by far, is an anonymous information activist account that tweets specifically for Afrin (also spelled Efrin), a city in northern Syria that was a site of ongoing violent conflict related to the Syrian civil war.²⁵

Most of the NATO-related activity from this cluster is concentrated within one short period of time (on March 3, 2018) and is the result of a coordinated tweeting campaign in support of the Kurds in Afrin as that city was being captured by Turkish and Turkish-aligned forces. Those tweets call out Turkey for its military actions against Kurdish fighters and Kurdish people and for supporting the Free Syrian Army—which the Pink Cluster accounts liken to “terrorists” and “jihadis.” This criticism is then extended to NATO, of which Turkey is a member state.

@<anonymized> (2018-03-18 16:15): Shame on you NATO, US, UN, ANTI-ISIS COALITION! You watch silently as Turkey and its jihadis attack YPG, loyal anti-ISIS allies in #Afrin, bomb their towns, loot and destroy their homes and force them to flee in panic #TwitterKurds <link>²⁶

@KurdsCampaign (2018-03-18 19:01): We need to expose what is happening now in Afrin. These are the people who are gaining ground with support from Turkey, NATO, EU, UK, USA. The “moderate headchoppers” of the FSA & ISIS #BreakSilenceOnAfrin <link>²⁷

Some of the content from this cluster appeals to NATO and NATO-allied countries to reconsider Turkey’s status as a NATO partner.

2018-03-23 @<anonymized> Turkey placed 4,000 ISIS militants in Afrin. Turkey is now planning the same plan for manbij and sinjar. The US and the EU should stop Erdogan and Turkey now. Turkey makes ethnic cleansing against Kurds #NATO #USArmy #Syria #Daesh #USNavy @CENTCOM <embedded video of fighters marching through streets>²⁸

2018-03-31 @<anonymized>: How can US support Turkey just because NATO member? #Erdogan uses excuse #PKK is terrorist to justify killing innocent civilians. Erdogan is terrorist & will continue his quest to

kill all #Kurds unless he's stopped. Silence implies agreement with Turkey's #genocide against Kurds

Other content uses the connection between NATO and Turkey to attack NATO more generally. For example, there are tweets that utilize the “associative property of disinformation” to connect Turkish forces with ISIS “terrorists,” Turkey with NATO, and therefore ISIS with NATO:

@<anonymized> (2018-03-18): Congrats to #Nato and your army of #ISIS thugs who the #TurkishArmy led in looting and terrorizing #Afrin ##BreakSilenceOnAfrin <images of fighters holding guns in the air>²⁹

A close look at the temporal graphs, timelines, and active accounts within this cluster provides numerous signals of authentic online activism in support of the Syrian Kurds. A few dedicated accounts use @mention campaigns, tagging tweets with the handles of celebrities, journalists, politicians, and other highly followed accounts to encourage them to amplify their messages and advocating for a “Twitter storm” to bring attention to their cause. However, this activism does become entangled with other efforts to inflict political damage on the standing of NATO, as other political actors recognize this situation as an opportunity to score political points. Reflecting this entanglement, there is a small but significant overlap in audience between the Pink and Green clusters, which factors into their proximity within the network graph.

Online Political Activism and Strategic Information Operations

This analysis of Twitter conversations related to NATO during spring 2018 demonstrates how online political discourse is structured—in this case, taking place within a small number of distinct communities, with limited (though interesting) communication between and across

those communities. It also demonstrates how this discourse is shaped by mainstream media, alternative media, and grassroots activism, as well as by information operations that seek to leverage all of these. In one section of the network graph representing information trajectories within this conversation, mainstream media (influencers in Blue) and NATO official accounts (influencers in Yellow) function to spread—among liberal American Democrats in Blue and more diverse, international audiences in Yellow—messages of support for NATO against perceived aggression from Russia and Putin and against perceived efforts by Trump to undermine the alliance. For those critical of mainstream media, this confirms (to some extent) a view of mainstream media supporting the military defense–related interests of North American and Western European countries.

In another section of the graph, we can see the Russian government media apparatus integrated into the alternative media ecosystem and the online activism taking shape in both the international left (Green Cluster) and US alt-right (Red Cluster) online communities, using that integration to shape conversations toward its interests. These activities align with findings from previous work. In one study, we uncovered evidence of Russian information operations explicitly microtargeting similar US left-leaning and alt-right activist communities within Black Lives Matter discourse.³⁰ In another, we examined information operations related to a campaign criticizing and discrediting the White Helmets in Syria as members of the humanitarian response group were explicitly targeted for military attacks by the Syrian government and its allies.³¹

Interestingly, within the Green Cluster in this study, we see configurations of accounts and media very similar to those active in the campaign to discredit the White Helmets. This supports a view of this cluster as representing a more sustained online community that participates in many seemingly distinct political conversations and activist causes. As we saw in this study, the content of this cluster moves across topics but is persistent in its criticism of NATO, the United States, the United Kingdom, and other Western “intervention” in var-

ious conflicts around the world, both current and historical. Often, the messages echoing across this cluster attempt to bridge anger from one event to broader criticisms of NATO and the West, drawing from and connecting to longer-standing “anti-war” communities and “anti-imperialism” arguments. Not surprisingly, the messages also converge around Russia’s geopolitical interests—e.g., by supporting Russia’s intervention in Syria, defending against accusations of Russia’s involvement in the poisoning of the Skripals, and dismissing criticism toward Russia and Putin.

In the Pink Cluster, we see an example of what is likely more emergent activism and what may be a current or future target of information operations. The Pink Cluster took its shape here around online activism in support of Kurdish people in Syria. Its content was loudly critical of a specific action by a NATO member state (Turkey targeting Kurdish forces in Afrin, Syria). While some content within the cluster attempted more nuanced criticism that distinguished between NATO and Turkey and sought to push NATO to take action against Turkey, other content attempted to bridge the criticisms of the community to broader criticisms of NATO and its other member states. Although its interactions with the Green Cluster were not significantly different (in terms of volume) from interactions between other clusters, there appear to be some natural affinities between the Green and Pink clusters. It could be valuable to examine the activities within this cluster and its interactions with accounts in the Green Cluster over time, to see if and how the two interact. A significant portion of the Green Cluster initially came together in support of the Palestinian cause before shifting focus to Syria and then moving on to other criticisms of NATO. It is possible that some part of the Pink Cluster could be intentionally brought into the Green Cluster through ongoing efforts (both by activists and information operators) to bridge the two. Future work will be needed to explore the dynamics between these two clusters over time to determine if their interactions do indeed expose intentional information operations designed to infiltrate, shape, and leverage this case of “emergent” online activism.

Conclusion

The analysis above demonstrates the persistent and evolving nature of some information operations whereby loose online communities of activists can be guided to move into new conversations and to focus on new causes. These operations use a variety of tactics, including generating online articles and spreading them across diverse alternative news media, amplifying (republishing articles of) friendly journalists, and employing online trolls who infiltrate communities and enact the part of activists. They also take advantage of authentic activists who at times end up spreading political propaganda, in some cases intentional disinformation. Unfortunately, it can be difficult in these contexts to differentiate between authentic activists and political agents and to disentangle organic activism from information operations.

While this work has focused on the online activities related to the political interests of Russia, NATO, the United States, and, to some extent, Syria, there are other entities at work in this conversation and many different state, nonstate, and even corporate actors in these and in other conversations around the globe. Although the social media companies have begun to make some changes to their platforms to address this phenomenon, we can assume that information operations will continue to be active in political discourse online and that they will continue to evolve as the systems and their users become more savvy.

Notes

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12. This tweet, sent from the account of political scientist Brian Klaas on May 31, 2018, provides political commentary about Putin’s anti-NATO goals and how Trump’s actions at the G-7 are aligned with Putin’s goals.

13. Kate Starbird et al., “Ecosystem or Echo-System?”

14. The account history, highly political tweet patterns, and profile features (images, description) all suggest that this account is being operated as part of a political influence effort. This connection has been investigated by others, including the BBC: Sarah Abdallah, “Syria War: The Online Activists Pushing Conspiracy Theories,” BBC News, April 19, 2018, <https://www.bbc.com/news/blogs-trending-43745629>.

15. This tweet, by an influential account that claims to be a geopolitical analyst from Lebanon, uses the anniversary of the invasion of Libya to catalyze criticism of NATO. It links to an article on RT, one of the flagship media outlets of the Russian government.

16. This tweet, by the official account of the Ministry of Foreign Affairs of Russia, leverages the anniversary of NATO action in Yugoslavia to resurface criticism of NATO. It contains embedded images from that conflict.

17. This tweet, by an American-born journalist who has become a prominent commentator on RT and Sputnik, questions the validity of claims about the use of chemical weapons by government forces in Syria.

18. This tweet, by the official account of RT (Russia Today), attempts to foster doubt about the nature of the poison—and the role of the Russian government—in the poisoning of Sergei and Yulia Skripal. It links to an article on RT.

19. QAnon is a community of online conspiracy theorists who follow an anonymous online personality, Q. Q shares cryptic messages, which the community members translate into their theories, which focus around themes of a nefarious “deep state” working to undermine Donald Trump and an impending redemption for him against claims of conspiracy with Russia. Among their claims was that Robert Mueller was secretly working to expose rampant pedophilia among members of the “deep state” and that there would soon be tribunals to bring those people to justice. See Justin Bank, Liam Stack, and Daniel Victor, “What Is QAnon: Explaining the Internet Conspiracy Theory That Showed Up at a Trump Rally,” *New York Times*, August 1, 2018, <https://www.nytimes.com/2018/08/01/us/politics/what-is-qanon.html>.

20. This tweet and the one below from the personal account of President Trump, both continuations from a longer string of tweets, frame US financial support to NATO as an arrangement that is unfair to the United States.

21. This tweet, sent from the official account of NATO on the anniversary of its founding, includes a video celebrating its creation and promoting its cause.

22. This tweet, from the account of Guy Verhofstadt (then a member of the European Parliament), expresses solidarity with the British people after the poisoning attack on the Skripals. It links to an article in *Washington Post* that claimed the attack was likely to have been orchestrated by the Russian government.

23. This tweet, sent by CNN reporter Zachary Cohen, contains a quote from then US secretary of defense Jim Mattis, characterizing Putin's anti-NATO strategy.

24. This tweet, which we anonymized because the author is not a highly visible public figure, recounts recent actions and rhetoric by Donald Trump toward Canada and suggests that the United Kingdom should be worried about how Trump may treat it in the future.

25. We have further anonymized this account by listing it as [anon] in the graph and tables.

26. This tweet, which we anonymized because the author is not a highly visible public figure, criticizes NATO and its allies for their inaction in a conflict between Turkey and Kurdish forces in Afrin.

27. This tweet, by an anonymous online activist group that supports the Kurds in Syria, contains criticism of NATO and its allies and a call to action for other online activists to help garner attention regarding the current conflict in Afrin.

28. This tweet and the one below, both anonymized because the authors are not highly visible public figures, criticize the United States and NATO for their inaction in the conflict between Turkey and Kurdish forces in Afrin.

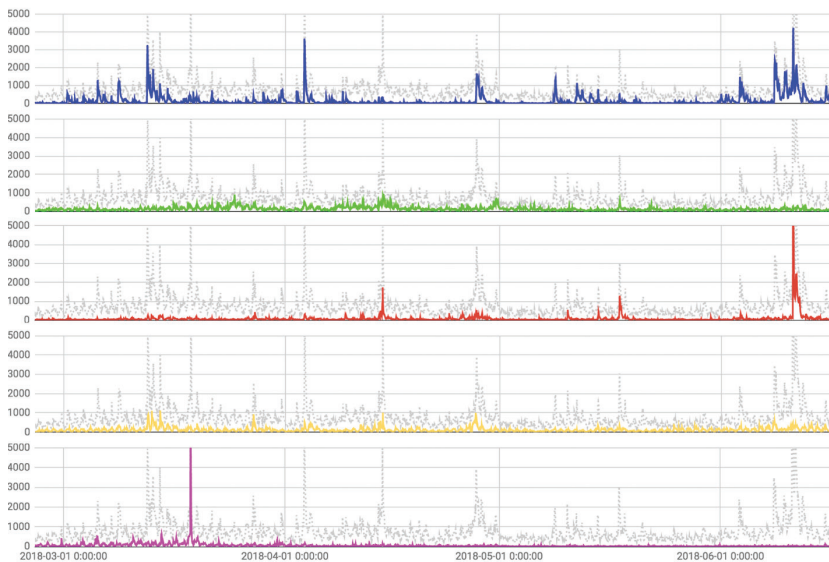
29. This tweet, sent from an activist account we anonymized, opportunistically leverages the narrative about NATO inaction in Afrin as an opportunity to criticize NATO.

30. Arif, Stewart, and Starbird, "Acting the Part."

31. Starbird et al., "Ecosystem or Echo-System?"; Wilson, Zhou, and Starbird, "Assembling Strategic Narratives."

Appendix A: Temporal Patterns (Tweets per Hour) by Cluster

My researchers created graphs of tweets volume over time (tweets per hour) for the accounts in each cluster. The timelines are colored according to cluster. The gray dotted line represents overall tweet volume (all tweets, including tweets from accounts in all clusters and tweets from accounts outside one of the main clusters).



Appendix B: Top Most Retweeted Accounts by Cluster

For each cluster, we identified the accounts that were most retweeted *by* accounts in this cluster. Please note that this does not mean that those accounts are *in* this cluster, as some accounts are highly retweeted by accounts in multiple clusters.

Blue	Green	Red	Yellow	Pink
brianklaas	sahouraxo	realDonaldTrump	NATO	<anonymized>
davidfrum	RT_com	SharylAttkisson	NATOPress	KurdsCampaign
MalcolmNance	AWAKEALERT	VeteransBritain	jensstoltenberg	<anonymized>
kurteichenwald	ShehabiFares	RichardGrenell	USNATO	<anonymized>
McFaul	<anonymized>	AP	NATO_MARCOM	<anonymized>
MarkHertling	<anonymized>	charliekirk11	USAmbNATO	GissiSim
jimsciutto	<anonymized>	VP	StateDept	<anonymized>
RNicholasBurns	MaxBlumenthal	JackPosobiec	guyverhofstadt	<anonymized>
krassenstein	timand2037	<anonymized>	statedeptspox	<anonymized>
MollyJongFast	crimesofbrits	PressSec	BritishArmy	<anonymized>
funder	Partisangirl	WiredSources	AFP	<anonymized>
Kasparov63	VanessaBeeley	sahouraxo	<anonymized>	<anonymized>
mattmfm	ShoebidgeC	<anonymized>	USArmyEurope	<anonymized>
peterbakernyt	SputnikInt	<anonymized>	spectatorindex	<anonymized>
SteveSchmidtSES	BenjaminNorton	<anonymized>	USNavyEurope	<anonymized>
olgaNYC1211	<anonymized>	StateDept	brianklaas	<anonymized>
AmbassadorRice	Russ_Warrior	<anonymized>	GermanyNATO	<anonymized>
counterchekist	ClarkeMicah	<anonymized>	NATO_ACT	<anonymized>
ChrisMurphyCT	<anonymized>	FoxNews	ResoluteSupport	<anonymized>
ZcohenCNN	NinaByzantina	<anonymized>	<anonymized>	<anonymized>

Appendix C: Top Most Tweeted Domains by Cluster

Using URL links embedded in tweets and retweets (and after resolving these to their original location), we identified the most tweeted web domains in the data. Domains are displayed with the most retweeted at the top.

Blue	Green	Red	Yellow	Pink
washingtonpost.com	rt.com	dailybrian.com	nato.int	anfenglishmobile.com
m.spiegel.de	youtube.com	conservativedaily.com	youtube.com	youtube.com
cbsnews.com	sputniknews.com	breitbart.com	washingtonpost.com	ahvalnews.com
snappytv.com	globalresearch.ca	youtube.com	reuters.com	washingtonpost.com
observer.com	zerohedge.com	washingtonexaminer.com	facebook.com	www.reuters.com
nato.int	theguardian.com	rt.com	rand.org	washingtonexaminer.com
abcnews.go.com	fort-russ.com	foxnews.com	state.gov	ahvalnews2.com
cnn.com	almasdarnews.com	express.co.uk	flickr.com	change.org
reuters.com	independent.co.uk	zerohedge.com	politico.eu	thetimes.co.uk
smartdissent.com	facebook.com	nato.int	foreignpolicy.com	facebook.com
nytimes.com	reuters.com	whitehouse.gov	rferl.org	hawarnews.com
thehill.com	nato.trendolizer.com	reuters.com	economist.com	hellasjournal.com
bbc.co.uk	theduran.com	truepundit.com	stripes.com	theguardian.com
mobile.twitter.com	off-guardian.org	dailycaller.com	defensenews.com	rt.com
youtube.com	haaretz.com	thehill.com	defenseone.com	kurdistan24.net
merriam-webster.com	telesurtv.net	tacticalinvestor.com	defense.gov	thecanary.co
newsweek.com	mirror.co.uk	facts4eu.org	wsj.com	nytimes.com
theguardian.com	21stcenturywire.com	jpost.com	ac.nato.int	bloomberg.com
rawstory.com	tass.com	veteransforbritain.uk	nytimes.com	gatestoneinstitute.org
msnbc.com	atlanticcouncil.org	russia-insider.com	theguardian.com	wsj.com

Appendix D: Most Frequent Terms in Account Profiles (User Descriptions)

This is a list of the terms that appear most frequently in account profile descriptions. These descriptions are short, user-generated text fields. We ran this analysis on distinct accounts for each cluster, meaning that we counted each account once. In creating this list, we removed common terms (i.e., “stopwords”) such as articles, pronouns, conjunctions, and some prepositions.

Blue	resist (8003), love (6513), theresistance (6254), lover (5260), trump (4676), mom (4449), fan (4384), politics (4289), proud (4250), life (4192), fbr (3941), liberal (3901), resistance (3858), writer (3793), retired (3400), wife (3265), world (3098), political (2999), mother (2996), music (2973), own (2926), people (2787), time (2493), democrat (2436), husband (2377), news (2316), what (2279), father (2249), science (2221), progressive (2196), one (2184), good (2055), american (2005), things (1972), former (1970), rights (1934), sports (1912), animal (1910), artist (1888), teacher (1888), human (1838), living (1832), opinions (1817), country (1734), truth (1708), family (1701), social (1654), junkie (1651), 2 (1645), history (1634), follow (1625), here (1610), more (1604), tweets (1592), justice (1587), advocate (1539), activist (1537), views (1534), new (1533), author (1531), twitter (1515), dog (1513), always (1450), dad (1445), veteran (1440), go (1430), live (1429), never (1410), old (1363), member (1347), art (1331), state (1295), only (1278), feminist (1272), right (1262), man (1246), married (1224), animals (1202), blue (1198), enthusiast (1197), books (1186), know (1184), neveragain (1182), america (1181), back (1170), was (1169), lists (1154), believe (1146)
Green	love (2434), world (1778), anti (1725), life (1698), politics (1568), fan (1328), people (1291), truth (1205), music (1120), proud (1072), one (1044), own (1034), political (1033), lover (1025), pro (1014), news (1007), time (990), free (989), writer (962), god (962), social (955), human (896), man (873), endorsement (852), follow (837), peace (830), socialist (805), student (799), tweets (797), activist (764), only (763), live (752), history (747), good (736), justice (736), views (727), more (726), twitter (707), media (703), member (692), rights (677), war (671), here (646), endorsements (633), always (632), never (630), supporter (629), there (627), engineer (622), right (620), father (618), know (614), things (603), freedom (601), when (600), maga (594), new (560), art (552), account (544), pakistan (535), against (532), science (523), family (520), artist (517), journalist (511), real (498), left (496), everything (491), muslim (488), labour (486), trump (482), living (478), born (475), see (472), enthusiast (470), old (464), support (462), party (460), ex (459), hate (457), non (457), business (456), international (450), american (446), too (442), some (440), husband (440), christian (434), believe (429), back (429), country (428), retired (428), think (423), first (423), day (422)
Red	maga (12684), trump (8195), conservative (6733), love (6221), god (4974), proud (3745), christian (3660), country (3428), american (3104), life (3090), nra (3061), 2a (3014), patriot (2969), family (2939), america (2784), supporter (2774), president (2665), pro (2545), that (2361), retired (2155), fan (2090), wife (2043), father (1971), politics (1881), married (1789), husband (1744), military (1669), http (1601), veteran (1575), usa (1572), follow (1566), jesus (1563), mom (1561), kag (1550), lover (1529), great (1476), truth (1454), support (1453),

news (1404), mother (1395), people (1385), constitution (1371), one (1355), member (1344), world (1343), freedom (1312), vet (1309), trump2020 (1270), time (1265), own (1228), back (1226), political (1219), free (1191), deplorable (1150), anti (1137), trumptrain (1123), potus (1123), army (1110), israel (1095), lists (1069), americafirst (1067), 1a (1049), right (1031), draintheswamp (1029), business (1014), man (971), first (971), music (969), buildthewall (964), only (959), good (944), loves (942), prolife (930), former (916), brexit (898), born (881), owner (875), views (871), years (864), government (861), go (847), always (838), qanon (831), believe (819), history (792), again (779),

Yellow own (2812), views (2515), politics (2313), security (1974), news (1900), endorsement (1887), tweets (1800), love (1748), world (1696), fan (1563), international (1538), life (1399), eu (1376), political (1320), proud (1263), policy (1229), former (1193), history (1145), european (1133), writer (1089), endorsements (1086), account (1074), lover (1058), journalist (1048), opinions (1041), director (1037), personal (1020), affairs (1001), music (990), official (969), military (953), student (946), uk (931), editor (901), foreign (897), science (896), people (871), university (863), member (860), father (827), follow (823), social (822), author (819), one (818), pro (816), husband (809), time (801), law (790), europe (789), ex (789), media (779), global (771), fbpe (768), brexit (767), human (760), business (743), retweets (733), research (733), interested (712), things (712), army (705), new (685), more (664), only (653), retired (652), fellow (645), relations (645), public (637), defence (626), good (616), liberal (613), analyst (612), rights (610), citizen (603), here (600), f (597), working (597), british (593), man (574), senior (569), enthusiast (567), american (565), embassy (564), phd (564), family (562), officer (559), national (559), conservative (554), dad (549)

Pink en (485), love (436), kurdistan (411), politics (371), world (329), human (324), news (323), kurdish (312), pro (297), anti (292), life (285), tweets (277), endorsement (275), rights (274), kurd (245), people (238), political (236), freedom (230), proud (230), journalist (228), history (228), non (216), free (215), student (214), twitter (205), one (205), own (202), views (197), fan (190), activist (187), writer (183), turkey (183), lover (181), music (181), social (174), israel (174), international (172), time (161), man (159), english (157), east (155), endorsements (153), truth (152), university (149), peace (148), conservative (146), science (146), god (145), middle (145), only (143), art (134), media (134), eu (134), good (133), things (132), van (132), ma (128), engineer (126), right (122), member (122), maga (121), rojava (120), live (120), phd (120), interested (118), former (118), support (117), law (115), father (115), new (114), american (114), christian (113), more (112), editor (111), ex (110), im (109), author (109), justice (109), supporter (106), account (105), never (103), islam (101), retweets (101), war (100), personal (100), come (99), syria (99), against (97), greek (97), born (97), democracy (96), anarchist (96), trump (94), business (94), atheist (94)

Appendix E: Most Frequent Terms in (Unique) Tweets by Cluster

This is a list of the terms that appear most frequently in tweets. For this analysis, we excluded retweets and exact copies, meaning that we counted each textual version of a tweet only once (aggregating by cluster). In creating this list, we removed common terms (i.e., “stopwords”) such as articles, pronouns, conjunctions, and some prepositions.

- Blue** trump (20347), putin (14340), russia (11897), allies (8139), @realdonaldtrump (6183), russian (5054), more (4618), war (4290), president (4017), attack (3839), trade (3594), against (3516), america (3513), military (3505), world (3414), united (3285), europe (3200), one (3052), eu (2945), countries (2911), states (2862), uk (2586), sanctions (2551), country (2249), alliance (2204), only (2146), much (2111), people (2052), foreign (2041), gop (2039), iran (2021), pay (1996), germany (1988), article (1983), time (1952), other (1923), still (1890), usa (1887), ally (1845), korea (1801), nerve (1780), fbi (1780), any (1774), security (1758), potus (1713), canada (1704), over (1683), deal (1677), new (1673), good (1633), think (1597), american (1542), many (1522), nothing (1521), european (1515), same (1485), right (1482), agent (1466), syria (1465), said (1446), state (1423), cia (1411), western (1366), china (1359), weaken (1358), defense (1345),
- Green** russia (23909), syria (19177), war (13614), uk (10570), eu (7583), russian (7397), military (7327), israel (7139), usa (6895), turkey (6801), against (6597), trump (6438), world (6194), more (6177), people (5682), iran (4973), countries (4639), libya (4601), attack (4585), one (4516), over (4427), putin (4382), france (4223), only (4203), europe (4152), ukraine (4119), assad (4111), syrian (4101), terrorists (3988), weapons (3936), country (3784), saudi (3695), other (3624), state (3396), news (3364), isis (3349), years (3344), any (3333), allies (3312), @realdonaldtrump (3307), iraq (3275), time (3227), new (3198), west (3154), support (3125), forces (3098), army (3066), western (2986), chemical (2969), china (2775), afghanistan (2746), think (2741), states (2708), terrorist (2694), never (2656), bombing (2596), peace (2549), propaganda (2505), media (2505), international (2464), skripal (2458), germany (2442), must (2403), backed (2365), yemen (2356)
- Red** russia (3558), eu (3439), trump (3261), turkey (3112), europe (2101), germany (2019), pay (1965), uk (1894), military (1817), syria (1748), war (1717), realdonaldtrump (1714), more (1675), gdp (1534), trade (1528), allies (1472), iran (1398), russian (1367), european (1331), israel (1323), president (1269), putin (1235), against (1232), defence (1134), countries (1118), much (1106), world (1053), over (1049), only (990), good (983), defense (960), attack (947), time (938), spending (936), pays (924), erdogan (906), protect (884), one (870), need (858), great (831), must (829), new (829), cost (798), chief (791), country (767), people (766), states (764), france (755), alliance (744), america (742), own (734), member (716), news (703), change (693), off (688), makes (684), potus (677), believe (672), ally (661), usa (657), merkel (647), coming (645), towards (643), state (642), years (640), sense (635), many (634), security (624), same (623), weapons (596),

- Yellow** russia (14766), eu (11011), russian (6376), more (6366), military (6117), trump (5798), turkey (5698), allies (5437), security (5384), war (5023), uk (4984), putin (4976), ukraine (4735), new (4349), europe (4313), syria (4241), against (3966), one (3711), defence (3603), defense (3559), support (3553), alliance (3513), over (3158), world (3085), countries (3076), today (3059), germany (2995), attack (2932), forces (2912), european (2907), general (2821), @jensstoltenberg (2707), #wearenato (2674), secretary (2572), time (2535), only (2534), country (2533), member (2532), president (2526), news (2489), first (2364), states (2313), must (2311), good (2252), people (2248), poland (2240), usa (2214), afghanistan (2208), state (2109), part (2107), @realdonaldtrump (2069), great (2057), peace (2019), meeting (1994), air (1961), very (1957), 2018 (1952), years (1912), cyber (1891), members (1889), iran (1854), read (1839), ally (1833), macedonia (1801)
- Pink** turkey (20517), afrin (12612), erdogan (7197), syria (5994), turkish (5705), kurds (5565), isis (5469), russia (4193), eu (4159), against (3569), member (3144), ally (3134), army (2997), kurdish (2965), statedept (2957), war (2909), people (2863), world (2849), ypg (2562), civilians (2326), potus (2192), @realdonaldtrump (2103), stop (2089), more (1958), #breaksilenceonafrin (1955), hrw (1850), state (1786), usa (1758), time (1742), @jensstoltenberg (1691), @brett_mcgurk (1682), support (1679), military (1635), @emmanuelmacron (1607), allies (1602), one (1577), only (1568), genocide (1562), terrorist (1538), new (1484), jihadist (1475), nytimes (1470), @centcom (1435), @senjohnmccain (1404), #twitterkurds (1399), terrorists (1391), greece (1352), turks (1342), over (1319), efr (1292), @azadirojava (1291), rojava (1283), whitehouse (1278), killing (1278), city (1277), @washingtonpost (1266), efrin (1254), uk (1251), country (1246), trump (1234), jihadists (1230),
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Appendix F: Percentage of Retweets from Retweeter Cluster (rows) to Retweeted Cluster (columns)

Color	Blue	Green	Red	Yellow	Pink
Blue	0.887902	0.005026	0.004013	0.037752	0.0018162
Green	0.009202	0.903791	0.015211	0.024088	0.0149524
Red	0.010467	0.037217	0.816407	0.054987	0.0109995
Yellow	0.077831	0.019858	0.024381	0.836243	0.0080863
Pink	0.009564	0.034057	0.012557	0.023755	0.8829999

