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Changing tides: Online conspiracy theory use by radical violent extremist groups over time

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**Changing Tides:
Online Conspiracy Theory Use by Radical Violent Extremist Groups Over Time**

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A thesis submitted to the Department of Psychology in fulfillment for the degree of

Master of Science in Psychological Science

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Abstract

Radical violent extremist terrorism is a global issue that has existed for centuries and has been the cause of millions of deaths. Extremist organizations have learned to adapt and survive attempts at legal/military interdictions. One possible major element that allows for the survival of these radicalized organizations is the use of conspiracy theories within their online messages that are used to radicalize and recruit members to their cause. These conspiracy theories tend to elicit two types of messages: a quest for significance or a loss of significance. This study aims to observe how extremist organizations utilize conspiracy theories in their online messages to adapt to the standing of the organization (growth, height, and decline). This study will utilize a 2x3 non-experimental, correlational content analysis of historical documents using text-based algorithms via latent dirichlet allocation to examine the frequency of conspiracy theory usage (presence or absence) from radical Islamic (ISIS) and right-wing extremist groups (QAnon) used over time. There was no significant pattern between conspiracy theory usage and ISIS's timeframe standing, $\chi^2(2) = 0.90, p = .32$. The data from the QAnon Drops showed too many discrepancies among the post frequencies across different time frames so supplemental analyses were run to examine change in conspiracy theory use between the growth and height time frames as well as change in conspiracy theory theme over time. There was a significant pattern between conspiracy theory use and timeframe, $\chi^2(1)=10.95, p<.001$. The themes of conspiracy theories appear to change over time, which may be attributed to historic events at the time. Future studies should aim to even the post frequencies and continue to expand upon this research to grasp the methodology of extremist organizations and their usage of conspiracy theories.

Changing Tides:

Online Conspiracy Theory Use by Radical Violent Extremist Groups Over Time

A major issue faced by the entire globe of nations is combating radical violent extremist terrorism and its growth. Terrorism has increased within the twentieth and twenty-first centuries (Morgan, 2004). Haghani and colleagues (2022) assert that over the past decade, an average of 10,000 terrorist attacks occur annually around the world. Since NATO's last Strategic Concept was drafted in 2010, the threat of terrorism has become more diverse and adaptable (Loertscher et al., 2022).

With the ever-growing concern of terrorism, there has been a global response in interdiction and other counterterrorism actions. Following the September 11th attacks, industrialized nations began to allocate more resources towards countermeasures. Sandler (2015) noted that with more terrorist attacks following September 11th, allocating resources must be done effectively so terrorists cannot circumvent laws and cause significant physical and economic loss. Terrorist organizations' recruitment methods will shift over time depending on if they require more manpower or more expertise, and it is this adaptability that allows these organizations to survive (Bloom, 2017). A good method of adaptability is social marketing, which is essentially increasing the acceptability of ideas or methods within a target group to solve a problem (Lefebvre & Flora, 1988).

Terrorism by Radical Violent Extremist Groups

The origin of the term *terrorism* dates back to the French Revolution in 1794 (UN Office on Drugs and Crime, 2018). The FBI defines terrorism, both domestic and international, as violence and/or criminal acts carried out by individuals to progress political, social, religious, racial, or environmental ideological goals (Federal Bureau of Investigation, n.d.; c.f.;

Piszkiwicz, 2003). Combating terrorism differs from fighting a standard military. Terrorism is criminal activity; therefore, its actors do not follow the rules of engagement nor the rules of war and international humanitarianism (Sofaer, 1986). Some examples of their unlawful behaviors include the need to covertly engulf themselves into the general population, in that they do not wear uniforms (Sofaer, 1986; Merrari, 1993), and they do not discriminate between civilians and combatants.

The Growth of the Internet, Social Media, and Online Technologies

Floridi (2009) proposed that the world is experiencing the fourth Scientific Revolution with the birth and innovation of the internet in the age of information. Since its start during the Cold War in the 1960s as a means for government researchers to share information (Cohen-Almagor, 2011; University System of Georgia, n.d.), the internet has slowly made its way into the lives of many people globally and has reformed how our lives are conducted.

One major contributor to the growth of the internet is the rise of social media. The Cambridge Dictionary defines social media as, “websites and computer programs that allow people to communicate and share information on the internet using a computer or cell phone” (n.d.). Social media has transformed how we interact and communicate with people all around the world within seconds. Some major examples of social media platforms include Facebook, Instagram, Myspace, Reddit, Snapchat, Twitter, and YouTube. The largest platform, Facebook, has reported that it had over 500,000,000 registered users (BBC News, 2014). With these numbers, you could virtually communicate with millions of people. Edosomwan et al. assert that the number one way for a business to grow is through social media and networking (2011). The principle of growth using social media applies to extremist organizations as well.

The internet is an ever-growing democratic device that provides a public voice to those who usually would not have one (Barrett et al., 2012). While activating public voice can be a positive attribute (e.g., “Twitter Revolutions” in Tunisia and Egypt to overthrow dictators with unprecedented protests; Bhuiyan, 2011; Joseph, 2012; Thompson, 2012), it also opens the door for use by terrorist/extremist organizations, as well as lone wolf actors. Bastug et al. (2020) contend that in this new era of terrorism, organizations exploit the internet by adopting accessible technologies and social media to expand their reach globally. Young Westerners may become radicalized and claim allegiance to groups like the Islamic State, creating concerns for policymakers and researchers trying to understand the radicalization process (Haque et al., 2015). One issue with combatting online extremism is the fine line between security and liberty, which was expressed by the then Speaker of the House Nancy Pelosi, who said, “We are committed to protecting our Nation from terrorism while protecting our precious civil liberties, protecting the people and protecting the Constitution” (2008). What makes this understanding that much more difficult is that the dissemination of information can be done not only by the organization directly, but also by third-party supporters. In a content analysis study conducted by Chatfield et al. (2015), the researchers examined a specific Twitter account, @shamiwitness (since been deactivated), whose tweets echoed the ideals of the Islamic State: ineptitude of the United States, oppression of Muslims, and call to jihad. The Islamic State exploits the rapid communication provided by the internet and social media to reach the “luring hearts” of Westerners and Muslims around the globe to fight to extend the Islamic State’s territory (Chatfield et al., 2015).

Extremism and Conspiracy Theories

As former White House cybersecurity chief, serving under both President Bill Clinton and George W. Bush, Richard Clarke said, “Terrorists use the internet just like everybody else” (as cited in Conway, 2006). The internet has proven to be an instrument in how terrorists communicate and spread their message, a new major concern for counter-terrorism units (Hollewell & Longpré, 2021).

One major component to successful radicalization messages is the usage of conspiracy theories. Conspiracy theories are defined as false narratives compiled by multiple agents to work toward a detrimental outcome (Swami et al., 2015). Conspiracy theories may have a role in radicalization due to their promotion of beliefs designed to target specific groups to elicit society-wide grievances (Rousis et al., 2020). In surveys conducted by the Cooperative Congressional Election Studies (CCES) in 2011, over 55% of the respondents answered that they believe in at least one conspiracy theory (Oliver & Wood, 2014). Some examples of relatively newer conspiracy theories that have emerged during the twenty-first century regard flat earth, climate change, 9/11 perpetrators, anti-vaccine beliefs, 5G networks, and the deaths of Osama bin Laden and Princess Diana (Rottweiler & Gill, 2020). These conspiracy theories have begun to spread more openly with the growth of the Internet Age (Douglas et al., 2019).

Significance-quest Model of Radicalization (Kruglanski et al., 2014)

Usage of conspiracy theory messages usually tends to contain one of two types of tones: (1) a *quest for significance* or (2) a *loss of significance* (Kruglanski et al., 2014; Rousis et al., 2020). These two tones are considered to be a focal goal as to why terrorists and extremists are devoted to their cause (Kruglanski et al., 2009). A quest for significance is defined as a motivational force that transcends life and survival; a desire to matter and to be respected in a search for meaning (Kruglanski et al., 2009; Kruglanski et al., 2013; Rousis et al., 2020). In his

classic 1946 memoir, *Man's Search for Meaning*, Viktor Frankl speaks on this point when he says, "For success, like happiness, cannot be pursued; it must ensue, and it only does so as the unintended side effect of one's personal dedication to a cause greater than oneself or as the by-product of one's surrender to a person other than oneself" (2006). The other tone, a loss of significance, is the perceived sense of injustice imposed upon a person or group with which a person identifies with as a social identity (Kruglanski et al., 2009). Prior research by Jasko et al. (2017) has shown that a loss of significance, such as social loss or economic loss, were positive predictors of the use of ideologically motivated violence. These two tones of conspiracy theory messages can interplay with each other (i.e., a loss of significance can activate a quest for significance in an attempt for a significance restoration; van den Berg & van Hemert, 2021).

Kruglanski et al. (2014) proposed the Significance-quest model of radicalization seen below in Figure 1. In this model, significance loss and its possible sources (stigma, failure, loss, and/or humiliation) along with economic, political, and social anomie creates a sense of a lack of means for an individual to pursue their ends. This lack of means of gaining significance usually is paired with the narrative of social significance loss and collective humiliation (e.g., discrimination, occupation, etc.). A reduction in significance elicits a desire to restore significance. Ideological narratives (bottom right in Figure 1) can spread amongst groups with different means, both on an individual level (Mosque, madrassa, internet, etc.) as well as a social level (family, friends, co-workers, etc.). In a quest to restore significance, the individual or group will find the means needed for restoration, even leading to violence as a means. When violence is accepted, this is seen as alternative goals/values being suppressed. Actions such as killing, which was prohibited, and concerns for individual rights, which were prioritized, are now violated. Significance restoration overshadows individual rights and killing becomes justified to reach a

goal. The degree of radicalization (top right) is determined by the degree to which alternative concerns are expelled. The degree of radicalization is assumed to be proportional to a growing commitment to goals and a decrease in alternative concerns.

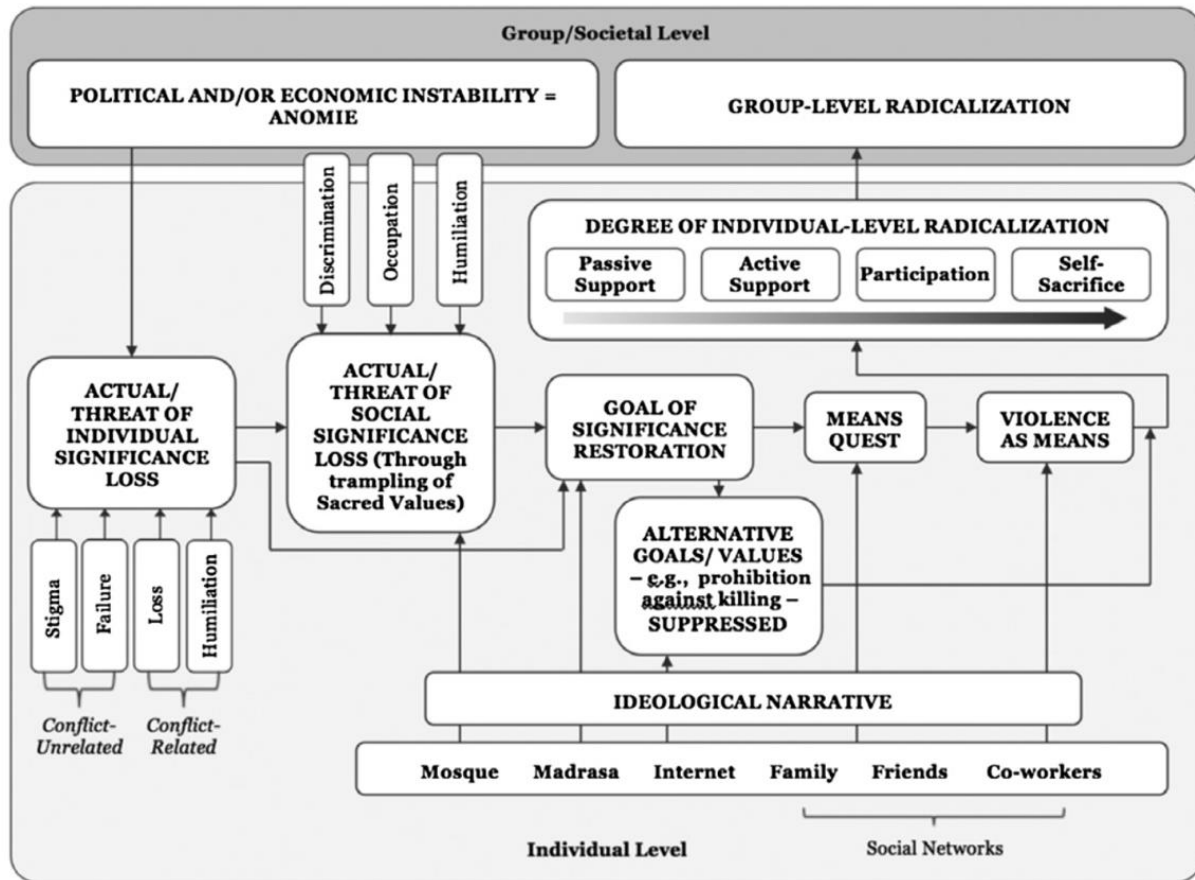


Figure 1. Significance-quest model of radicalization (Kruglanski et al., 2014)

A threat (e.g., stigma, conflict loss, etc.) is introduced to an organization, people group, nation, etc. This threat elicits a loss of significance (e.g., humiliation, occupation, etc.). The perceived pain that is felt can then be conveyed through messaging to voice the plight of the organization and cause an empathetic response from its receiving audience (in the “Cognitive-Emotive Model of Radicalization, this is also known as identification; Howard et al., 2019). This allows for an easing into radicalization; an easing into enlistment. The pain/plight may cause a desire for significance restoration. The more this is desired, the more values that become

suppressed in order to achieve this goal (Kruglanski et al., 2014). In an attempt at restoration, violence/fighting back is rationalized and utilized to push the goal(s) forward (Howard et al., 2019). The perpetrators of this violence can then be idolized as revolutionaries, idealists, warriors, and martyrs. In a study from Baugut and Neumann (2020), they found that martyrdom propaganda played the most vital role for foreign fighters who were about to face a dangerous situation, pushing the reward of “paradise”. Their stories are glorified, eliciting responses from those who desire to feel useful or remembered; significant.

The flow of this process is seen in a number of extremist organizations. One example of this is within the QAnon conspiracy: the loss of the 2020 U.S. Presidential Election of Donald Trump. QAnon is formulated around the idea of President Donald Trump fighting a secret cabal of “in”famous figures who would sacrifice and abuse children (Aliapoulios et al., 2022). When President Joe Biden won the election, QAnon began to spread misinformation about election fraud and about the presidency being stolen. Donald Trump, who was viewed by supporters of QAnon as an idol that fought a secret war against the satanic cabal, was now ousted (perceived threat/loss; Canon & Sherman, 2021). Thus began a push for, “The Storm”, an attempt to restore the Trump presidency. Through utilizing conspiracy theories, the central figure of the movement, Q, was able to spread misinformation to manipulate the masses to engage in the violent U.S. Capitol storming on 6 January 2021 (Kydd, 2021). While ultimately, Trump was not reinstated, the organization’s usage of conspiracy theories/misinformation allowed for mass-radicalization to violently fight their perceived threat.

The Current Study

The current study will begin to examine how extremist organizations use conspiracy theories in their online messages. Along with examining how they use conspiracy theories, the

study will observe to see if the organizations adapt to their status of success/failure and how that may impact the use of conspiracy theory messages in disseminated messages of the organization. Essentially, the project asks whether conspiracy use decrease when organizations succeed and increase when the organization begins to falter.

Extremist organizations may adapt their messages to followers based on the standing of the organization. Whereas the Significance-quest model of radicalization (Kruglanski et al., 2014) describes an individual's path to radicalization, could it be reversed to examine how extremist organizations manipulate their messages to attract new followers to their cause and maintain commitment from followers during times of challenge? Previous research (Bartlett & Miller, 2010; Rottweiler & Gill, 2020; Rousis et al., 2020; Aliapoulios et al., 2022) shows that extremist organizations like ISIS and QAnon utilize conspiracy theories to recruit new followers and along with this, aim to elicit an empathetic response (Howard et al., 2019). These empathetic responses can be an affirming/enduring message, such as promises of glory and the ability of the recruit to have a place in history. These responses represent what Kruglanski et al. describe as opportunity for significance gain. Alternatively, extremist organizations might offer reactive messages, suggesting that recruits should fight for the oppressed or relate to the struggles and/or humiliation of those fighting a noble cause. These messages relate to loss of significance (Kruglanski, et al.).

Knowing that the goal of extremist propaganda is to arouse an empathetic response, it is important to know how extremist groups like ISIS and QAnon change the types of online messages used over time and whether the current standing of the organization influences attempts to capture the needs of their audience to engage in a significance quest (Kruglanski, et al. 2014). That is to say, if the use of conspiracy theories serve the function of activating a

significance quest, we should see greater use of conspiracy theories during the growth period of an extremist organization, helping to activate empathic responses, and during the decline of an extremist organization, addressing the potential loss of significance. During a period of success, the height of organizational mobilization and activation, the organization should have achieved significance through their heightened status, therefore, conspiracy theory usage for the purpose of significance quest should be less valuable to the organization and less often used.

From this study, I hypothesize that conspiracy theory usage will be dependent upon the organizations' standing. If they are victorious (i.e., during the height of their organization), they will produce "positive" recruitment messages that glorify themselves. If they are in a growth phase or declining, they will use conspiracy theories that portray losses of significance to expound upon their struggles/oppression and play upon a recruit's empathetic response as a call to arms and unity to fight the oppressor. They may resort to higher conspiracy theory use during these times. Given that conspiracy use is common among both Islamic and right-wing extremist groups (Rousis, et al. 2020), and because conspiracy theory use may be linked with significance quest, this pattern should hold consistent across ideological organizations. ISIS and QAnon should both follow this model despite their differing causes/ideologies (Islamic fundamentalism terrorists vs. anti-establishment conspirator terrorists).

Hypothesis: Conspiracy theory use of an extremist organization will be at its highest during periods when significance of the organization is most threatened, during periods of organizational growth and decline, and at its lowest when the organization is experiencing high levels of significance, at the height of the organization. The pattern of conspiracy theory use across the growth, height, and decline of an extremist organization should be similar across groups with different extremist

Method

Extremist Organizations of Focus

Islamic State

The Islamic State, better known as *ISIS* or *ISIL*, is a Salafi-Jihadist terrorist organization with the goal of establishing an Islamic caliphate in the Levant (Iraq and Syria) and eventually worldwide (Center for International Security and Cooperation, 2021). At their height in 2014, they had seized over 45,000 kilometers of land within just Iraq and Syria along with control over 2.5 million civilians by early 2017, and beyond those two nations, ISIS also took land in Egypt, Libya, Afghanistan, Nigeria, as well as other nations (Jones et al., 2017). As an organization, they have separated themselves from other extremist organizations through their sheer brutality and unconventional recruitment tactics, techniques, and procedures (Bisgin et al., 2019).

Financed by Al-Qaeda under Osama bin Laden, Abu Mus'ab al-Zarqawi planted the roots of the Islamic State in western Iraq in 2003 (Gerges, 2016), which would prompt the United States to connect then-Iraqi President Saddam Hussein and Al-Qaeda (Powell, 2003), which would prove to be false, as Al-Qaeda disapproved of Saddam's regime, as well as plunge the U.S. into a war in Iraq (Weisman, 2006). U.S. Secretary of State Colin Powell's statements would launch Zarqawi status as an international jihadist and elevate his message (Jasko et al., 2021), leading the U.S. into a new war against Iraq.

By 2011, Operation Iraqi Freedom had created instability within Iraq and ISIS saw the opportunity to commandeer land and bolster their ranks. On June 29, 2014, Abu Bakr al-Baghdadi would officially announce the start of their caliphate from Aleppo, Syria to Diyala, Iraq (Wilson Center, 2019). The subsequent US-led response, Operation Inherent Resolve, would

continue for nearly another decade across not only the Middle East and Africa, but against lone wolves and small cells throughout the entire world.

In 2018, CNN reported that ISIS was responsible for 143 attacks across 29 different nations that had led to the deaths of over 2,000 people and thousands more injured. As of January 1, 2022, ISIS has been tied to 235 arrests in 32 states and Washington, D.C., within just the United States alone (George Washington University, 2022). A majority of those ISIS affiliates were US citizens.

The global reach of ISIS makes it a dangerous terrorist group. Despite strong efforts by many nations, ISIS has found a way to survive and adapt with both counterterrorism efforts as well as the technology and tactics of modern day. Even though President Trump declared ISIS to be defeated on December 19, 2018 (Wilson Center, 2019), the remnants of ISIS may resurge or be absorbed by other groups, such as the reemergence of al-Qaeda in the Middle East (i.e., remaining members from ISIS, who are military trained and essentially mercenaries may now go to the next highest bidder/best opportunity; International Crisis Group, 2017). People are attracted to the empowering and anti-establishment revolutionary group, especially a younger population that blames their deprivations on injustice and disarray (2017). Beyond the structure of the group, the ISIS ideology seems indestructible as it panders to the hurt and oppressed, the revolutionaries, and the “righteous”.

QAnon

The fairly new extremist group, QAnon, began in a 4chan /pol/ (Politically Incorrect Board) forum in 2017 when a user, who identified as “Q” (based on the “Q clearance” within the U.S. Department of Energy), posted a conspiracy theory that President Donald Trump was waging a covert war against a global, satanic cult of pedophiles that includes the Clintons,

George Soros, and Tom Hanks, among others (Amarasingam & Argentino, 2020; Moskalenko & McCauley, 2021). QAnon heavily relies on the usage of conspiracy theory dissemination. The organization has been tied to a string of extremist events within the United States, including incidents like Edgar Madison Welch's armed vigilante attempt at stopping "Pizzagate", a disproven conspiracy theory that emails leaked from Hillary Clinton's campaign manager John Podesta mentioned how they held child abuse rituals at the Comet Ping Pong Pizzeria (Bleakley, 2021), in Washington, D.C. in 2016 (Amarasingham & Argentino, 2020), Matthew Philip Wright's armed standoff with law enforcement at the Hoover Dam in 2018 in which Wright desired the release of a report for the Office of the Inspector General exposing villainous acts of Trump opponents (Garry et al., 2021), and the January 6th storming of the US Capitol Building (Moskalenko & McCauley, 2021), along with a number of other incidents.

QAnon is a growing threat within the United States, and in 2019, the FBI officially labeled them as a domestic terror threat (CSIS, 2021). They have amassed a large following as seen in an internal investigation from Facebook that found thousands of groups and millions of followers that support QAnon conspiracies (Sen & Zadrozny, 2020). Facebook, along with other internet platforms have begun to take measures to remove affiliated content and profiles, but QAnon followers show resilience and adaptability in their online presence by shifting from one platform to the next, finding more polarizing and fringe sites to spread their message on and effectively may further radicalize followers who may be more casual and less committed as they are now getting their information from extremist echo chambers with the rise of mistrust in the government and mainstream media (CSIS, 2021).

Countering the spread of misinformation from QAnon and its third-party sources is a difficult task. Along with their survivability in the face of social media cancellations, there are

some other facets that make QAnon arduous to combat. One reason is how unique QAnon's decentralized structure is compared to different extremist organizations. Followers are given "Q Drops" (the cryptic messages from Q) and are aligned to come to their own conclusions about the intel they receive; "Do your own research". Along this note, the Center for Strategic & International Studies (CSIS) suggests that there have not been explicit instructions from Q to carry out violent acts, rather it is on the followers to act essentially as lone wolves or small cells. Q instead allows for a community that opens permissive communication for airing any grievances that can lead to action (2021).

Studying QAnon in the aftermath of the 2020 US Presidential Election is important. It is of importance to continue to monitor the organization after the defeat of President Trump, the central hero of their narrative. Despite this, two Republicans who have praised the conspiracy theory, Marjorie Taylor Greene and Lauren Boebert, have won their elections into the House (Roose, 2020). At this time, it is unknown whether the presidential loss of Trump will curtail QAnon from distributing further radicalization messages or if the elections of Greene and Boebert may give a new voice to the movement.

Sample

The sample for the current study included documents from both ISIS (2014-2017) and QAnon (2017-2020). The data was gathered from Kaggle, which is a collaborative online platform where researchers can publish, share, and obtain datasets for research purposes (Kaggle Inc., 2022). Examples of the following datasets and sources will be included within the appendix of this paper (Appendix A).

Data on ISIS was gathered from Kaggle. Rousis et al. (2020) prepared the dataset which included English-version paragraphs from three of ISIS' publications: *Dabiq* and *Rumiyah*. From

these extremist publications, Rousis and colleagues coded each article, gave them an ID tag and a coding name, provided the file name, and the full text of the paragraph of focus. This dataset also included other entries from the organizations that the researchers studied along with ISIS (radical violent extremist groups like al-Qaeda and Neo-Nazis, nonviolent radical extremist groups like Hizb ut-Tahrir and the alt-Right, and moderate groups like Progressive Islam and Neo-Conservatives; Rousis et al., 2020). For the purposes of this study, only the data pertaining to ISIS was relevant.

The other dataset obtained, titled, “QAnonDrops” (Kingsman, 2021), consisted of post meta data, ID, author, source, website, board it was posted on, a timestamp, the text of the message, and any referenced post. The composer of this dataset chose to omit any images attached to the messages saying, “Posts reference images which I have opted not to include in this repo due to their distasteful content; the text is already quite enough and then some” (2021). The omitted images were cited in a link for those who were compelled to view them. The provided link may be helpful for further research purposes.

Organization Growth, Height, and Decline

Islamic State

In establishing time frames for ISIS, their **Growth** period spanned from 2004-2014 (the posts from the dataset are only from 2014; *Dabiq* issues 1-6), the **Height** period spanned from 2015-2016 (*Dabiq* issues 7-15, *Rumiyah* issues 1-4), and the **Decline** period spanned from 2017-2019 (*Rumiyah* issues 5-13). These time frames are proposed due to the historical events that had occurred during these years. During ISIS’ Growth period, Abu Musab al-Zarqawi would establish al-Qaeda in Iraq (AQ-I) in 2004. On June 7, 2006, he was killed in an airstrike. Around six months later, Iraqi President Saddam Hussein would also be executed. Many of his army and

intelligence officers would go onto supporting ISIS (Coles & Parker, 2015). The growth become more visible with AQ-I conquering Raqqa (January 2014) and Mosul (June 2014). On June 29, 2014, the new leader of AQ-I, Abu Bakr al-Baghdadi announced that they are now the Islamic State and are establishing their caliphate.

ISIS' Height period was defined by more land taken and infamous terrorist attacks. ISIS would take Ramadi in May 2015 and, at their apex, control around one-third of Syria and forty percent of Iraq (Wilson Center, 2019). During this span of time, ISIS would also claim responsibility for the attack on Russia MetroJet flight 9268 (October 31, 2015), attacks in Paris (November 13, 2015), the Pulse Nightclub shooting (June 6, 2016), and the Nice truck attack (July 14, 2016).

In accordance with US-led coalition escalations of troops, the Decline period for ISIS was riddled with defeats. In 2017 alone, ISIS would lose around 95% of its territory including key cities like Aleppo (June 30, 2017), Mosul (July 9, 2017), and Raqqa (October 20, 2017; Wilson Center, 2019). By December 19, 2018, President Donald Trump would formally declare victory over ISIS. A little bit less than a year later, al-Baghdadi would be killed during a US raid on March 26, 2019.

QAnon

To time frames for QAnon, their **Growth** period spanned from 2016-2019, the **Height** period occurred during 2020, and the **Decline** period would start in 2021 and continue presently. These time frames are also proposed due to the historical events that had occurred during these years. The first Q Drop appear on October 28, 2017, which incorrectly/fasely claimed that Hillary Clinton and others would be arrested. Based on the pizzagate conspiracy, QAnon would continue posting Drops and this would lead to attacks by Edgar Maddison Welch (December 14,

2016; technically before the first Drop, but following the pizzagate conspiracy), Matthew Philip Wright (June 15, 2018), and Anthony Comello (March 13, 2019).

The Height of QAnon coincided with the outbreak of the COVID-19 pandemic. Shutdowns due to the virus in the US began around March 15, 2020. COVID measures would lead to attempted attacks by Eduardo Moreno (March 31, 2020) and Jessica Prim (April 29, 2020). Also in this period was the 2020 US Presidential Election.

With Trump's election loss came the beginning of the Decline period. Early into 2021, and not too far removed from Election Day nor Biden's Inauguration, QAnon's most infamous event occurred: The January 6th Capitol storming. Abroad, a different attempted QAnon coup d'état would occur in Germany on December 7, 2022. While all of this is happening, governments around the world were urging citizens to receive the COVID-19 vaccine, whereas QAnon would be associated with the anti-vaccine crowd.

To obtain a required sample size for the ISIS and "QAnon Drops datasets, chi-squared test for independence apriori tests were run. With two degrees of freedom and a small-to-moderate effect size ($w=.30$), estimating the sample size required for power of .80, 108 posts would be required, well below the existing number of posts within each of the ISIS ($n= 714$ posts) and QAnon Drops ($n= 4,721$ posts) datasets (Table 1).

Materials

To establish which conspiracy theories to focus on when analyzing the data, a list of common conspiracies were compiled based on Rousis et al.'s (2020) study (mainly for Islamic extremism), as well as some of the more notable conspiracy theories from QAnon. These conspiracy theories are listed as keywords (e.g., caliphate), phrases (e.g., holy war), or titles

Time Frame by Organization	<i>n</i> (%)
ISIS	
Growth	94 (13.2%)
Height	427 (59.8%)
Decline	193 (27.0%)
QAnon	
Growth	3,773 (79.9%)
Height	948 (20.1%)
Decline	0 (0.0%)

Table 1. Frequencies of Posts per Time Frame for ISIS and QAnon

(e.g., pizzagate; Aliapoulios et al., 2021). A complete compendium of terms and phrases are included within the appendix section of this article (Appendix B).

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Latent Dirichlet Allocation

To investigate the use of conspiracy-related and non-conspiracy-related topics across time, Latent dirichlet allocation (LDA) served as the primary topic identification analysis. LDA

is a generative probabilistic, hierarchical Bayesian model for collections of large sets of text with different levels of topics and patterns throughout the collection of texts (Blei et al., 2003). In simpler terms, LDA identifies patterns and dimensions that co-occur within the same document to see possible trends (i.e., what words tend to occur together in the same document?).

The LDA analysis proceeded in several phases. First, the documents and text data were prepared for analysis. The documents were organized with associated meta-data, including author, timing, number of paragraphs, and number of words. Once the documents were organized, the data was imported into RStudio (2020) for additional data preparation. Any prepositions and filler words were removed to prevent interference in the document modeling process. Then, a bag-of-words (Harris, 1954; Zhang et al., 2010) technique identified the most frequently occurring words in the sample. A find-replace technique addressed any misspellings or alternate forms of words (e.g., organise vs. organize; labour vs. labor). Frequently occurring two- or three-word phrases were recoded into n-grams to support the analysis (e.g., road trip = road_trip).

The second step in the analysis process was to model the topics through LDA. LDA is an iterative analysis that recreates latent documents with topics and compares documents created by the model with the actual documents. The goal of the analysis is to have the least amount of variance between modeled documents (with topics) and actual documents (with topics). This parity is achieved when the words identified within a topic typically occur with documents that have the same topic and do not occur often outside documents of the same topic.

Figure 2 shows a model to explain latent dirichlet allocation. Three parameters must be set, alpha (α), beta (β), and K. Alpha (α) is your documents to topics ratio; how many topics can occur within a single document. Beta (β) is your words to topics ratio; how many words can fit

within a single topic. K is the total number of topics for a corpus of documents. From alpha, we get theta (θ) which is a multinomial distribution to grab topics. From beta, we get phi (ϕ) which is a number of multinomial distributions for picking words. From theta, we get zed (z) or the list of topics. Combining zed and phi, we get a list of words (w), one per topic, and then concentrate these words to form a document (N_D). This process will be done as many times as necessary in order to match the number of documents in a corpus to create another corpus (D) and compare the old with the new. K sets the limit to the number of topics that can be consolidated within a corpus of documents.

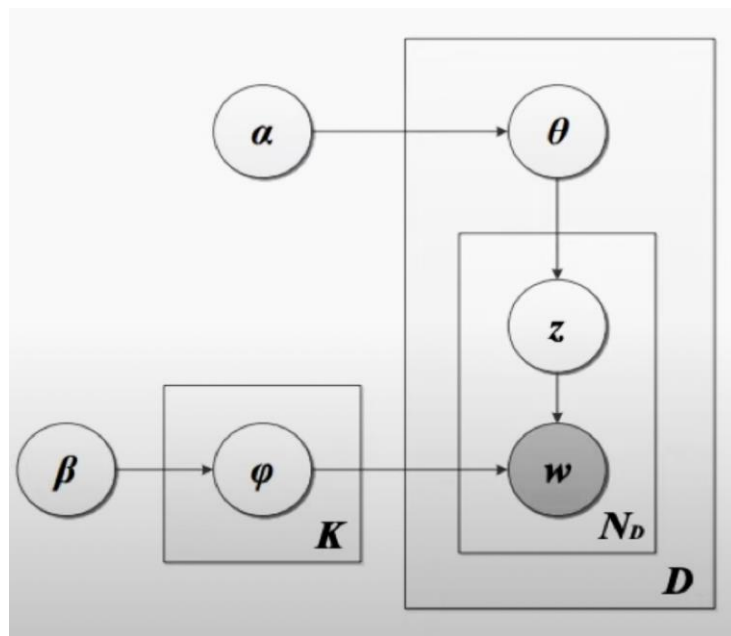


Figure 2. Latent Dirichlet Allocation Model (Serrano.Academy, 2020)

To select the optimum number of topics, researchers completed an LDA model for each extremist group (i.e., ISIS and QAnon) for a different number of topics. For each LDA model, the model returns a divergence measure that helps to identify the coherence among words within topics and the extent to which these topics are exclusive to documents identified as having the same topic. The divergence measure is a multivariate measure of entropy and will be lower when an optimal number of topics is established (Arun et al., 2010). The divergence measure is

influenced by the number of documents and the number of words per document, therefore, relative divergence values for different number of documents modeled (K), as well as the most frequently occurring words within a selected topic and the frequency of topics across documents all served as decision support criteria for determining the optimum number of topics. Figure 3 contains the divergence scores for ISIS posts as well as QAnon drops. One can notice that after an initial increase in divergence, the values decrease until additional number of topics does not result in appreciable changes in the divergence score. The optimum number of topics for ISIS ranged between 35-40 and 45-50 for ISIS posts and QAnon drops, respectively. After inspection of the number of documents per topic and the most frequently occurring words in each topic, the final number of topics selected was 40 for ISIS and 50 for QAnon, respectively.

Once the optimal number of topics are selected, the LDA model provides a list of the most frequent words associated within each topic. Topics could not be identified for some documents ($n = 1$ and 417, for ISIS posts and QAnon drops, representing .1% and 9%, respectively) The smaller number of words per post in QAnon drops likely resulted in the inability for the model to identify a topic for those posts.

The third stage of the analysis process was to identify the meaning of the word lists within topics and confirm these topics with example text from the documents. The researchers reviewed the word lists and identified labels for the different topics. These labels constitute the core topics represented in the corpus of documents analyzed. The researchers also noted whether the words associated with a particular topic contain common elements of conspiracy theory use. Some topics likely contain references to conspiracy theories whereas other topics may not. In determining whether a topic was conspiratorial or not, the raters simply used the criteria

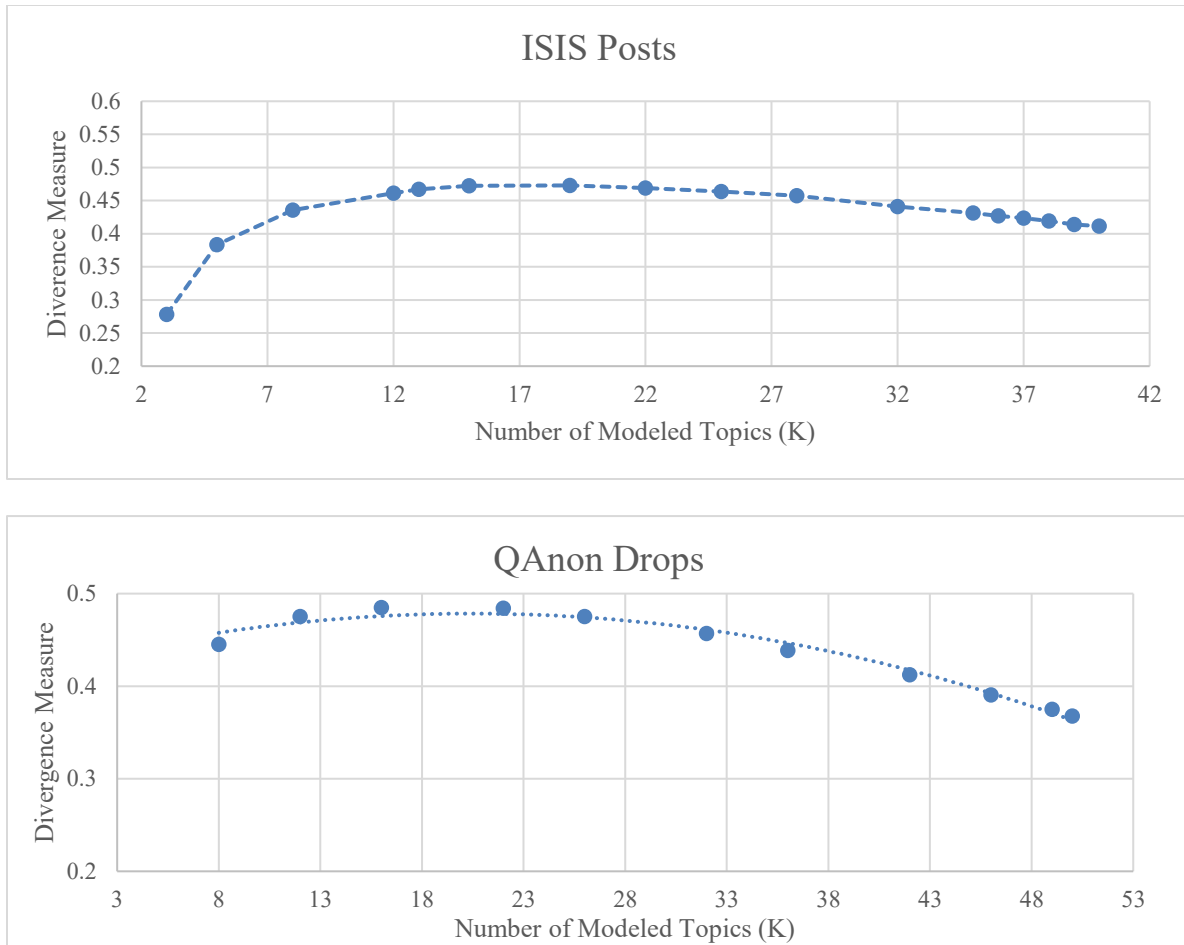


Figure 3. Divergence scores across number of modeled topics (K) for ISIS posts and QAnon drops. For each analysis, alpha = .50 & beta = .10.

provided by Rousis et al. (2020). The criteria asked the judges to answer if a post involves malevolent actors that are working behind the scenes to promote their own agenda. Examples of topic labels and excerpts are included in Appendix A, with examples of labels that have conspiratorial elements and labels that did not have conspiratorial elements for both extremist organizations.

The fourth stage of the analysis was to identify which documents contain which topics. The LDA model provides a probability that each document is a member of each topic. The topic that had the highest probability in the LDA model was assigned to the document. Given that some topics will be associated with conspiracy theories, the researchers identified the number and proportion of documents that contain topics associated with conspiracy theories and those not related to conspiracy theories (e.g., strategic updates, general statements of encouragement to members).

The fifth stage of the analysis was to associate meta-data related to the document, such as author, date, and historical context, with the presence or absence of specific topics, including those associated with conspiracy theories. The hypothesis was that conspiracy theory use will be more common when extremist organizations have the highest levels of threat associated with the group (i.e., during the Growth and Decline periods, when threats to the status and significance of the group are at their highest levels).

Results

After cleaning the texts, using RStudio (Posit), a word frequency table was gathered, and a document-feature matrix was created in order to begin topic modeling. Between ranges of K values within a set of lower divergence scores, the researchers used the number of posts per topic and the coherence of the most frequent words with each topic as the determining factor for the optimum number of topics to use. Forty topics for the ISIS' posts and fifty topics for the QAnon Drops were established to be sufficient for analyses. From the 40 topics from ISIS, 31 fall under conspiracy theories, and from the 50 topics from QAnon, 29 fall under conspiracy theories (Table 2). Interrater agreement was 80%, with a phi-coefficient associated with the correspondence between judgments of conspiracy topics or not achieving $\phi = .43$ ($p=.006$).

Cronbach's alpha (α) was used to compute inter rater reliability. An agreement rating greater than or above $\alpha=.70$ is generally considered to be acceptable (UCLA, n.d.). Given the level of agreement among raters, the Cronbach's alpha for three raters was estimated as $\alpha=.70$.

Conspiracy Theory Use Over Time

Chi-square analysis indicated that ISIS' Growth and Height timeframes were similar in the percent of conspiracy theory presence (69.15% and 69.48%, respectively) and the Decline timeframe showed a higher presence of conspiracy theory usage (73.06%; Figure 3). However, contrary to the hypothesis, there was no significant pattern between conspiracy theory use and the organizational Growth, Height, and decline timeframes of ISIS, $\chi^2(2, N=713) = 0.90, p = .32$ (Appendix C).

Unfortunately, for our QAnon Drops data, there was such a large discrepancy in posts among the three time frames that the researchers could not conduct a strict test of the main hypothesis for QAnon. Most of the drop text data was posted within the predetermined growth time frame ($n=3,773$), whereas the height ($n=948$) and decline ($n=0$) time frames showed much fewer posts. The growth period showed 48.26% of posts and the height period showed 42.51% of posts having conspiracy theories (Figure 4). A chi-square analysis was run to examine the pattern between conspiracy theory use and just the growth and height time frames for our QAnon drops. These results did yield a significant pattern, $\chi^2(1, N=4,304)=10.95, p<.001$ (Appendix D). While this pattern of results does fit the primary hypothesis, it does not provide complete support for the hypothesis. Because data from the Decline timeframe does not exist, the results may suggest that there is just a decrease in the amount of conspiracy theories over time in general instead of an increase during the declining phase. Figure 5, however, shows that conspiracy theory use among QAnon drops was high during 2017 and 2018, experienced a slight decline in 2019, and a

more substantive drop in 2020. This pattern fits the primary hypothesis that conspiracy theory posts would be high in the initial phases of the formation of the organization when the need for significance was high.

With these primary results, we cannot make strong conclusions pertaining to whether the model will hold consistent across ideological organizations. The significant drop in conspiracy theory usage among online posts during the Height period for QAnon was not matched with a corresponding drop in conspiracy theory usage during the Height period for ISIS.

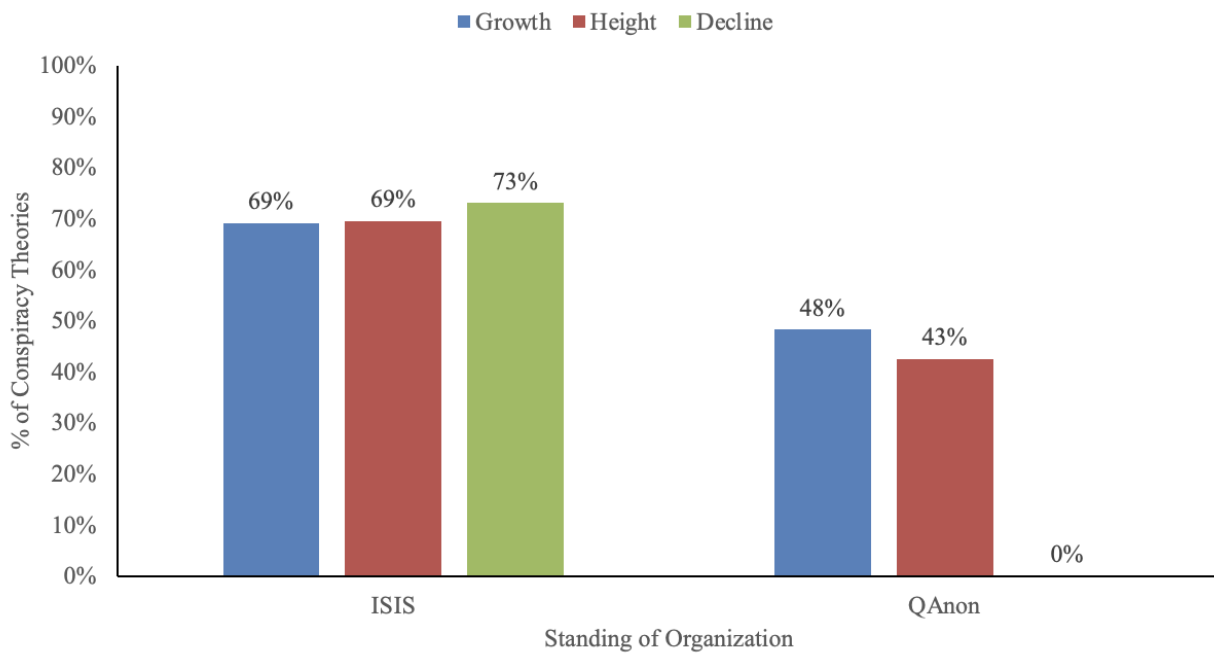


Figure 4. Percent of Identified Conspiracy Theories by Extremist Organization (The QAnon Drops data did not include any posts within the declining time frame)

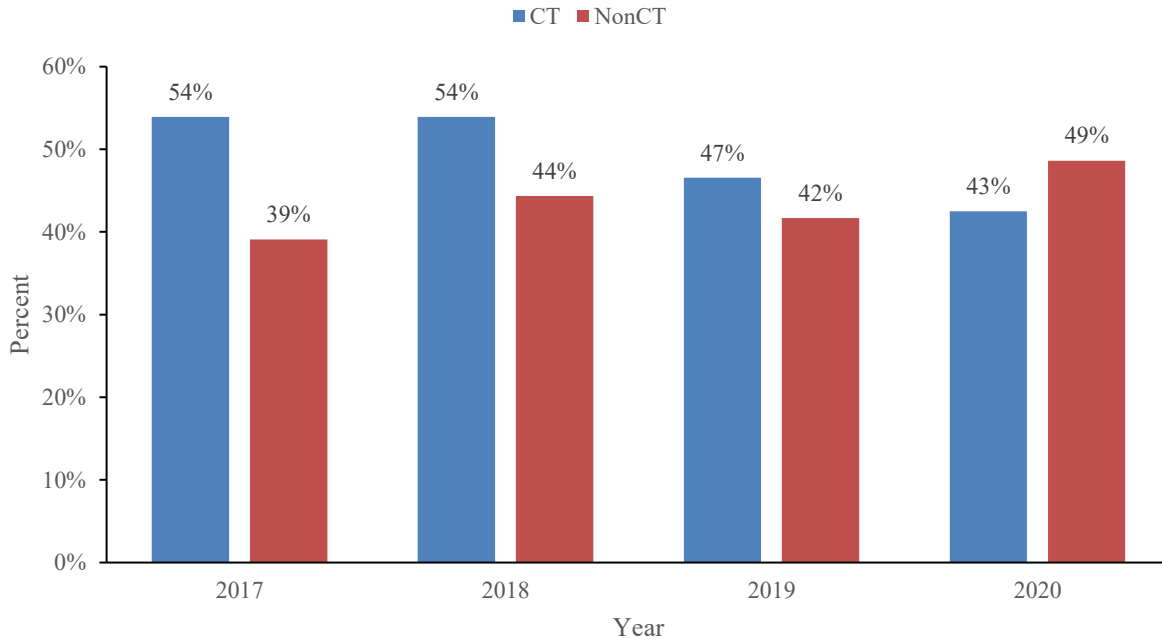


Figure 5. Percent of Conspiracy Theory and Non-Conspiracy Theory Posts by QAnon over Years

Supplementary Analysis

Supplemental analyses tested whether preference for certain conspiracy theory themes would change over time for ISIS and Qanon posts. In addition to whether topics being either related or not related to conspiracy theories, posts were grouped into major topic themes. These themes were based on previous research by Rousis et al.'s (2020) as well as observing the pattern of most frequently occurring words per topic and topic coherence.

When looking at the percentages of ISIS post topics by year (Figure 6), the topic “Apostasy”, addressing those within the faith who were committing acts against religious law, had its largest presence within 2014 (33%), but saw a sharp decline into 2015 (10%), and then began to gradually increase through 2016 and 2017 (26% and 31%, respectively).

“Establishment of a caliphate will bring about the end times” (shortened in Figure 5 to “Establish caliphate/End times”) also appeared about 28% of the time in 2014. This topic category in 2015

showed the lowest percentage among any term (9%), but then increased to 21% in 2016 and 43% in 2017 (the highest presence of any term for any year). Along with “Apostasy”, “Establishment of the caliphate/End times” there topics that had the highest usage during the Decline phase of the ISIS organization. “Crusades” started in 2014 at 28% and saw its height in 2015 at 33%. This would, however, decline into 2016 and 2017 (23% and 16%, respectively). “War on Islam” had its lowest appearance in 2014 at 18%. This topic increased through 2015 and 2016 (27% and 38%, respectively) but began to decrease through 2017 (18%). A chi-square analysis was run to examine the pattern between conspiracy theory theme and the time frames for our ISIS posts. These results yielded significant pattern, $\chi^2(6, N=517)=41.22, p<.001$ (Appendix E), indicating a preference for some topics compared to others over time.

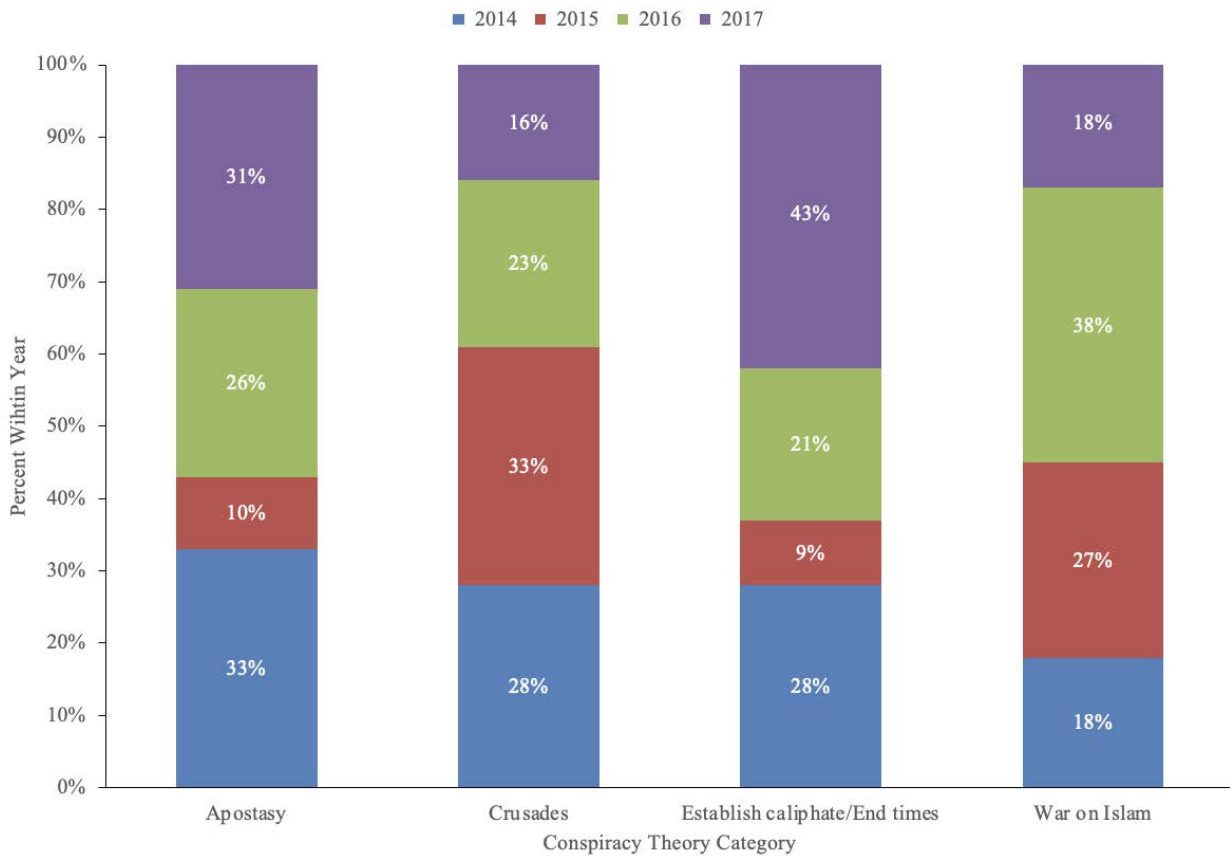


Figure 6. Percent of ISIS Topic Use by Year (Year 2014 is considered to be within the Growth timeframe, years 2015 & 2016 is within the Height timeframe, and 2017 is within the Decline timeframe)

When looking at the percent of QAnon post topics by year (Figure 7), the year 2017 generally did not see many posts that fell within the conspiratorial topics, with the most frequently appearing topic being related to the “Fake News”. The proportional number of conspiratorial posts greatly increased in 2018, where “Arrests”, “DC Maneuvers”, “Election”, and “HRC” (Hillary Rodham Clinton) were the topics that appeared most with a conspiracy theory element. The “Presidential Power” theme had its low point in 2017, but in 2020, this topic appeared at its highest percent. Observing Figure 7, one observes that QAnon posted the broadest range of conspiracy theory topics in the year 2018. A chi-square analysis examined the pattern between conspiracy theory topic and the growth and height time frames for our QAnon drops. These results also yielded a significant pattern, $\chi^2(14, N=4,656)=161.75, p<.001$ (Appendix F), indicating that some topics compared to others differed in their use over time.

Discussion

The goal of the current study was to examine how extremist organizations use conspiracy theories in their online messages and how these organizations adapt the type of conspiracy theories in their messages to the status of their success/failure. I hypothesized that conspiracy theory usage will be dependent upon the organizations’ standing. If the organization is either in its initial development or in its decline, the organization would use more conspiracy theories compared to when the organization is at its apex of success. I also expected that this pattern would hold consistent across organizations with different ideological frameworks. Based on the

Significance-quest Model for Radicalization (Kruglanski et al., 2014) and the Cognitive-Emotive Model of Radicalization (Howard et al., 2019), it was proposed that if an organization is successful, they will glorify their victories (i.e., conspiracy theories will not be as necessary), whereas an organization that is growing or declining in its influence will utilize conspiracy theories of loss, oppression, and/or struggle to elicit an empathetic response from their audience.

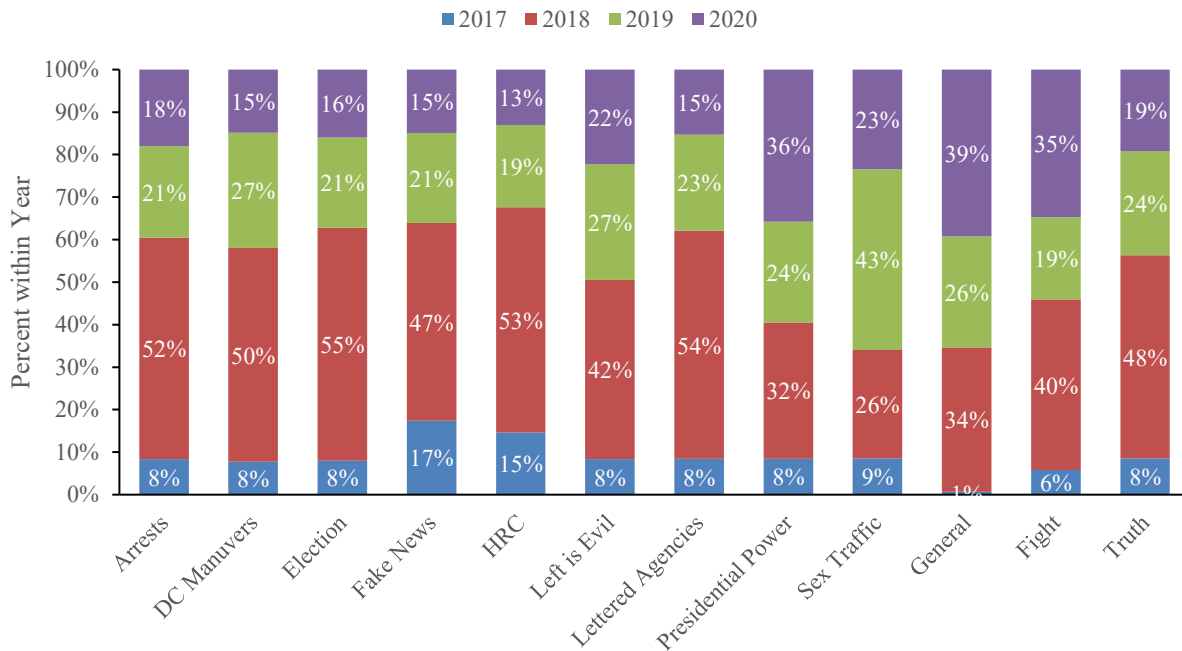


Figure 7. Percent of QAnon Topic Use by Year (Years 2017, 2018, and 2019 are considered to be within the Growth timeframe whereas 2020 is in the Height timeframe. Topics labeled as “General”, “Fight”, and “Truth” are Non-Conspiracy Theory related and the other topics are Conspiracy Theory related)

Contrary to the primary hypothesis, we did not find a significant pattern between conspiracy theory use and an organization’s standing among media posts in the ISIS publications of Dabiq and Rumiyah. For QAnon online messages, there was a significant decrease in conspiracy theory usage between the Growth periods and the subsequent Height period,

consistent with the hypothesis, but insufficient data prevented looking at the Decline period. These results are, on the surface, inconsistent with prior research pertaining to extremist organizations' quest to gain/restore significance (Kruglanski et al., 2009; Kruglanski et al., 2013; Howard et al., 2019; Rousis et al., 2020; van den Berg & van Hemert, 2021) and that extremist organizations will adapt to adapt their methodology to survive (Bloom, 2017).

Perhaps one explanation for the lack of results for ISIS posts was that the time periods may have been too broad to see distinct shifts in conspiracy use in response to specific challenging events. Conspiracy theories have been seen to emerge during times of crises in order to attempt understanding and establish control of the narrative (van Prooijen & Douglas, 2017). Therefore, events such as the start of Operation Inherent Resolve (US-led coalition against ISIS) and the 2016 US Presidential Elections (and the rising polarity that stems from politics) may have played a role in the sheer amount of posts that contain conspiracy theories, obscuring broader patterns.

The supplementary analysis for ISIS showed a significant pattern between conspiracy theory topic and timeframe when more refined topic categories were used. The conspiracy theory topics "Apostasy", "Crusades", and "War on Islam" showed an increase from the Growth period to the Height period, and then a decrease from the Height period to the Decline period. For the conspiracy theory topic "Establish Caliphate/End Times", there was an increase from the Growth period to the Height period, and the Height and Decline periods had a similar frequency count. The results suggest that ISIS preferred using these conspiracy theory topics more during their Height. This would not align with the original hypothesis that the organization will use more conspiracy theories in its initial development or in its decline compared to when the organization is at its apex of success.

The supplementary analysis for QAnon also showed a significant pattern. Between conspiracy theory topic and timeframe. From the Growth period to the Height period, all of the identified conspiracy theory topics showed a decrease in frequency count. This suggests that QAnon preferred to use their conspiracy theories during their Growth period. Perhaps this strategy was used as a means to grow in notoriety. This result is partially consistent with the original hypothesis as the Growth period contained more conspiracy theories than the Height period. This would also align with how an organization uses conspiracy theories in their quest for significance, as proposed by Kruglanski and colleagues (2014; 2022).

In addition, Rousis et al. (2020) found that radical violent extremist groups used conspiracy theories more than nonviolent extremist and moderate groups, and that right-wing and Islamic extremism did not differ in their usage. This could explain why ISIS and QAnon, both designated as violent organizations, both utilized high amounts of conspiracy theories over time. If the overall level of conspiracy theory use was high for both organizations across time periods, the analysis may not have been sensitive enough to detect changes across time. If this is the case, then the pattern of changes in conspiracy theory use might be detected more readily among extremist groups that express a more moderate message to followers, showing differences across growth, height, and decline periods of the organization.

In the current study, we observed differences between the extremist organizations in their conspiracy use over time. For ISIS, differences in overall conspiracy theory use across significant periods of growth, height, and decline were not observed. For the QAnon Drops, a complete test of the model was not possible due to disparities among the time frames predetermined for an organization's standing. However, further analysis on the proportion of post topics by year suggest that both ISIS and QAnon may have altered the themes of their

conspiracy theories each year. This could suggest that extremist organizations' conspiratorial messages may be influenced by changes in the organization or other changes not yet analyzed.

Limitations and Potential Future Research

This study is unique in that it examines changes in extremist organization conspiracy theory use over time. Prior research has not yet examined this dimension of change over time, but rather just established *if* extremist organizations use conspiracy theories in their online materials (Bartlett & Miller, 2010; Douglas et al., 2019; Rottweiler & Gill, 2020; Rousis et al., 2020; Aliapoulios et al., 2022). A major strength to this study was the consistent methods utilized for analysis for each group. This study employed an unseeded LDA method, meaning that there were no predetermined topics identified before establishing co-occurring words. This allowed the identification of topics to occur naturally through natural language processes of word usage (Gross & Murthy, 2014). Whereas the consistency of methodology across extremist groups was a strength, a "seeded" LDA might have benefited the analysis of the ISIS posts, as common themes are known within the text corpus. For example, research by Wignell et al. (2017) found a theme of ISIS Heros, individuals identified by name who are admired within the organization. These names may have only appeared one or twice, but the collection of names in a "seeded" group may have helped identify a "heroes" topic that would not have emerged from direct word frequency analysis. The same approach could be applied to QAnon drops, however, not without potentially injecting some bias into the analysis, focusing on interpretations of the use of words rather than the use of the words themselves. Utilizing a seeded LDA would have ensure certain groupings of words are compiled and not added into more general lists (Peters et al., 2022). A seeded LDA approach may facilitate analysis of topics over time, allowing established terms that

fit the same topic to be identified. QAnon posts, however, has been known for intertwined terms and theories, leaving a seeded approach to be potentially biasing toward specific conspiracy theories and not allowing natural patterns to emerge. Future research on seeded and unseeded LDA methods may prove fruitful in looking at changing topics over time.

One major limitation to this study is the major discrepancy between the number of posts among time frames for the QAnon drops, despite the large number of total posts. Although QAnon posts contained many extremist elements and although a large percentage of the posts contained conspiracy theories, there were not many posts from the Decline phase of QAnon, leaving analyses based on time impossible. Future research should reevaluate timeframes to disambiguate when groups might experience threats to their identity and therefore more likely to use conspiracy theories within a shorter timeframe.

The current study also focused on extremist groups with many followers. Conspiracy theories have been found among smaller groups as well as in the manifestos from so-called “Lone Wolf” terrorists (Berntzen & Sandberg, 2014). Lone wolf manifestos represent a culmination of extremist ideology that has reached its zenith. Many lone-wolf actors, however, show a pattern of social media posts online addressing the elements of their ideology (Chatfield et al., 2015; Holt et al., 2022). For such terrorist actors, the goal is to craft a self-focused narrative that justifies extremist and violent actions. In such a case, one might observe a growing pattern of conspiracy theory use over time in social media posts of these lone-wolf actors, not a decrease, until the manifesto is released. Other echo chamber websites that reflect the main messages projected by QAnon at a given time might also show a different pattern of conspiracy theory use over time, as posts with extreme ideas may gain additional attention from followers (Frischlich, 2021).

Another limitation is that the sources of online literature did not filter between explicit recruitment messages versus radicalization messages. Radicalization is the adoption of beliefs that justify terrorist acts, whereas recruitment is actually enlisting to commit such acts (Lösel et al., 2020). Radicalization will likely lead to recruitment, as per the Cognitive-Emotive Model of Radicalization (Howard et al., 2019). This model also proposes that there are two pathways to radical actions: an emotional pathway (i.e., reactive anger to injustice calling for action) and the efficacy pathway (i.e., individuals are rational and oriented toward solutions, and therefore, toward group identification). A radicalized individual can become recruited via intensification of beliefs through consuming more extremist propaganda. The rise of the internet allows for extremist organizations to reach wider audiences (Neumann, 2012) without having to rely on a third party (e.g., news reporters) to convey their message (i.e., extremist organizations can control their narrative; Stevens, 2009). The purpose or tone of the posts may differ and that may alter the results we found. An example seen in this study involves the topics established for ISIS. Some of the topics that did not consist of conspiracy theories portrayed actual historical narratives based on battles won in Syria (e.g., “Liberating Iraq and Syria”), whereas some topics that did consist of conspiracy theories had calls to arms (e.g., “Justification and call for jihad and istishhad”). Future studies should examine online extremist literature that aims to radicalize individuals, as well as online literature that aims to recruit individuals and see if/how these may differ in their utilization of conspiracy theories.

A third limitation is that this study only looked at two extremist organizations: ISIS and QAnon. Future studies should aim to replicate this study by also examining how other organizations (e.g. Al-Qaeda, Hezbollah, Hamas, Aryan Nations, nIRA, National Socialist Movement, etc.). These organizations may use conspiracy theories in their online literature with

less frequency, and their use of conspiracy theories may change over time given general patterns in organizational development or in response to specific organizational challenges. One example of this can be seen with the extremist group Al-Qaeda. Osama bin Laden and Al-Qaeda issued fatwas against the United States due to their military presence in Saudi Arabia (i.e., occupation; loss of significance). Similarly, less extreme organizations should be considered for analysis. It cannot be ruled out that the extremity of ISIS and QAnon may have muted any effects, whereas a less extreme organization may show more variation in their conspiracy theory posts.

The next limitation pertains to the sources for posts. For the ISIS data, this study used an English-translated version of the *Dabiq* and *Rumiyah* publications (i.e., ISIS translated their articles from Arabic to English). It is possible that the nuances that could be understood from Arabic may differ from that of English nuances. Unfortunately, the author was not well-versed in Arabic and therefore, the English version was used. In order to avoid any translational issues that may have arose, future research should consider using the Arabic versions of these publications along with a translator whom would understand both the translation while also being able to convey the nuances and/or any possible colloquialisms. Similarly, there is some concern for the source of the QAnon Drops. In this study, the goal for the samples used was to only analyze data that was considered to be directly from the extremist organization (i.e., no third-party social media users). The Q Drops are assumed to be from one source (“Q”), but there is no way of being certain that multiple actors did not portray themselves as “Q”. Having multiple random authors for posts may alter the results that were found. While knowing the author of the posts is not plausible at this time, future may want to consider analyzing the QAnon Drops for discrepancies in style, content, etc. to possibly demonstrate if there are multiple authors.

Finally, the last limitation is the arbitrary usage of growth, height, and decline for each organization. While there are general timeframes as to where each of the organizations' statuses would be, it is difficult to define a perfect timestamp for these, especially height and decline (Growth is a bit easier as it may be at the establishment of the organization or their first post). Future research could strengthen arguments for these time frames by looking at important events in the development of the organization and then associate these events with the timing of conspiracy theory posts. This could aid in linking historical events to certain posts/publications to provide a grander understanding of the messages disseminated.

Summary and Conclusions

The results of the current study provide only qualified support for the hypothesis that extremist organizations will use conspiracy theories differently over time. Understanding how extremist organizations utilize conspiracy theories in their online messages can provide a broader understanding to how extremist organizations radicalize/recruit individuals towards their cause (Bartlett & Miller, 2010; Crawford & Keen, 2020; Basit, 2021). It also provides local, state, federal, and international law enforcement agencies an idea of the methods used by extremist organizations in order to develop counterterrorism interdiction methods, such as government strategic communications, counter-narratives, and alternative narratives (Beutel et al., 2016), against radical online tactics, techniques, and procedures (TTP). In the past, discovering and understanding how extremist groups use the internet to spread their messages has led to actions like banning QAnon official accounts from major social media platforms (e.g., Facebook/Meta) and anonymous online boards (e.g., 4chan) and adding "fact-checkers" to verify the authenticity of certain posts. New counter-terrorism techniques attempt to use artificial intelligence as a tool for identifying red flags, detecting misinformation/disinformation, automizing the takedown of

flagged activity, etc. (UNOCT & UNICRI, 2021). However, more needs to be done in combatting online extremism, while also accounting for citizens' civil liberties.

Although the current study was unable to establish a clear pattern of how extremist organizations utilize conspiracy theories across time, it is clear that conspiracy theories are persistently used by extremist groups in their online materials. Misinformation/disinformation is on the rise and can lead people towards social, mental, political, and/or economic distress (Borges do Nascimento et al., 2022). Lewandowsky and van der Linden (2021) suggest the use of inoculation, or a preemptive warning of threat and/or prebunking misinformation, could be a useful method in counteracting conspiracy theories, namely those related to vaccine misinformation and political extremism. It is important for future studies to continue to expand upon this research and understand the techniques of extremist organizations and their usage of conspiracy theories to recruit and to radicalize individuals toward extreme action. These studies should address the role these conspiracy theories play in the ideology of significance for these groups, their members, and their supporters.

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Appendix A*Examples of Topics Considered Conspiracy Theories*

Organization	Topic	Conspiracy Theory?	Excerpt
ISIS	Final battle at Dabiq	Yes	<p>All praise is due to allah the lord of the worlds. may blessings and peace be upon his messenger, muhammad, and upon his family and companions. As to what follows: history repeats itself by allah's divine decree. this is the sunnah (established way) of allah in his creation. {this is the sunnah of allah with those who passed on before; and you will not find in the way of allah any change} [al-ahzab: 62]. {this is the sunnah of allah which has occurred before. and never will you find in the way of allah any change.} [al-fath: 23]. there is no escape from this divine decree. it must happen and it certainly will. since the collapse of the mushrikin in arabia, persia, and india at the hands of the sahabah and the tabi, the bulk of all jihad was against the cross-worshipping romans with sham playing an important role in all the wars between muslims and crusaders. and this will be the case until their taghut cross is broken by the masih (allayhi salam). as this final crusade carries on and prior to its short pause followed by crusader treachery (whenever that occurs), it is important to reflect over a number of matters. we ask allah to make us from the people of vision, not from a deaf, dumb, and blind people who do not understand. reflections on the final crusade feature abu hurayrah reported that allah's messenger (sallallahu alayhi wa sallam) said, "the hour will not be established until the romans land at al-a'amaq or dabiq (two places near each other in the northern countryside of halab). then an army from madinah of the best people on the earth at that time will leave for them when they line up in ranks the romans will say, "leave us and those who were enslaved from amongst us so</p>

			we can fight them,” the muslims will say, “nay, by allah we will not abandon our brothers to you,” so they will fight them then one third of them will
ISIS	Liberating Iraq and Syria	No	yet being the incompetent proxies that they are, the PKK – shortly afterwards – found themselves flanked by ___Region___ state soldiers who infiltrated their territory and entered ‘ayn al- islam once more, with further gains being made by the mujahidin thereafter in the southern and western countryside. This is in addition to the khilafah’s offensive in wilayat al-barakah where the mujahidin advanced on the city of al-barakah their hatred of islam and the shari’ah. Rather, it focuses exclusively on a nationalist issue, denouncing their oppression of ___Region arabs and turkmen, and declaring that they do not approve of dividing “the ___Region nation.” Fsa secularists join hands with the atheist PKK to fight the ___Region ___state crusader airstrikes on ‘ayn al-islam turned the city into rubble from two points, crushing nusayri forces and closing in on PKK territory in the city. ...PKK forces had already committed “military suicide” by stretching themselves thin over vast extents of territory and attempting to cover so many frontlines while relying solely on crusader airstrikes. ...
QAnon	CIA Surveillance	Yes	Would you believe a device was placed somewhere in the WH that could actually cause harm to anyone in the room and would in essence be undetected? Fantasy right? When Trump was elected you can’t possibly imagine the steps taken prior to losing power to ensure future safety & control. When was it reported Trump Jr dropped his SS detail? Why would he take that huge risk given what we know? I can hint and point but cannot give too many highly classified data points. These keywords and questions are framed to reduce sniffer programs that continually absorb and analyze data then pushed to z terminals for eval. Think xkeysc on steroids.

QAnon	WWG1WGA (“Where we go one, we go all”)	No	1) You are learning. You needed a push. Godspeed. Q 2) We were inspired by anons here to make our efforts more public. Find the exchange 2 days ago. Feel proud! Q
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Appendix B*List of Conspiracy Theories*

Ideology	Conspiracy Theory	Topics Used
Islamic	Crusades	Jihad against the West, West is weak, Attack kufr, shirk, and crusaders, Values to beat crusaders, Jewish, ISIS a growing threat to West, Allah's support against West/Kufr, lies/humiliation from West, obligation to hijrah, attacks/revenge against West, enemies
Islamic	War on Islam	Enemies of ISIS in Syria, Syria, Allah's support against West/Kufr, jihad/istishhad, Allah will provide and protect, justification for jihad/istishhad, lies/humiliation from West, Allah will bless caliph/caliphate, attacks/revenge against West, enemies
Islamic	Apostasy	Kufr and Shirk, Camp of Imam vs. Camp of Kufr, Fight apostasy in the Philippines, Attack kufr, shirk, and crusaders, Warning/obligations to hold true to values, Rules for dealing with kufr, Allah's support against West/Kufr, obligation to hijrah, non-believers/kufr, da'wah/shahadah, enemies
Islamic	Establishment of a caliphate will bring about the end times	Hope for the caliphate, Global caliphate against shirk, establish wilayat globally, successfully expanding globally, Final battle at Dabiq, Islam/jihad in Asia, caliphate, global/legitimate caliphate
QAnon	HRC (Hillary Rodham Clinton)	HRC Collusion Emails, Huber Investigation of HRC, Iran Missile Deal, HRC Hussein Private Meeting

QAnon	DC Maneuvers	Mueller Investigation Declassified Documents, Soros and Obama, Rosenstein Resignation Panic, Release of Classified Documents, Think Logically about Resignations
QAnon	Election	South Carolina Election Fraud, Believe in the Real DT Election
QAnon	Fake News	Beware False Information, Fake News Global Media, Control the narrative, Big Tech Big Mission, Media Control of the people, White Rabbit
QAnon	Lettered Agencies	FBI Director fired, CIA Surveillance, Snowden and NSA
QAnon	Presidential Power	Biden pushing COVID-19, Presidential control over Fake News, Shadow Obama, Central Bank and Africa
QAnon	Sex Traffic	Sex traffic

Appendix C*Association between Conspiracy Theory Use and ISIS' Standing*

Post Included	Time Frame (Standing)			
	Growth	Height	Decline	
Conspiracy Theory	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	
Yes	65 (69.2%)	296 (69.5%)	141 (73.1%)	$\chi^2(2)=0.896, p=.32$
No	29 (30.9%)	130 (30.5%)	52 (26.9%)	<i>N</i> = 713

Appendix D*Association between Conspiracy Theory Use and QAnon's Standing (Growth & Height)*

Post Included	Time Frame (Standing)		
	Growth	Height	
Conspiracy Theory	<i>n</i> (%)	<i>n</i> (%)	
Yes	1,821 (52.9%)	403 (46.6%)	$\chi^2(1)=10.95, p<.001$
No	1,619 (47.0%)	461 (53.4%)	<i>N</i> =4,304

Appendix E*Association between Conspiracy Theory Topic and ISIS' Standing*

Conspiracy Topic	Time Frame (Standing)			
	Growth	Height	Decline	
	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	
Apostasy	20 (14.5%)	75 (54.3%)	43 (31.2%)	
Crusades	22 (14.1%)	109 (69.9%)	25 (16.0%)	
Establish Caliphate/End Times	20 (15.7%)	53 (41.7%)	54 (42.5%)	$\chi^2(6)=41.22, p<.001$
War on Islam	6 (6.3%)	73 (76.0%)	17 (17.7%)	<i>N</i> =517

Appendix F*Association between Conspiracy Theory Topic and QAnon's Standing*

Conspiracy Topic	Time Frame (Standing)		
	Growth	Height	
	<i>n</i> (%)	<i>n</i> (%)	
Arrests	332 (82.0%)	73 (18.0%)	
DC Maneuvers	418 (85.1%)	73 (14.9%)	
Election	158 (84.0%)	30 (16.0%)	
Fake News	611 (85.1%)	107 (14.9%)	
HRC	274 (87.0%)	41 (13.0%)	
Left is Evil	140 (77.8%)	40 (22.2%)	
Lettered Agencies	161 (84.7%)	29 (15.3%)	
Presidential Power	190 (64.2%)	106 (35.8%)	
Sex Traffic	36 (76.6%)	11 (23.4%)	
General*	93 (60.8%)	60 (39.2%)	
Fight*	192 (65.3%)	102 (34.7%)	$\chi^2(14)=161.75, p<.001$
Truth*	733 (80.8%)	174 (19.2%)	<i>N</i> =4,656

*While listed in this contingency table, these terms were considered to non-conspiracy theory related