

THE PENNSYLVANIA STATE UNIVERSITY  
SCHREYER HONORS COLLEGE

COLLEGE OF INFORMATION SCIENCES AND TECHNOLOGY

Intelligence Goldmine or Overwhelming Hinderance? Social Media's Impact on U.S.  
Intelligence Community Analysis

SAMUEL B. PFOHL  
SPRING 2023

A thesis  
submitted in partial fulfillment  
of the requirements  
for a baccalaureate degree  
in Security and Risk Analysis  
with honors in Security and Risk Analysis

Reviewed and approved\* by the following:

William Parquette  
Professor of Practice  
Thesis Supervisor

Michael Hills, Ph.D.  
Teaching Professor  
Honors Adviser

\* Electronic approvals are on file.

## ABSTRACT

This thesis intends to explore the relationship between social media and the United States' Intelligence Community and its dealings with domestic extremism. To achieve this goal, this paper will provide in-depth analysis of case studies where social media had a significant impact on the lead-up, actual event, or subsequent actions of major domestic extremism attacks. Specifically, this research's scope will look at the Boston Marathon Bombing, the January 6<sup>th</sup> Insurrection, and the Robb Elementary School Shooting as its major case studies. Through these comparative examples of domestic extremism, this thesis will look to address the ultimate research question of "what role does information gleaned from social media play in the timeliness and accuracy of formulating intelligence analysis relating to domestic extremism within the U.S. Intelligence Community?" To address the above question, the focus of these case studies will be on how effectively, or ineffectively, social media was used during these events to mitigate, solve, or otherwise change how officials reacted to each event. The ultimate goal of this research is to show how social media, an increasingly present aspect of today's world, impacts the United States' Intelligence Community, and whether social media should be regarded as a boon of knowledge or be regarded with trepidation due to information overload. Using the cases outlined above, this research ultimately came to the conclusion that information from social media does not have a noticeable impact on accuracy but can significantly impact timeliness, leading to social media being an invaluable source, if used efficiently, for the U.S. Intelligence Community.

## TABLE OF CONTENTS

LIST OF FIGURES .....	iii
ACKNOWLEDGEMENTS .....	iv
Chapter 1 Introduction .....	1
Research Question.....	4
Hypothesis and Key Questions .....	4
Research Design.....	5
Chapter 2 Literature Review .....	7
Chapter 3 Case One: The 2013 Boston Marathon Bombing .....	11
Summary of Timeline and Events.....	11
Analysis of Social Media Impact .....	12
Findings.....	15
Chapter 4 Case Two: The 2021 January 6 <sup>th</sup> United States Capitol Attack .....	17
Summary of Timeline and Events.....	17
Analysis of Social Media Impact .....	20
Findings.....	22
Chapter 5 Case Three: The 2022 Robb Elementary School Shooting.....	24
Summary of Timeline and Events.....	24
Analysis of Social Media Impact .....	27
Findings.....	29
Chapter 6 Summary .....	31
Chapter 7 Further Research .....	35
Appendix A Case Timelines .....	36
Appendix B Glossary of Terms .....	39
BIBLIOGRAPHY .....	40

**LIST OF FIGURES**

Figure 1 -- The Intelligence Cycle (FBI, 2016) .....	2
Figure 2 -- Boston Bomber Captured Tweet (Twitter, 2013) .....	15
Figure 3 -- President Trump's Tweet (Twitter, 2021) .....	18
Figure 4 -- Texas House Committee Report Map (Astudillo et al, 2022).....	26

## ACKNOWLEDGEMENTS

I would first like to thank Professor Parquette for putting up with me on a weekly basis and for generously answering my (sometimes confusing or obvious) questions whenever I asked them and Dr. Hills for supporting and guiding me throughout this thesis process. I would also like to thank the Schreyer Honors College staff who have always been very helpful with answering my questions and who have always been accessible with resources. Finally, I would like to thank my family for their constant support (and reminders to work on my thesis) and my fellow Schreyer students who have all been incredibly encouraging along this journey.

## **Chapter 1**

### **Introduction**

The United States Intelligence Community is an umbrella term which includes federal agencies, independent agencies, as well as branches of non-intelligence-centric federal divisions. This includes the major players such as the Central Intelligence Agency (CIA), the Federal Bureau of Investigation (FBI), and the National Security Agency (NSA) which are often the most public of the agencies (ODNI Home, n.d.). The U.S. Intelligence Community as a whole is responsible for security of the United States citizens; broadly this means that a stronger intelligence community means a safer U.S. from foreign influence, foreign and domestic terrorism, crime, war, and other various unsavory and potentially damaging acts.

The U.S. Intelligence Community accomplishes its goals through various practices, but for this research the focus will be on the Intelligence Community's practices of collection and analysis. However, those are not the only aspects of intelligence work. It is imperative to also talk about the intelligence cycle, an integral part in understanding how the U.S. Intelligence Community functions. According to the FBI, this cycle consists of "requirements, planning and direction, collection, processing and exploitation, analysis and production, and dissemination"

(FBI, 2016). As the name suggests, this process is cyclical with each step moving to the next and so on.



**Figure 1 -- The Intelligence Cycle (FBI, 2016)**

While all parts of the cycle are equally important, collection and analysis will be the focus of the case studies below. Collection is critical because it is what allows analysis to be conducted. Analysis is what brings information gathered from front-facing operations into a usable format which can then be disseminated to policy makers, intelligence leaders, or even the general public. “Intelligence analysis provides civil and military policy makers with information directly related to the issues they face and the decisions they have to make” (Lowenthal, 2022, p. 151). The Intelligence Community hires thousands of analysts to provide the best intelligence products possible. However, this process has become exponentially more complex and voluminous since the dawn of the Information Age in the second half of the 1900s. This age is defined as the time since computer technologies greatly expanded the amount, value, and availability of massive amounts of data, circa the late 20<sup>th</sup> century (Merriam-Webster, n.d.).

While presenting a major benefit because of the innumerable new methods for monitoring deviants, new ways to collect and store data, and new availabilities for information dissemination, the Information Age has also created a tidal wave for intelligence analysts as there is now virtually an unlimited amount of data available for analysis in order to deduce actionable intelligence. This conundrum is further compounded by the current rise of social media as it provides platforms for any person with an internet connection to spew personal data online. This is a potential goldmine for analysts as it can be used to understand intentions, find fringe communities, or follow suspects from a safe distance, but how can this be done effectively when the amount of content is so vast?

Today, the U.S. Intelligence Community implements OSINT, open-source intelligence, which gains insights from any publicly available sources, of which social media is included. However, social media, online applications intended for information sharing and social networking, only make up a fraction of sources used for OSINT. As such, this study will focus specifically on social media and its boons or pitfalls, rather than looking at OSINT as a whole as that would represent too many different pieces to accurately analyze for this research. To be useful for decision makers, analysis must be both timely and accurate, and the amount of social media data available today risks overwhelming U.S. Intelligence Community analysts. This dangerous situation makes research relating to the effective handling of social media and intelligence extremely timely and necessary for future security.



## **Research Question**

Based on the following literature review, as well as the timeliness of these topics, the researcher proposes the following research question: What role does information gleaned from social media play in the timeliness and accuracy of formulating intelligence analysis relating to domestic terror within the U.S. Intelligence Community?

## **Hypothesis and Key Questions**

The researcher hypothesizes that timeliness will not be noticeably affected by social media information as analysts within the Intelligence Community must still meet their required deadlines; however, accuracy will be greatly affected due to analysts facing a vastly increased quantity of data that must be sifted through in the same amount of time. The mountain of data introduced by social media in turn decreases analysts' efficiency, and by extension, their accuracy.

The key definitions of the research question, and by extent the hypothesis, relate to the terms "timeliness" and "accuracy." For this research, timeliness will be defined as how long it takes for decisions/actions to be taken by the Intelligence Community. In each case study, a timeline will be provided to show when social media data was used for analysis and how this impacted said case. This impact can take the form of social media being used to locate or identify criminals, social media being used to prevent or stop crimes, or social media being used after the fact, such as in a subsequent trial. Accuracy will also be defined in the framework of this research. Accuracy will primarily be based on whether the information obtained from social

media was true and usable. In each case study, the social media data used will be discussed. Following that, the researcher will explain said data's application and effectiveness in the case: whether it was invaluable, whether it led to a dead-end, or whether it was misleading (intentional or not). This will be measured for each case by looking at whether social media impacted, or could have impacted, the findings of the case. Based on these metrics, social media's impact on timeliness and accuracy will be able to be measured for the purposes of this thesis.

### **Research Design**

The most important part of the proposed research question is the “how” in relation to both timeliness and accuracy of U.S. Intelligence Community analysis. Therefore, this study will be constructed from qualitative research since quantitative measurements will not be as useful for answering the research question. Under the qualitative umbrella, this research project will use two primary methods. The main method will be a comparison of case studies with a focus on how social media impacted each case. To further aid the research, a review of literature will also be used. This method will include content analysis aimed at providing a measure of the link between the quality of Intelligence Community analysis and social media data.

Due to the U.S. intelligence Community's secretive nature, specific case studies were chosen since they are very public cases presenting a lot of accessible information and details. The 2013 Boston Marathon Bombing will be the first case studied because it occurred the earliest of the three cases being used for this research and it took place during the early years of popular social media platforms such as Facebook and Instagram. The second case study relates to the January 6, 2021, U.S. Capitol Attack and shows an Intelligence Community completely

engrossed in online data which provides a good counter to the previous case study. Finally, the Robb Elementary School Shooting from 2022 will provide the most recent case and one that incorporates many facets of how social media impacts law enforcement efforts. Furthermore, a literature review will add additional context to the research as minor cases and other anecdotes can be included to move the answers to the research questions beyond just three case studies and make them more applicable to today's wider analyst environment. This research will not use sampling methods since case studies and literature reviews have been purposefully selected with no randomization, thus removing the generalizability of this research.

In terms of ethical considerations, there is little to no worry in this research of crossing ethical barriers. All information used will be from reliable public sources. Also, any information used that was gathered from live sources will omit any personally identifiable information and will only be used as background information. Overall, the nature of this thesis will not identify anyone who does not wish to be identified and will also not use any level of classified information. Since no classified sources will be used, the topics being analyzed will not include any information that could compromise the U.S. Intelligence community. Overall, this research presents an extremely low level of risk for anyone involved as no sensitive information or personally identifiable information will be used.

## Chapter 2

### Literature Review

Current literature makes it clear that experts are acutely aware of social media information overload in the Intelligence Community; however, there is a severe lack of academic research on this specific topic. Instead, there is much writing focused on two related areas which this research hopes to bridge. Social media in particular has become a hotbed topic for research as it continues to integrate itself into all aspects of modern life. While a broad umbrella term, Merriam-Webster defines social media as “forms of electronic communication (such as websites for social networking and microblogging) through which users create online communities to share information, ideas, personal messages, and other content (such as videos).” Specifically relevant to this research, social media will focus on the major social media platforms currently popular in the United States. According to the Pew Research Center in 2021, from most to least popular, these sites are Youtube, Facebook, Instagram, Pinterest, LinkedIn, Snapchat, Twitter, WhatsApp, TikTok, Reddit, and Nextdoor (Auxier, B., & Anderson, M., 2022). This represents but a small glimpse into the world of social media though, as when searching the term “social media” on the Apple Store, hundreds of results come back. As such, the sheer amount of social media (or more broadly, open-source) data is well documented. Even though a relatively new subject (social media did not become widely popular until around 2005), a massive number of articles have been written on this topic.

Topics of social media have also started to bleed into the world of the intelligence community. An example can be framed within the context of the 2022 Russian assault on Ukraine; NBC News noted that “hacktivists” from around the world displeased with Russian aggression have datamined, hacked, and even fabricated data on the Russians, posting their

“findings” to various social media sites. Once verified and combed over by analysts, this information could prove useful, but “Open-source researchers who pore through reams of information from Russia said it could take years before such leaks could reveal important information,” removing the timeliness factor, and subsequently the value, of said data (Collier, 2022). Adding to this ever-growing amount of data on social media is the very problematic infestation of bots, another term for automated accounts or profiles not directly run by people, that “make up a significant portion of online profiles, and many of them flood social media with high volumes of low-quality information to manipulate the public discourse” (Qiu et al.). Just by using any site such as Twitter, Facebook, Reddit, or Tik Tok, a user can see the seemingly limitless amount of content and users that are accessible via just a few clicks. A tiny amount of this content could potentially be extremely important. For example, a 2014 study dedicated to analyzing Islamic terrorist networks notes that 90% of online terrorist activities occur on social media (Medina, 2014). However, the grain of important content can be almost impossible to detect in a timely manner due to the sheer size of social media data. The numbers are staggering. The Vietnam Journal of Computer Science estimated 3.02 billion monthly social media users by 2021 (Jain & Vaidya, 2021). Clearly, social media is a hub for activities which the U.S. Intelligence Community is extremely interested in, namely terrorism, but how do analysts find terrorist activities hidden amongst billions of users, with most users posting many times on various platforms, even further raising the amount of data which must be sifted through?

The other area of related literature involves information overload specifically within the U.S. Intelligence Community. Information overload is explicitly addressed in a study by Schick, Gordon, and Haka from the 1990s, during the very start of the Information Age. They state that the fear of uncertainty leads organizations to collect more information in hopes of better

understanding whatever they set out to understand. This leads to the issue of over collecting (also known as Information Overload), another large problem for organizations (Schick, Gordon, & Haka, 1990). Mark Lowenthal notes in his book *Intelligence: From Secrets to Policy* that “...increased collection also increases the task of finding the truly important intelligence. If you have more haystacks, you do not necessarily get more needles” (Lowenthal, 2022, pg. 73). This sentiment is mirrored in much of the literature regarding the current state of the U.S. Intelligence Community. The consensus is that analysts are currently facing down an absurd amount of data. “Perhaps most strikingly, the National Security Agency intercepts and stores 1.7 billion emails, phone calls, and other communications every day, a small portion of which are organized into 70 databases. Paradoxically, then, by trying to do more, U.S. intelligence agencies are accomplishing less” (Young, 2019). Also, in the book *Infoglut*, the author discusses how war and peace are no longer the independent terms they once were; this means surveillance and data collection practices are now more extended and all-encompassing to account for the ever-present threat of terrorism and crime (Andrejevic, 2013).

Lowenthal also points out in his book that when dealing with the different forms of intelligence that the U.S. Intelligence Community actively collects “Two possible [new] candidates are social media intelligence (SOCMINT) and data intelligence (data-int)” (Lowenthal, 2022, pg. 139). The other types of intelligence being referenced here are signals intelligence (SIGINT), imagery intelligence (IMINT), measurement and signature intelligence (MASINT), human intelligence (HUMINT), geospatial intelligence (GEOINT), and open-source intelligence (OSINT) (Office of the Director of National Intelligence, n.d.). While all of these “INTs” have much work dedicated to making these tools as effective as possible, the only one applicable to this research is OSINT. Even still, this term is too broad for the researcher’s

purposes, leading to this research hopefully providing new information for the not-yet-fully-realized SOCMINT that Lowenthal mentioned. This research finds its purpose in the definitional gaps left behind by the current INTs. While it is clear that the U.S. Intelligence Community is aware of social media and the resources it presents, these well-researched areas also explicitly show that social media contributes to information overload, a major hurdle which the U.S. Intelligence Community is currently trying to jump. Furthermore, past research shows that the U.S. Intelligence Community also does not currently have the resources, or efficiency, to fully take advantage of social media information. This research aims to bridge the two domains of the U.S. Intelligence Community and social media to better study how the latter can more effectively be used by the former.

## Chapter 3

### Case One: The 2013 Boston Marathon Bombing

The Boston Marathon Bombing on April 15, 2013, was, for many, the first glimpse into how the world of social media impacts intelligence practices on so many different levels. While the intelligence community had already been scouring social media as part of their OSINT programs, the Boston Marathon Bombing put the use of social media in collecting and analyzing intelligence at the forefront. As such, it represents an appropriate case to start with as it had many instances of social media playing a significant role with both positive and negative consequences. It is also worth mentioning that this is chronologically the first case studied for this research, meaning it acts as a baseplate for social media's impact on the intelligence community since social media's use was not as widespread then as it is today. This case study, and the other two following cases, will be broken up into three sections: first giving an overview of the event to set the frame, then focusing in on how social media played a role, and finally presenting a findings section to draw conclusions regarding how social media was used in respect to the overall research question.

#### Summary of Timeline and Events

See Appendix A for graphical timeline. On April 15<sup>th</sup>, 2013, the finish line of the 117<sup>th</sup> annual Boston Marathon was disrupted when one explosion from within the crowd occurred, followed seconds later by another explosion about a block down Boylston Street in Boston, Massachusetts. These explosions killed three people and injured almost 300 others. A day later, the FBI spoke to victim Jeff Bauman, Jr., who offered them a description of a man who dropped



his backpack near the explosion. Later, the FBI announced that the bombs were created using pressure cookers filled with nails, explosives, and various other types of shrapnel. On April 18<sup>th</sup>, the FBI publicly released images of the two suspects, one in a white hat and the other in a black hat, who would later be identified as Chechen Kyrgyzstani-American brothers Dzhokhar and Tamerlan Tsarnaev. Later that night MIT police officer Sean Collier was found shot in his patrol vehicle, reportedly shot by one of the brothers. The brothers then stole a car belonging to “Danny” (the pseudonym for an unnamed victim) and stopped at a gas station letting “Danny” escape and call the police. After tracking “Danny’s” phone which was still in the car, authorities and the brothers have a shootout in Watertown where Tamerlan is almost arrested, but Dzhokhar, fleeing in the car, drives over Tamerlan, causing him to later die from injuries sustained early in the morning of April 19<sup>th</sup>. Officer Richard Donohue was also severely injured at the scene. A shelter-in-place order was given for Watertown, with police conducting a door-to-door search. Later that night, a resident went to his backyard to check a loose boat cover and saw a body and blood, so he alerted the police. Around 8:30 PM, Dzhokhar emerged from the surrounded boat and gave himself up to authorities (Morrison & O’Leary, 2015). It would later be learned that the bombers’ intentions were based around retaliation for the Iraq and Afghanistan Wars, claiming the U.S. conducted these wars against Muslims.

### **Analysis of Social Media Impact**

The Boston Marathon Bombing instantly caused a firestorm online as bystanders and survivors tried to contact loved ones and used social media to share information, both pertinent and not. However, the connections of this case and social media actually go back further than

2013. The FBI was aware of Tamerlan at least as early as 2011 when the Russian Federal Security Bureau (FSB) alerted them of Tamerlan's connection with radical forms of Islam as seen by various social media "ramblings" (Montgomery, Horwitz, & Fisher, 2013). This would ultimately lead to a dead end as the FBI found no concrete connection between Tamerlan and terrorism (*Unclassified Summary...*, 2014). Back to 2013, at this time many people also started using social media to post videos, pictures, or other pieces of information in order to let said information be seen broadly or to help law enforcement find a lead. According to Boston Police Commissioner Edward Davis, the influx of photos and videos "almost became a management problem, there was so much of it" (Montgomery, Horwitz, & Fisher, 2013). The issue here was twofold; not only did law enforcement have to contend with the mountain of data coming in from various social media sources while also trying to scour hours of surveillance footage from the scene of the bombings, they also had to contend with the wider internet's amateur sleuthing via social media which was aimed at finding the bombers but did not have the proper official resources or trained understanding to do so.

A major example of amateur sleuthing was on the social media site Reddit, where threads on dedicated news and investigation subreddits (forums dedicated to specific topics) were trying to solve the bombings themselves. On one deleted investigative subreddit, users posted any photos or videos of the event then tried to make sense of them. One of the forum's moderators posted "Find people carrying black bags. If they look suspicious, then post them. Then people will try and follow their movements using all the images" arguing that thousands of investigators would be more effective than fewer, skilled investigators. (Montgomery, Horwitz, & Fisher, 2013). These social media sleuths offered more danger than just increasing information overload as their theories could endanger people who were wrongly accused by social media detectives. In

order to get ahead of amateur investigators, the FBI released images of the two suspects they had zeroed in on via surveillance video of the area, in part to reduce the damage being done by people on social media making wild accusations and wrongly targeting people they saw as suspects (Montgomery, Horwitz, & Fisher, 2013). Internet speculation and evidence-sharing had become extremely widespread by this point. However, these sources could not, for the most part, be verified, leading to FBI Special Agent in Charge Richard DesLauriers to remark at a press conference on April 18<sup>th</sup> that “For clarity, these images should be the only ones—the only ones—that the public should view to assist us. Other photos should not be deemed credible and unnecessarily divert the public’s attention in the wrong direction and create undue work for vital law enforcement resources” (FBI Boston, 2013). Unfortunately, the officially released pictures reignited social media, with again more profiles coming forward to offer their felt expertise in the area. A Reddit user on the subreddit “r/MuseumofReddit” recounts how after the FBI images had been released, another thread was started under the name “Recently missing Brown University student Sunil Tripathi and Suspect #2 share similar hair, ear structure, brow structure, and face shape” (u/UnholyDemigod, 2013). This thread, which was ultimately deleted after the real culprits were found, caused a social media witch hunt which finally ended only after extensive harassment of the Tripathi family and an apology by Reddit’s administrators (u/UnholyDemigod, 2013). Ultimately, this example and the many like it would not help law enforcement solve the case and instead provided unnecessary distractions which further added to the amount of data that investigators had to sift through.

However, social media did also help this investigation. Once the official FBI photos were released, social media was used to quickly get the pictures out to Boston, the U.S., and the world. Within a few hours, the FBI had the identity of the Tsarnaev brothers from their aunt, who had

seen the photos (Montgomery, Horwitz, and Fisher, 2013). Following the final capture of Dzhokhar late on April 19<sup>th</sup>, Boston was finally put at ease when the police department utilized social media itself by putting out a tweet notifying everyone that “the hunt is over. The search is done.”



**Figure 2 -- Boston Bomber Captured Tweet (Twitter, 2013)**

## Findings

The researcher can speak from first-hand experience that, when opening up Twitter directly after the news of the bombings, there were thousands of posts relating to all facets of the tragedy. Photos were being shared claiming to catch suspicious acts, and people were sharing conflicting reports of how many explosions there were and when/where they were happening. As the researcher was not part of the investigation, there was no onus to comb over the vast amount of data social media offered. For the analysts and investigators trying to save lives and catch the bombers as quickly as possible, this mound of social media data represented the first great hurdle as even the Boston Police Commissioner noted how the inundation of information slowed down finding any true actionable evidence. It is also worth noting that because of social media, the FBI was alerted two years prior to the possibility of Tamerlan being an extremist yet failed to find any concrete evidence to bring him into custody before the bombings.

Beyond the timeliness factor of analysis being slowed by the amount of social media data, accuracy was also negatively impacted in the Boston Marathon Bombing case. Even with the combined prowess of numerous social media platforms, importantly here Reddit, social media added little to nothing to the investigation save for causing dangerous distractions where innocent people were vilified for being deemed “suspicious.” This directly and negatively impacted the investigation seeing as the FBI had to react to these distractions as they were becoming increasingly dangerous. In the end, to stem the rising tide of misinformation, the FBI decided to release the photos of the suspects to refocus the public. As seen above, this still did not stop social media from running amok, and ultimately, only the capture of the brothers reined social media in.

Of course, this case does not represent a failure on every level for social media in the intelligence circle. The decision to release the photos of the suspects and spread them via the internet is ultimate what lead to the suspects’ identification, and only the light-speed of social media and the internet could spread the photos to the brothers’ aunt in order to get identification back to the FBI within a day. Furthermore, social media was effectively used to communicate with the public throughout the manhunt, especially in its final moments. These are rather small victories when compared to the pitfalls that social media presented in this case, however. Overall, this case saw social media used by the intelligence community as an effective communication tool to disperse information, but it severely hindered timeliness as social media information bogged down efforts to find the culprits.

## Chapter 4

### Case Two: The 2021 January 6<sup>th</sup> United States Capitol Attack

Compared to the previous case, the January 6<sup>th</sup> United States Capitol Attack in 2021 (also referred to as January 6<sup>th</sup> Insurrection or simply January 6<sup>th</sup>) provides a look into a more modern event where social media played a huge role relating to the event and the intelligence community. One of the most unique and fitting attributes about January 6<sup>th</sup> for this research is that the entire event was almost completely spurred on by the internet and social media. This will be described in more detail later, but it offers a unique case since a large portion of the crime was committed almost entirely due to online factors. This case also provides a useful look into how social media can have lasting effects after a case is “over” as social media is still playing a role in tracking down and gaining information about those who participated in the event. As such, the January 6<sup>th</sup> Insurrection was chosen as case study to contrast the baseline set by the previous case.

#### Summary of Timeline and Events

See Appendix A for graphical timeline. By November 7<sup>th</sup>, 2020, most major news outlets reported that then-candidate Joe Biden had gained the necessary 270 electoral votes for the 2020 presidential election, meaning he had won against then-president Donald Trump. President Trump then spent the rest of the year publicly attacking the election process and repeatedly called into question the validity of Biden’s victory. President Trump’s electoral loss as well as his repeated comments regarding a stolen election sparked President Trump’s followers to action. This would ultimately culminate in the January 6<sup>th</sup>, 2021, United States Capitol Attack.

Around noon that day, President Trump held a rally for his supporters gathered around the White House. He focused on the election stating “We will never give up. We will never concede” (Lonsdorf et al, 2022). President Trump also focused on then-Vice President Mike Pence and his ability to finalize the electoral votes, hoping Pence’s support could help overturn the election. As Trump spoke, some of those gathered at the White House started moving toward the U.S. Capitol Building and gathering there. By one in the afternoon, the first police barricade was passed by the gathered Trump supporters enroute to the Capitol. Meanwhile, a joint session of Congress started, and Trump ended his speech stating “We’re going to the Capitol…” after which he returned to the White House (Lonsdorf et al, 2022). By 1:30 PM, those gathered had made their way past the final police barricades and made their way up the Capitol Building’s stairs as Congress’s session continued, undisturbed. About the same time, pipe bombs in packages were sent to the Republican National Committee headquarters and the Democratic National Committee headquarters, both in Washington D.C. By 2 PM, protestors had made their way into the Capitol Building via broken windows and doors opened to them by already-inside protestors. By 2:30 PM the building had gone into lockdown, and senators and congressmen were taken to safety. Throughout these events, Trump continued to tweet, and at 2:38 PM he tweeted “Please support our Capitol Police and Law Enforcement. They are truly on the side of our Country. Stay peaceful!”



**Figure 3 -- President Trump's Tweet (Twitter, 2021)**

However, the above tweet did not stop the protestors, and by 3:00 PM the protestors had made it into the Senate chamber as well as many individual offices, including Speaker Nancy Pelosi's (Lonsdorf et al, 2022). As the protestors continued around the Capitol, protestor Ashli Babbitt was shot by Capitol Police. She later died. Right after 3:30 PM, President Trump ordered the National Guard to the Capitol (Lonsdorf et al, 2022). Right after 4:15 PM, President Trump tweets out a video including a statement that, among other things, asked those in the Capitol to "go home." At 6 PM, Washington D.C. was placed under curfew as Capitol Police started to clear protestors out of the Capitol.

At 7 PM, Facebook started to delete President Trump's messages for the day and ultimately suspended him from its social media platform. This action was followed shortly with similar acts from Twitter. Following this, numerous outlets condemned the day's events, including the Republican Party (Colvin, 2022). Starting at 8 PM, the Capitol started to open back up with the Senate, and then the House, resuming their sessions. At 11:32 PM, the joint session resumes, and by 3:45 AM on the morning of January 7, 2021, Mike Pence called the electoral votes in favor of President-Elect Biden (Lonsdorf et al, 2022).

During the attack, immediately following the attack, and still continuing as of the conducting of this paper's research, local law enforcement as well as the FBI have continued identifying, arresting, and charging rioters suspected in committing crimes on January 6<sup>th</sup>. As the next section will explore, throughout all of these events, social media continued to play an extremely important role leading up to, during, and after the riot.



## **Analysis of Social Media Impact**

The 2021 January 6<sup>th</sup> Capitol Attack was selected for this research because almost every single facet of the case was influenced by social media. One of the many things President Trump is remembered for is his incessant use of Twitter. In fact, his use of Twitter was so impactful that a Google Scholar search for “Trump and Twitter” comes back with about 250,000 results. This is an important note because his use of Twitter laid the groundwork for the Capitol Attack. As Trump continued to tweet about the election, information quickly spread to his followers, allowing large groups to gather under his banner. Also, social media was a crucial part in getting various groups to organize for January 6<sup>th</sup>. According to the New York Times, groups which participated in the attack such as QAnon, a political conspiracy group, and the Proud Boys, a right-wing extremist group, had been fueled by Trump’s online rhetoric for months leading up to January 6<sup>th</sup> and were planning movements to “retake the Capitol Building.” Once President Trump began his rally at the White House and protestors started making their way to the Capitol Building, messages started popping up on social media sites including far-right-wing social media platforms Gab and Parler discussing what streets to use as well as what tools to bring for the protesters to use to get inside the Capitol (Frenkel, 2021).

Throughout the protest, social media continued to impact the case as well. President Trump continued to tweet out about the Capitol, and protestors posted photos and videos of themselves on numerous different social media sites. Ultimately, this led to the deletion of posts linked to the attacks as well as the suspension of accounts related to suspects. In an unprecedented move, Facebook and Twitter both independently decided to delete President’s Trumps tweets calling for people to go to the Capitol and ended up suspending (and ultimately banning) his profiles (Perrigo, 2021).

Paramount to this research is how social media was used in the frame of the FBI's intelligence analysis, so much of social media's importance in this case is dedicated to events following January 6<sup>th</sup>. As stated above, the FBI launched a massive investigation into those at the Capitol attack. Unsurprisingly, social media was again the main medium used to collect and analyze data and information regarding the attack on the Capitol. Since those participating in the attack used social media to both plan the event as well as document their activities during and after the riot, social media proved to be a goldmine for the FBI. Social media was so useful that the Associated Press noted "As of [December 10, 2021], more than 50 people have been sentenced for federal crimes related to the insurrection. In at least 28 of those cases, prosecutors factored a defendant's social media posts into their requests for stricter sentences, according to an Associated Press review of court records" (Kunzelman, 2021). Furthermore, the FBI's Wanted webpage regarding the Capitol attack is full of images of those still at large but whose images are captured in extreme detail mainly from the backgrounds of videos and pictures posted online by various other rioters (*Capitol Violence*, n.d.). Under the literally hundreds of photos on the webpage is a list of all those who have been charged or arrested in relation to the attack. Many of these entries list social media as a source leading to their arrest. For example:

According to court documents, Matthew Perna, 37, of Sharpsville, Pennsylvania, entered the Capitol at approximately 2:47 p.m. on Jan. 6, going through the Senate Wing door after barriers set up by law enforcement were breached. He remained inside the building for approximately 20 minutes, in the Senate Wing Lobby. While there, he held a cellular device in his right hand and filmed and chanted with the crowd. Later, he posted an eight-minute video to his Facebook account in which he stated, among other things, 'It's not over, trust me.' (*Pennsylvania man...*, 2021).

Social media continues to be the final piece of the puzzle when it comes to the January 6<sup>th</sup> attack. On the FBI's website, sentencing and arrests have continued into March of 2023, with many still citing social media as a main source of incriminating information.

### **Findings**

Much like the Boston Marathon Bombings, this case is one that the researcher had first-hand experience with. A few people from the researcher's hometown were present at the riot and would later get picked up or otherwise questioned by law enforcement because of Facebook posts they made placing themselves in the Capitol at the time it was attacked. Comparatively, this case represents a much more positive view of social media being used by the intelligence community. Unlike Boston where the influx of social media data slowed down the collection and analysis process, in Washington D.C., social media data made the investigation starkly more effective. Interestingly, this case and the last see social media essentially serving the same role: both cases see it being used as an instrument to locate wrongdoers. The main difference between the cases is that the Boston Bombings were looking for very specific people and things; whereas, January 6<sup>th</sup> was focused on a much larger group of people. Simply put, these two cases show that the sheer amount of information offered by social media is definitely useful when the item or items under scrutiny is of proportional size; it is better to have hundreds of records to help find hundreds of people than it is to have thousands of records to help find two people. In other words, a needle in a haystack is much more difficult to find than 1000 needles in a haystack.

In terms of timeliness, for the January 6<sup>th</sup> Capitol Attack, this is extremely easy to measure. As shown by the FBI's official webpage, the first charges against rioters were brought

just two days later on January 8<sup>th</sup>, 2021. Disregarding the people who got directly arrested at the event, the turnaround was almost instantaneous, which is impressively fast for the intelligence community, especially with something the scale of the Capitol Attack. The sense that social media quickened this investigation is further compounded by the fact that the charges and arrests have continued relatively regularly, lending credence to the idea that there is an efficient process in place to analyze this information. It is also worth noting that the threat level for this case was much lower than during the active shooters of the Boston Marathon Bombing. As such, the FBI was in less of a time crunch, possibly adding to the effective use of social media in this case.

Accuracy is also relatively positive for this case. Specifically, there have been little to no major reports of the FBI getting any of the information wrong and incorrectly arresting anyone based on misidentification via social media. Overall, this case in many ways shows an intelligence community which used social media to its full extent in collection and analysis and was therefore able to produce a much better, and faster, analytic product, ultimately leading to more and more frequent arrests in response to the January 6<sup>th</sup> Capitol Attack. To date, more than 1000 arrests have been made relating to January 6<sup>th</sup>, according to the Department of Justice.

## **Chapter 5**

### **Case Three: The 2022 Robb Elementary School Shooting**

As with the other case studies chosen for this research, the Robb Elementary School Shooting in Uvalde, Texas, on May 24, 2022, provides a different lens with which to explore social media's impact on the intelligence community. Whereas the last two cases saw social media being used directly in investigations, the Uvalde shooting shows a different use for social media within collection and analysis. Rather than being part of the event directly, this case looks at social media specifically as it pertains to indicators and warnings that occurred prior to the shooting that were discovered later as the intelligence community conducted its investigation. Since the shooting itself was contained to one building that was surrounded by police for the majority of the event, there was little social media influence during the event itself save for bystanders and other onlookers providing updates via social media. As such, this portion of the research will focus more heavily on the aftermath of the event as compared to the previous two case studies.

#### **Summary of Timeline and Events**

See Appendix A for graphical timeline. In the months leading up to the shooting itself, seventeen-year-old Salvador Ramos asked others, including his sister, to buy him guns, as he was not yet of legal age. No one did buy him the weapons, but he did get himself other accessories such as ammunition, rifle slings, and a military-style vest. Also leading up to the attack, Ramos took to social media multiple times where he had interactions pertaining to

committing a school shooting, including referencing something he would do in May that would put him “all over the news” (Astudillo et al, 2022). These interactions will be discussed in further depth in the following section. On May 16, 2022, Ramos turned eighteen and proceeded to buy two AR-15 style rifles along with over 2000 rounds of ammunition. On May 24 around 11:15 AM, Ramos messaged an online German friend that he was annoyed with his grandma and was going to do something to her. He followed this message with another to his online friend saying, “I just shot my grandma in her head. Ima go shoot up a elementary school rn [right now]” (Astudillo et al, 2022). Ramos then proceeded to shoot his grandma in the face before stealing her car, loaded with both rifles. By 11:28 AM, Ramos crashed the car in a ditch near Robb Elementary School and got out, leaving one rifle behind. From here he shot at, but missed, two witnesses at a nearby funeral home, who in turn called 911. By 11:30, he was outside Robb Elementary school and was noticed by staff who alerted students as Ramos started firing while still outside. Two minutes later, the school went into lockdown, but the shooter entered anyway, due to a door that was “already unlocked or the lock failed to engage, which [the teacher] could not have known because the doors lock from the outside” (Astudillo et al, 2022). Ramos then walked into connected classrooms 111 and 112, firing over 100 rounds of ammunition at those inside.



**Figure 4 -- Texas House Committee Report Map (Astudillo et al, 2022)**

At 11:35 AM, Uvalde police officers entered the building, including Pete Arredondo, the chief of school district’s police department, but he did not bring his radio in with him. Between this time and 11:42 AM, various officers tried to move towards the classrooms only to be beaten back by gunfire. The police also noted that at this point they treated the situation as a “barricaded subject” rather than an “active shooter” (Astudillo et al, 2022). As police presence increases, students from areas away from the shooter start to be evacuated by police breaking windows to get people out of the school. Police presence around the set-up perimeter continued to increase, and by 11:54 AM, gathered onlookers started to record and post videos of the struggle between parents and police outside of the school. As of noon, external confusion grows as conflicting social media reports obscure what is happening inside the school, and internal confusion continues as officers inside and outside of the school fail to properly communicate causing those inside to wait for any superior’s approval before acting. Still, no on-site command post was set up to bring order to the event. Around 12:15 PM, SWAT units started to arrive while Arredondo

was focused on obtaining a master key for the building. A Border Patrol Tactical Unit also arrived at this time. Only at this point does Robb Elementary post on Facebook that there is an active shooter in the building. Another half hour went by as officers continued to look for keys to the rooms, bring in breaching tools, and inch closer to the rooms where the shooter was located; additionally during this time, numerous students in the rooms called 911. At 12:47 PM, Arredondo gives approval to enter the classroom. At 12:50 PM, officers breaching the room kill Ramos who was hiding in a closet when police entered (Astudillo et al, 2022). At the end of the day, nineteen students and two teachers were killed. Following the shooter's death, the FBI joined the local law enforcement to aide in their post investigation. In the investigation that followed, the social media connections in regard to the shooter came to light and will be described below.

### **Analysis of Social Media Impact**

As noted earlier, social media had a different role in this case as compared to the other ones, providing another frame to look at social media's usefulness to the intelligence community. In this case, social media was in the limelight in the retrospective investigation. As with many other school shootings since the rise of social media in the mid-2010s, the social media accounts of those who end up as shooters tend to leave a trail of posts which can correctly identify them as violent and very troubled before their attacks. The 2018 Stoneman Douglas High School Shooting in Parkland, Florida, and the Oxford High School Shooting in Michigan were both carried out by individuals who posted information related to guns, gun violence, or school shootings on social media before their respective shootings (Seitz, 2022). The Robb Elementary



case followed almost the exact same modus operandi with Salvador Ramos taking to social media prior to his attack to post threatening messages related to the shooting. Ramos's Instagram profile had a photo of his hand holding a gun magazine. On the same profile was pinned a TikTok video showing two AR-15 style rifles with the caption "Kids be scared" (Seitz, 2022). Taken in a vacuum, these posts would throw up numerous red flags. Unfortunately, within the vast number of social media profiles and posts, it is highly likely that these never got noticed by law enforcement, let alone reported before the attack. Also prior to the shooting, Ramos used social media to share online videos depicting beheadings and violent sex as well as a video of him driving with a passenger holding a plastic bag with a dead cat and pointing BB guns out the window at bystanders (Condon, 2022). As mentioned above, he also used social media to express that he was going to do something that would get him on the news as well as expressing a desire to kill himself (Condon, 2022). Looking at social media messages sent via Snapchat to a German friend, investigators would also later find his messages talking about waiting for packages of ammunition to arrive as well as his final messages about killing his grandmother and going to shoot up an elementary school. All of these items provide a clear trail of breadcrumbs that, due to no direct reporting to authorities and the sheer number of social media posts, were left unseen until too late.

During the actual investigation itself, social media was also present in this case, albeit a much less important factor to this research. As parents and other onlookers gathered to the outside of the school as they were attracted by the noise as well as initial official Facebook posts by police and the school about shots fired in the vicinity, many turned on their phones to livestream the situation. These pieces of evidence, in conjunction with CCTV footage from

inside the school, have been and continue to be used in the investigation into law enforcement's response to the shooting.

## **Findings**

As compared to the first two case studies, The Uvalde, Texas, Robb Elementary School Shooting case represents a unique look into the use of social media within the intelligence community, and it was for that reason it was chosen for this research. While social media was primarily used post-event in this case, it is nonetheless an important window into the strengths and pitfalls of social media within the intelligence collection and analysis sphere. This case shows how even when evidence exists that very clearly points in the direction of a domestic terror event, the intelligence community is not always able to pick up or act on these threats from the internet ahead of time. In this case, no one directly reported the posts and/or messages to authorities, but in other school shooting cases mentioned above such as the one in Parkland, Florida, posts were reported but not followed up on by the intelligence community. Both of these failure scenarios can be attributed to information overload as the U.S. Intelligence Community does not have the manpower or resources to track down every report or thoroughly monitor every social media platform.

It is also important to note that social media companies themselves, such as Twitter or Meta (owners of Facebook and Instagram) do have algorithms and internal review processes in place to catch suspicious posts, but the success of these processes is definitely questionable. The fact that neither the companies nor the intelligence community acted on the Uvalde shooter's posts shows a clear blind spot in the intelligence collection apparatus of the U.S. Intelligence

Community. Better measures need to be put in place to accurately sniff out dangerous actors via social media before they act. Posts such as the ones discussed above need to be able to be distinguished from other benign posts about guns on social media. Interestingly, while the intelligence community holds some of the blame in this area, individuals and companies should also be working closer in hand with the intelligence community to both cast a wider net and to make the net tighter.

In terms of accuracy, this case is hard to judge. At first it appears to be a complete failure since law enforcement failed to stop the crime before it happened. However, since the information was not collected until after the attack had been carried out, it is unfair to say accuracy faltered when, in reality, accuracy was a nonfactor. Instead, as the fallout from this case continues to unfold, accuracy can be looked at by taking lessons learned from Uvalde and applying them to similar cases in the future. As in past school shootings, the same warning signs expressed in previous cases via social media were also present here. These signs cannot continue to be missed each time. Clearly, social media holds the key in cases like this. Multiple reports show that people knew Ramos was disturbed before the attack, in large part due to his social media presence, yet no one acted on this information (Condon, 2022). While this case is primarily considered a complete failure in terms of collection and analysis of social media by the intelligence community, it also shows that social media has the potential to be used as an effective early warning sign if recognized and applied correctly.

## **Chapter 6**

### **Summary**

The purpose of this research is to address the overarching question of what role information gleaned from social media plays in the timeliness and accuracy of formulating intelligence analysis relating to domestic terror within the U.S. Intelligence Community. While information used in this research naturally has a focus on law enforcement, the researcher chose and focused on portions of the cases that also involved, and could be extrapolated to, the broader intelligence community. For example, the FBI represents both law enforcement and the intelligence community, and the focus on the FBI in this research shows the bridge between law enforcement, the intelligence community, and domestic terror. By using three distinct case studies where each contains a completely different usage of social media by the intelligence community, this research was able to analyze diverse applications of social media within the intelligence sphere to gain a better understanding of how timeliness and accuracy is affected.

In the first case regarding the Boston Marathon Bombings, social media was a major part of the investigation as firsthand accounts were sifted through in order to find any evidence of the perpetrators. Also, social media was used as a tool by the FBI to quickly release information to the public, ultimately leading to the quick identification of suspects. However, social media also negatively impacted this case with the sheer amount of social media information almost grinding the investigation to a standstill as analysts had to scan through innumerable conflicting social media reports, including needing to contend with social media amateurs trying to solve the case themselves who ultimately caused harm to innocent people by falsely accusing people

unassociated with the bombings. This case provided a good baseline for the research because it provided a case near the dawn of the social media age that provided both positives and negatives regarding both analysis and collection.

In contrast, the second case analyzed the January 6<sup>th</sup> U.S. Capitol Attack and focused on how social media can be used extremely effectively at times for both collection and analysis. January 6<sup>th</sup> showed how an entire event (cause, lead-up, event itself, aftermath, and investigation) can all be influenced by and use social media. In this case, specifically, social media proved to be a major boon to the FBI as evidence was freely available due to those participating in the attack posting videos of themselves and others, allowing for a quick and accurate investigation. Based on the number of participants who have already been caught, as well as the myriad of photos depicting more rioters, it is safe to say that social media not only helped with collection and accuracy in this case but was the driving factor behind it. In many ways, this case provided a high-water mark for the effectiveness of social media in intelligence work, in both the areas of timeliness and accuracy.

The final case about the Robb Elementary School Shooting provided a stark contrast to the last case. This case had a noted lack of social media used in analysis or collection until after the crime had been committed and lives had been lost. This is not to say that social media did not play a role, though. In fact, this case was picked precisely for the fact that social media was used to show what the intelligence community had missed in this case. By comparing this case with other school shootings carried out by those with similar motives, it became clear that social media has and continues to leave telling trails which, if found, can be used to thwart similar domestic terror events. While this case showed that social media was not effective for collection, and its accuracy will rely on how effective the intelligence community becomes at stopping

events with similar social media tells in the future, it nonetheless proved the point that social media continues to have an important part to play in both of these areas.

Putting all three of these cases together, a broader image of social media's impact on collection timeliness and accuracy in the world of intelligence comes to fruition. It was seen that collection can be greatly aided by social media when primary accounts are abundant and can be cross-verified. Having significant time and personnel to handle this multitude of data also has an incredible impact. However, when social media starts to run amok with unfounded claims, baseless theories, and individuals doing their own intelligence analysis, it can bog down the intelligence community as they try to untangle each thread that an internet user introduces, ultimately reducing the intelligence community's effectiveness. Additionally, a great amount of extremely relevant information still gets missed on social media by the intelligence community. Case three demonstrated that although the evidence can be there, the needle is not necessarily automatically dug out of the haystack. This, in turn, shows how social media analysis is woefully lacking right now, and more resources should be put towards more accurately and consistently discovering those needles.

Near the beginning of this thesis paper, the researcher hypothesized that timeliness would be the more resistant of the two measures, meaning that while accuracy would be hindered by the sheer amount of data social media has to offer, timeliness would stay consistent in the cases where social media doesn't play a large role. However, after completing this research, the opposite seems true. Accuracy seemed to stay the same as any other intelligence case with social media keeping findings relatively accurate while still needing to contend with misinformation from various sources. Seemingly, the intelligence community is just as skilled at finding truths on the internet as they are anywhere else. Timeliness, on the other hand, fluctuates wildly

because of social media. In Boston it became a hinderance and almost caused an information standstill, but on January 6<sup>th</sup>, social media led to rapid collection, leading to more timely intelligence. It is clear from this research that social media represents a dynamic variable for the intelligence community, as it offers huge benefits when implemented correctly; conversely, it can be easily overlooked or cause pertinent information to get lost in the noise, if mishandled. As the U.S. Intelligence Community continues to refine its social media usage, the researcher believes that timeliness of analytical products will improve as information is more effectively sorted while accuracy will continue to be minimally affected.

## Chapter 7

### Further Research

While this research effectively answered the questions asked with the available data, there is definitely more that could be, and should be, studied in this area. Perhaps most importantly, this research would be much more effective when looked at from an internal perspective. The U.S. Intelligence Community is notoriously closed off from the public, making this researcher rely solely on public information. With all of the FBI and other agencies' internal documents on these cases also added to the pool of resources, a much more comprehensive and specific picture could be formed about how effectively social media was used and how impactful it actually was. Also, with unlimited time and resources, these cases studied should be expanded to include all domestic terror events that occurred in the age of social media, again to create a more comprehensive picture of what this research set out to answer. Ultimately, the goal of this research was to look at the effectiveness of social media intelligence within the U.S. Intelligence Community, so it would also be useful for the research to be expanded to the collection and analysis within the other areas of intelligence work such as foreign terror recruitment or foreign terror operations (both these areas have connections to the use of social media) rather than just domestic terror, but that was far exceeding the scope for this research. Overall, this research represents solid ground from which the topic of social media in the U.S. Intelligence Community can be expanded upon, ultimately leading to social media becoming an integral part of intelligence analysis.



## Appendix A

### Case Timelines

#### Case One: Boston Marathon Bombing

- 2:50 PM April 15<sup>th</sup>, 2013: Two Explosions disrupt the finish line of the 117<sup>th</sup> annual Boston Marathon on Boylston Street in Boston, Massachusetts.
- April 16<sup>th</sup>, 2013: The FBI spoke to victim Jeff Bauman, Jr., who offers them a description of the suspects. The FBI announces the bombs were made from pressure cookers.
- 5:00 PM April 18<sup>th</sup>, 2013: The FBI publicly released images of the two suspects, identified as Kyrgyzstani-American brothers Dzhokhar and Tamerlan Tsarnaev.
- 10:25 PM April 18<sup>th</sup>, 2013: MIT Police officer Sean Collier is found shot in his patrol vehicle, reportedly shot by one of the brothers.
- 11:00 PM April 18<sup>th</sup>, 2013: The brothers steal a car belonging to “Danny” and stop at a gas station letting “Danny” escape and call the police.
- 12:45 AM April 19<sup>th</sup>, 2013: Authorities and the brothers have a shootout in Watertown where Tamerlan is fatally injured, and Dzhokhar flees in the car.
- 7:00 AM April 19<sup>th</sup>, 2013: A shelter-in-place order was given for Watertown, with police conducting a door-to-door search.
- 7:00 PM April 19<sup>th</sup>, 2013: A resident went to his backyard to check a loose boat cover and saw a body and blood, so he alerted the police.
- 8:30 PM April 19<sup>th</sup>, 2013: Dzhokhar emerged from the surrounded boat and gave himself up to authorities.

#### Case Two: January 6<sup>th</sup> U.S. Capitol Attack

- November 7<sup>th</sup>, 2020: Most major news outlets report Joe Biden had gained the necessary 270 electoral votes for the 2020 presidential election.
- 12:00 PM January 6<sup>th</sup>, 2021: President Trump held a rally for his supporters gathered around the White House. He focused on the election results.
- 1:00 PM Jan. 6<sup>th</sup>, 2021: The first police barricade was passed by the gathered Trump supporters enroute to the Capitol.

- 1:30 PM Jan. 6<sup>th</sup>, 2021: Those gathered made their way past the final police barricades and made their way up the Capitol Building's stairs.
- 1:35 PM Jan. 6<sup>th</sup>, 2021: Pipe bombs in packages were sent to the Republican National Committee headquarters and the Democratic National Committee headquarters.
- 2:00 PM Jan. 6<sup>th</sup>, 2021: protestors made their way into the Capitol Building
- 2:30 PM Jan. 6<sup>th</sup>, 2021: The Capitol Building went into lockdown.
- 2:38 PM Jan 6<sup>th</sup>, 2021: Trump tweeted "Please support our Capitol Police and Law Enforcement. They are truly on the side of our Country. Stay peaceful!"
- 3:00 PM Jan. 6<sup>th</sup>, 2021: The protestors made it into the Senate chamber as well as many individual offices; protestor Ashli Babbitt was shot by Capitol Police. She later died.
- 3:30 PM Jan. 6<sup>th</sup>, 2021: President Trump ordered the National Guard to the Capitol.
- 4:15 PM Jan. 6<sup>th</sup>, 2021: President Trump tweets out a statement that, among other things, asked those in the Capitol to "go home."
- 6:00 PM Jan. 6<sup>th</sup>, 2021: Washington D.C. was placed under curfew as Capitol Police started to clear protestors out of the Capitol.
- 7:00 PM Jan. 6<sup>th</sup>, 2021: Facebook and Twitter start to delete President Trump's messages for the day and ultimately suspends him from their social media platform.
- 8:00 PM Jan. 6<sup>th</sup>, 2021: The Senate, then the House, resume their sessions.
- 11:32 PM Jan. 6<sup>th</sup>, 2021: The joint session resumes.
- 3:45 AM Jan 7<sup>th</sup>, 2021: Mike Pence called the electoral votes in favor of Joe Biden.

#### Case Three: Robb Elementary School Shooting

- Early 2022: Seventeen-year-old Salvador Ramos asked others to buy him guns, as he was not of legal age yet, but he did get himself other accessories such as ammunition, rifle slings, and a military-style vest.
- Early 2022: Ramos took to social media multiple times where he had had interactions pertaining to committing a school shooting.
- May 16<sup>th</sup>, 2022: Ramos turned eighteen and proceeded to buy two AR-15 style rifles along with over 2000 rounds of ammunition.

- 11:15 AM May 24<sup>th</sup>, 2022: Ramos messaged an online German friend that he was annoyed with his grandma and was going to do something to her. Ramos then proceeds to shoot his grandma in the face before stealing her car, loaded with both rifles.
- 11:28 AM May 24<sup>th</sup>, 2022: Ramos crashed the car in a ditch near Robb Elementary School and shoots at two witnesses at a nearby funeral home; they in turn call 911.
- 11:32 AM May 24<sup>th</sup>, 2022: The school went into lockdown, but the shooter entered anyway. Ramos then walked into connected classrooms 111 and 112, firing over 100 rounds of ammunition at those inside.
- 11:35 AM May 24<sup>th</sup>, 2022: Uvalde police officers enter the building, including Pete Arredondo, the chief of the school district's police department.
- 11:42 AM May 24<sup>th</sup>, 2022: Officers move toward the classrooms only to be beaten back. Police treat the situation as a "barricaded subject" rather than an "active shooter".
- 11:54 AM May 24<sup>th</sup>, 2022: Gathered onlookers started to record and post videos of the struggle between parents and police outside of the school.
- 12:00 PM May 24<sup>th</sup>, 2022: Still, no on-site command post was set up to bring order to the event.
- 12:15 PM May 24<sup>th</sup>, 2022: SWAT units started to arrive while Arredondo was focused on obtaining a master key. A Border Patrol Tactical Unit also arrived at this time.
- 12:47 PM May 24<sup>th</sup>, 2022: Arredondo gives approval to enter the classroom.
- 12:50 PM May 24<sup>th</sup>, 2022: Officers breaching the room kill Ramos who was hiding in a closet when police entered.

## Appendix B

### Glossary of Terms

Bots – Automated social media accounts; not directly run by a human.

CIA – Central Intelligence Agency.

DATA-INT – Data intelligence; derived from data.

FBI – Federal Bureau of Investigation.

Gab – Social media platform championing free speech; used by right-wing groups.

GEOINT – Geospatial intelligence; derived from imagery and geospatial data.

HUMINT – Human intelligence; derived from human sources.

IMINT – Imagery intelligence; derived from pictures or photos.

MASINT – Measurement and Signature intelligence; derived from qualitative and quantitative analysis of physical features.

Meta – Parent company of social media sites Facebook and Instagram.

NSA – National Security Agency.

OSINT – Open-source intelligence; derived from any publicly available source.

Parler – Social media site marketed towards conservatives; used by right-wing groups.

Proud Boys – American male far-right-wing political organization.

QAnon – Political conspiracy group/movement; active on social media.

SIGINT – Signals intelligence; derived from signal intercepts.

Social Media – Any online platform through which multiple users can create online communities to share information, ideas, personal messages, and other content.

SOCMINT – Social media intelligence; derived from social media.

Subreddit – Online Reddit forum dedicated to a specific topic.

**BIBLIOGRAPHY**

Andrejevic, M. (2013). *Infoglut: How too much information is changing the way we think and know*. Routledge.

Astudillo, C., Neugeboren, E., & Oxner, R. (2022, May 28). *What we know, minute by minute, about how the Uvalde shooting and police response unfolded*. The Texas Tribune.  
<https://www.texastribune.org/2022/05/27/uvalde-texas-school-shooting-timeline/>.

Auxier, B., & Anderson, M. (2022, May 11). Social media use in 2021. PEW Research Center.  
<https://www.pewresearch.org/internet/2021/04/07/social-media-use-in-2021/>.

*Capitol violence*. (n.d.) FBI. <https://www.fbi.gov/wanted/capitol-violence>.

Collier, K. (2022, April 5). *Hackers Flood Internet with what they say are Russian companies' files*. NBCNews.com. <https://www.nbcnews.com/tech/security/hackers-flood-internet-say-are-russian-companies-files-rcna21853?mod=djemCybersecurityPro&tpl=cy>.

Colvin, J. (2022, January 7). *One year ago, Republicans condemned Jan. 6 insurrection. Yesterday, their response was far more muted*. PBS.  
<https://www.pbs.org/newshour/politics/one-year-ago-republicans-condemned-jan-6-insurrection-yesterday-their-response-was-far-more-muted>.

Condon, B. (2022, July 19). *Uvalde school shooter left Trail of warning signs ahead of attack*. PBS. <https://www.pbs.org/newshour/nation/uvalde-school-shooter-left-trail-of-warning-signs-ahead-of-attack>.

- FBI Boston. (2013, April 18). *Remarks of special agent in charge Richard Deslauriers at press conference on bombing investigation*. FBI. <https://archives.fbi.gov/archives/boston/press-releases/2013/remarks-of-special-agent-in-charge-richard-deslauriers-at-press-conference-on-bombing-investigation-1>.
- FBI. (2016, June 11). *Intelligence cycle graphic*. FBI. <https://www.fbi.gov/image-repository/intelligence-cyclegraphic.jpg/view#:~:text=The%20intelligence%20cycle%20is%20one,between%20the%20steps%20is%20fluid>.
- Frenkel, S. (2021, January 6). *The storming of Capitol Hill was organized on social media*. The New York Times. <https://www.nytimes.com/2021/01/06/us/politics/protesters-storm-capitol-hill-building.html>.
- Kunzelman, M. (2021, December 12). *Capitol rioters' social media posts influencing sentencing*. AP NEWS. <https://apnews.com/article/media-prisons-social-media-capitol-siege-sentencing-0a60a821ce19635b70681faf86e6526e>.
- Jain, P. N., & Vaidya, A. S. (2021). Analysis of social media based on terrorism—a review. *Vietnam Journal of Computer Science*, 8(01), 1-21.
- Lonsdorf, K., Dorning, C., Isackson, A., Kelly, M. L., & Chang, A. (2022, June 9). *A timeline of how the Jan. 6 attack unfolded - including who said what and when*. NPR. <https://www.npr.org/2022/01/05/1069977469/a-timeline-of-how-the-jan-6-attack-unfolded-including-who-said-what-and-when>.

Lowenthal, M. M. (2022). *Intelligence: From secrets to policy* (Eighth). CQ PRESS.

Medina, R. M. (2014). Social network analysis: a case study of the Islamist terrorist network.

*Security Journal*, 27(1), 97-121.

Merriam-Webster. (n.d.). *Information age definition & meaning*. Merriam-Webster.

<https://www.merriam-webster.com/dictionary/Information%20Age>.

Montgomery, D., Horwitz, S., & Fisher, M. (2013, April 20). *Police, citizens and technology factor into Boston bombing probe*. The Washington Post.

[https://www.washingtonpost.com/world/national-security/inside-the-investigation-of-the-boston-marathon-bombing/2013/04/20/19d8c322-a8ff-11e2-b029-8fb7e977ef71\\_print.html](https://www.washingtonpost.com/world/national-security/inside-the-investigation-of-the-boston-marathon-bombing/2013/04/20/19d8c322-a8ff-11e2-b029-8fb7e977ef71_print.html).

Morrison, S., & O'Leary, E. (2015, January 5). *Timeline of Boston Marathon bombing events*.

Boston.com. <https://www.boston.com/news/local-news/2015/01/05/timeline-of-boston-marathon-bombing-events/>.

*ODNI Home*. Home. (n.d.). <https://www.dni.gov/index.php/what-we-do/members-of-the-ic>.

Office of the Director of National Intelligence . (n.d.). *What Is Intelligence*. ODNI Home.

<https://www.dni.gov/index.php/what-we-do/what-is-intelligence>.

*Pennsylvania man pleads guilty to felony charge for obstructing Congress during Jan. 6 capitol breach*. The United States Department of Justice. (2021, December 17).

<https://www.justice.gov/usao-dc/pr/pennsylvania-man-pleads-guilty-felony-charge-obstructing-congress-during-jan-6-capitol>.

Perrigo, B. (2021, January 7). *Why Facebook and Twitter suspended trump after capitol riots.*

Time. <https://time.com/5927398/facebook-twitter-trump-suspension-capitol/>.

Qiu, X., FM Oliveira, D., Sahami Shirazi, A., Flammini, A., & Menczer, F. (2017). Limited individual attention and online virality of low-quality information. *Nature Human Behaviour*, 1(7), 1-7.

Schick, A. G., Gordon, L. A., & Haka, S. (1990). Information overload: A temporal approach. *Accounting, organizations and society*, 15(3), 199-220.

Seitz, A. (2022, May 27). *Shooter warning signs get lost in sea of social media posts.* AP NEWS. <https://apnews.com/article/uvalde-school-shooting-technology-shootings-social-media-texas-b8dc7a615765e17d46313bc83e2fe452>.

*Unclassified Summary of Information Handling and Sharing Prior to the April 15, 2013*

*BOSTON MARATHON BOMBINGS.* Department of Justice. (2014, April 10).

[https://oig.justice.gov/sites/default/files/reports/s1404\\_0.pdf](https://oig.justice.gov/sites/default/files/reports/s1404_0.pdf).

u/UnholyDemigod. (2013). *r/MuseumofReddit -- The Boston Bombing Debacle.* Reddit.

[https://www.reddit.com/r/MuseumOfReddit/comments/1iv343/the\\_boston\\_bombing\\_debacle/](https://www.reddit.com/r/MuseumOfReddit/comments/1iv343/the_boston_bombing_debacle/).

Young, A. (2019, August 18). *Too much information: Ineffective intelligence collection.* Harvard International Review. <https://hir.harvard.edu/too-much-information/#:~:text=In%20a%201970%20book%2C%20futurist,individual%20and%20an%20institutional%20level.>



## ACADEMIC VITA

Samuel B. Pfohl pfohls19@verizon.net		
<b>Education:</b>	<b>The Pennsylvania State University, University Park, PA</b> Schreyer Honors College BS Security Risk Analysis Minors: Information Sciences and Technology; History Dean's List: 7/7 Semesters	Expected Graduation May 2023
<b>Skills:</b>	Knowledge of the following programming languages: JavaScript, R/RStudio, Linux console Proficient in Tableau, SQL Effective Group Leader with Advanced Writing Skills	
<b>Project Experience:</b>	Linux-based cybersecurity labs Semester-long FBI intelligence analysis simulation Multiple visualizations created in Tableau, R Power BI dashboards using GIS data in SQL databases	
<b>Work Experience:</b>	<b>Learning Assistant for IST 110/SRA 268, Penn State</b> Assisted grading, held office hours, and tutored students in the areas of visual analytics and information sciences and technology	August 2021-Present
	<b>Data Analytics Intern, GeoSpatial Innovations Inc.</b> In charge of creating client-specific Power BI dashboards Created SQL queries based on GIS databases	June-August 2022
	<b>Summer Maintenance Staff, Franklin High School</b> Maintained facility and grounds	June-August 2021/2022
	<b>Soccer Referee, PA West</b> Managed weekly youth and teen soccer games Mediated conflicts between coaches, players, spectators	May-August 2019
<b>Volunteer Experience:</b>	<b>Friends for Food</b> Distribution of holiday dinners to those in need	2012-Present
	<b>Christ United Methodist Church Volunteer</b> Youth group leader, annual Christmas cantata member, and community volunteer	2012-Present
	<b>Ski Club THON/Pillar THON Organization</b> Helping families and holding events for Penn State's THON philanthropy	2019-Present
	<b>Appalachia Service Project</b> Home building service project for impoverished families	July 2018
<b>Extracurriculars:</b>	<b>Intramural Soccer</b> Played on numerous IM soccer teams	2019-Present
	<b>Gameday Ventures – BagBall; PSU ENTI</b> Created and marketed a new tailgate/lawn game for Penn State's Entrepreneurship and Innovation program	2022-Present
<b>Honors/Awards:</b>	Eagle Scout – Boy Scouts of America IST Dean's Excellence Award Gamma Tau Phi IST Honors Society Penn State IST Marshal Candidate U.S. Marine Corps Scholastic Excellence Award	2018 2019-2023 2020-2023 2023 2019