

Chapter 21

Prevention of Low-tech, Lone Actor Terrorist Attacks: The Case of the United States, 1970s - 2019

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This chapter examines the magnitude of the threat posed by ideologically extremist lone actors who are considered domestic terrorists in the US during the almost 50-year period of the early 1970s to 2019. This should enable us to formulate best practice-based measures to counter them, particularly during the formative pre-incident attack phases. This categorization of terrorist actor types excludes operatives belonging to US or foreign-based organized terrorist groups or their loosely affiliated networks that operate in the US. This is done by outlining the selection criteria for determining the factors that constitute a lone actor terrorist, a listing of significant attacks and plots by a representative sample of 52 perpetrators from the early 1970s to late 2019 (see Appendix A), and, based on these events and how they ended, an assessment of the extremist ideologies and psychological factors that motivated them, their modus operandi, including selection of weaponry and targets, and the measures that will be effective in preventing them during their attacks' formative pre-incident phases. Also examined is how these incidents and plots were resolved, particularly the measures used in preventing the ones that had failed to be executed. Several security technologies that are being employed to counter such perpetrators' pre-incident suspicious activities are also discussed. As an empirical study, the statistically-based findings are based on the chapter's database of actual cases during the almost 50-years that are covered. The conclusion presents the chapter's overall findings.

Keywords: lone actor/lone wolf, terrorism, radicalization, modus operandi, target selection, preemption, prevention.

Violent attacks by lone actor terrorists¹ are a relatively frequent occurrence in the US.² While a minority of terrorist incidents in the US are committed by members of organized terrorist groups or loosely affiliated networks, the majority are conducted by lone actors.³ This chapter focuses on terrorist attacks by ideologically extremist lone actors who are domestic terrorists - not operatives belonging to organized terrorist groups or their loosely affiliated networks in the US - during the almost 50-year period of the early 1970s to 2019. Significant examples of lone actor attacks include the shooting rampage by ISIS adherent (but not member) Omar Mateen at the Pulse Nightclub in Orlando, Florida, on 12 June 2016, (49 killed, 53 wounded); the late October 2018 mailings of more than a dozen homemade package bombs by the far-rightist militant Cesar Sayoc against his perceived politically liberal adversaries, including the broadcast network CNN (no casualties, but mass disruption); and the shooting rampage by the virulently anti-Semitic Robert Bowers against congregants at the Tree of Life synagogue in Pittsburgh, Pennsylvania, on 27 October 2018 (11 killed and six wounded). In another mass shooting by a lone actor terrorist, on 3 August 2019 Patrick Crusius killed 22 people and wounded 24 others in his white supremacist- and anti-immigration-influenced attack at a Walmart department store in El Paso, Texas.

This chapter's objective is to examine the magnitude of the threat posed by lone actor terrorists in the US and to discuss measures required to prevent such attackers during the pre-incident phases, if possible. This is done by outlining the selection criteria for determining the factors that constitute a lone actor terrorist, a listing of significant attacks and plots by a representative sample of 52 perpetrators from the early 1970s to late 2019 (see Appendix A), and, based on these events and how they ended, an assessment of the extremist ideologies and psychological factors that motivated them, their modus operandi, and the measures used by the US government and others to preempt them during their attacks' formative pre-incident phases. Some security technologies that are being employed to counter their pre-incident suspicious activities are also discussed. The conclusion presents the chapter's findings.

By coincidence, as this chapter's research was being completed in November 2019, the Federal Bureau of Investigation (FBI) published *Lone Offender: A Study of Lone Offender Terrorism in the United States, 1972-2015*.⁴ Like this chapter, the FBI's report also presents statistical findings on 52 cases of lone actor terrorist events and plots during a comparable period. However, unlike this chapter, specific information about the identity of the FBI's 52 cases is not presented, likely due to the legal sensitivity of revealing such information by a criminal investigatory agency. It is likely, therefore, that some of the incidents listed in this article might not be included in the FBI's study and vice versa. Nevertheless, the FBI's study is methodologically relevant and authoritative, so its inductive-based statistical findings are compared to this chapter's deductive-based findings for purposes of comparison. On some issues that were beyond the capability of the present study, the FBI study's findings are presented.

Selection Criteria

Several criteria were selected to examine lone actor terrorists in the US. These include the timeline for the representative sample chosen, their role as domestic (US) actors, whether domestic and/or foreign-based ideologies apply, and, finally, to qualify for inclusion, one of the attackers must be the attack's primary architect and actor.

First, the almost 50-year period of the early 1970s to late 2019 was selected because it presents a manageable timeframe to generate generalizable inferences about a spectrum of trends concerning lone actor terrorists.

In the second criterion, the selected violent lone actors had plotted, attempted or completed a terrorism-motivated attack in the US. Although numerous violent lone actors in the US commit mass fatality attacks, for this chapter only ideologically driven terrorists were selected,

as opposed to what are termed psychologically-disordered active shooters.⁵ This is not intended to imply that some ideologically-driven terrorists are not considered psychologically-disordered individuals as well, but that being driven by extremist ideologies is the primary distinguishing characteristic of such violent perpetrators. For this reason, neither Aaron Alexis's shooting rampage at the Washington, DC, Navy Yard (16 September 2013), nor Stephen Paddock's mass shooting in Las Vegas, Nevada (1 October 2017) were included because a terrorist motivation had not been proven as a motivating factor for their attacks.

In the third selection criteria, the lone actors are categorized as domestic terrorists. In this chapter, domestic terrorism is defined broadly to include persons who attack other Americans for political objectives, while such perpetrators reside in the US at the time of their attack, whether as citizens or on visitors' visa. As part of this geographical-based criterion, such lone actors are considered homegrown terrorists, as opposed to "one-person" foreign-based terrorists who are deployed by a foreign terrorist organization to conduct an attack in the US. For this reason, foreign-deployed "single terrorists" are not included, such as British national Richard Reid (22 December 2001) or Nigerian national Umar Farouk Abdulmutallab (25 December 2009) who both tried to explode aircrafts approaching US airports.

Similarly, several US homegrown high-profile terrorist operatives such as Adam Gadhan, Anwar al-Awlaki, Najibulla Zazi, Samir Khan, and Omar Shafik Hammami (AKA Abu Mansoor al-Amriki) are also not included in the listing of lone actors because they had travelled overseas to join foreign terrorist groups. On the other hand, Khalid Aldawsari, a Saudi Arabian national, who was studying in the US on an expired student visa, who was arrested for plotting an attack in Dallas, Texas, in February 2011, qualified for inclusion because he was already residing in the US at the time of his plot.

As to the fourth criterion, to qualify as domestic terrorists the extremist ideologies motivating them are either US, or foreign-based (or a combination of the two): this definition does not represent any government definition, as the US, at least as of late 2019, had not legislated an official definition of domestic terrorism that addresses both domestic- and foreign-based ideologies as motivation, but is this author's own definition, at least until a relevant definition is officially agreed upon. Generally, the extremist ideologies motivating domestic terrorists are primarily far-right-wing, far-left-wing, or Islamist. The far-right-wing groups that inspire vulnerable persons include white supremacists, neo-Nazis, Christian Identity, sovereign citizens movement, anti-abortionists, and others. The far-left wing ideologies that motivate them include extremist environmentalists (including anti-modern technology), anti-law enforcement, anti-globalists, and others. In a few cases, the extremist ideologies driving such lone actors are a blend of confused conspiratorial anti-government libertarianism that cannot be characterized as either far right-wing or far left-wing.

Fifth, the status of "loner" makes such perpetrators unique as opposed to being members of organized terrorist groups or loosely affiliated networks.⁶ This is particularly the case due to their lack of training, provision of weapons, and other forms of logistical support by organized terrorist groups at the time of their plots or attacks, although several such perpetrators underwent military training during their military service in the US (such as Timothy McVeigh, Oklahoma, 19 April 1995). Their status as "loners," however, does not imply that they must be single actors, although it is the case that most lone actors are single perpetrators. As explained by the FBI's study, to qualify as lone actors, if two perpetrators are involved, one of them must have been the primary architect and actor in the attack.⁷

Defining lone actors has been the subject of controversy in academic literature. As Hamm and Spaaij write, "Some experts use an expansive definition of lone wolf terrorism in terms of both motives and the number of perpetrators involved."⁸ They cite Jeffrey Simon's definition as "the use or threat of violence or nonviolent sabotage, including cyber-attacks, against government, society, business, the military ... or any other target, by an individual acting alone or with minimal support from one or two other people ... to further a political, social, religious,

financial, or other related goal,”⁹ to create fear and disruption that provokes heightened government reaction.

With a consensual definition of what constitutes lone actor terrorists still in contention, this chapter accepts the definitions by Simon and the FBI that lone actors can cooperate with one or two other individuals as long as one of them is the primary attack perpetrator, that they are not directly linked to an organized terrorist group, and that they self-fund and self-weaponize their operations, including during the plot phase. As examples, the cases of a husband-and-wife mass shooters (San Bernardino, California, 2 December 2015) and two brothers (Boston Marathon, 13 April 2013) are included because they acted as “joint” actors and exhibited the characteristics of a lone actor terrorist by having no direct affiliation with a foreign terrorist group. Also, Timothy McVeigh is included because he was the primary perpetrator of the Oklahoma City bombing (19 April 1995), with Terry Nichols, his main collaborator, playing a secondary role. In all these cases, there were no direct ties to any organized militant group.

In another component of defining such violent individual actors, this chapter terms them as “lone actors” as opposed to “lone wolves” (which is used by numerous studies) because, as Bart Schuurman, et al, point out, the “latter implies a high level of cunning and lethality that is often not present among” such perpetrators.¹⁰

Assessment

The chronology involving 52 incidents listed in the Appendix is intended to serve as a representative sample as opposed to a complete listing of every case of lone actor terrorist attacks (or plots) over the past 50 years in the United States. As such, it is intended to provide a preliminary basis to generate six primary objectives. The first objective is to provide an empirical baseline to identify trends in the frequency of lone actor terrorist incidents over a 50-year period, allowing us to determine whether it is on the rise or in decline. With lone actors defined broadly to include two-persons (e.g., brothers or husband and wife) in some incidents, the second objective is to identify the prevalence of the two-person lone actor teams among the overall sample. The third objective is to identify the lone actors’ gender. The fourth objective is to ascertain some of the psychological factors that might drive susceptible individuals into becoming lone actor terrorists. The fifth objective examines the types of ideologies that motivate such perpetrators. The sixth objective is to examine trends in modus operandi among the lone actor terrorists, such as their selection of weaponry and targets. The final objective is to identify how these incidents and plots were resolved, particularly the measures used in preventing the ones that had failed to be executed. It is hoped that examining the outputs of these objectives will generate findings on best practices in preventing such incidents.

1. Trends in the Frequency of Lone Actor Terrorist Incidents, 1970s – 2019

In terms of rates of incident trends, there has been a substantial increase in the number of plots and attacks over the years, with an especially heightened increase since the early 2000s. This is demonstrated by Table 1.

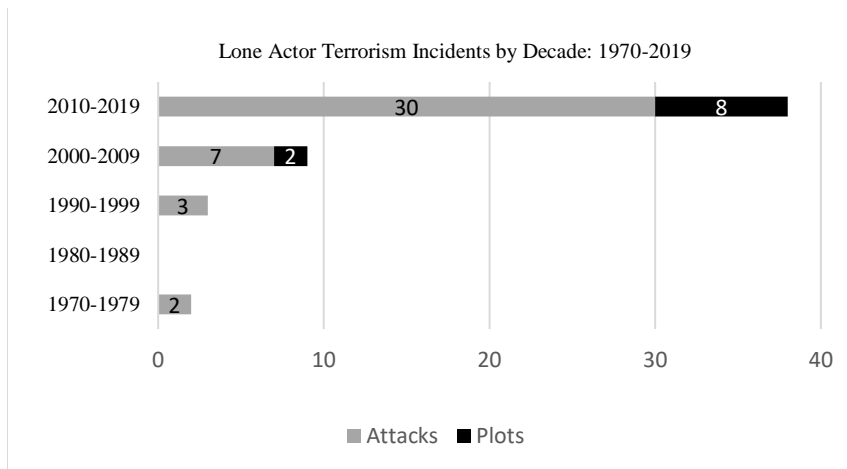
Based on these data, there was a dramatic escalation in the frequency of lone actor terrorist attacks and plots over the years (see Figure 1). This was especially the case during the period of 2010 to 2019, with the largest number of incidents (attacks (successful or not, and plots) (N=30, 71.4 per cent) and plots (N=8, 80 per cent). It should be noted that Ted Kaczynski’s mail bomb attacks lasted from the 1970s into the 1980s, but they are counted as one attack in the 1970s. Of special concern is that since 2015 there have been 17 attacks (N=17, 40.4 per

cent), the largest number of attacks during a five-year period since the early 1970s, indicating a heightened state of political and social polarization in American society.

Table 1. Trends in frequency of lone actor terrorist incidents 1970-2019

Decade Timeframes	Incidents	Attacks	Plots	Plot Detail	Incidents
1970-1979	Beginning of the Unabomber package bomb attacks	2			2
1980-1989	No significant incident except for continuation of Kaczynski’s mail bomb attacks				0
1990-1999	Three major attacks: January 1993, the Oklahoma City bombing in April 1995 and July 1996 to January 1998	3			3
2000-2009	2002 (2): July 2002 and October 2002; 2003 – 2005 no attacks; 2006: one attack; 2007-2008: no attacks, 2009: 2 attacks	7		2 (2009)	9
2010-2019	2010: 4 attacks; 2011: two attacks; 2012: one attack; 2013: four attacks; 2015: 5 attacks; 2016: 2 attacks; 2017: 3 attacks; 2018: 4 attacks; 2019: 3 attacks	30		2 (2010); 3 (2011); 1 (2015); 1 (2016); 1 (2019).	38
1970-2019		42	10	10	52

Figure 1. Lone Actor Attack Incidents by Decades showing Attacks and Plots



2. Prevalence of One over Two-person Lone Actors

Of the 52 attacks and plots, the two-person teams who qualified as “lone actors” consisted of Timothy McVeigh and Terry Nichols (April 1995), John Allen Muhammad and Lee Malvo (October 2002), Abu Khalid Abdul-Latif and Walli Mujahidh (December 2011), Tamerland Tsarnaev and Dzhokhar Tsarnaev (April 2013), and Syed Rizwan Farook and Tashfeen Malik (December 2015). Their four attacks constituted 9.4 per cent of the total attacks, and their single plot constituted 10 per cent of the total plots.

3. Gender

In this sample, the overwhelming gender of the attackers was male, with only one female participating in an attack with her husband in an attack (San Bernardino, December 2015). This may be explained, at least in the case of the US, by the preference of radicalized females to join organized terrorist groups because these provide them with a sense of belonging to a community, as opposed to engaging in lone actor-type attacks.¹¹

4. Psychological Drivers

In terms of their psychological drivers, according to the literature, the individuals who choose to become lone actor terrorists do so because they prefer not to be “formally involved with terrorist networks that would have happily given guidance and material support.”¹² With many of these perpetrators being probably frustrated with their personal lives, (e.g. being unmarried), as well as being frustrated with their professional lives (e.g. lacking a steady job), joining militant groups would represent a way out. However, paradoxically, with their failure to even fit into such groups because of their difficulty in getting along with other members due to their “social ineptitude” and other psychological factors, they therefore become isolated lone actor attackers.¹³ This was the case with Timothy McVeigh and Terry Nichols, the perpetrators of the bombing of the Alfred P. Murrah Federal Building in Oklahoma City (19 April 1995) who were “ostracized by the Michigan Militia because they advocated ... violence.”¹⁴ With regard to several lone actor terrorists who were married, while each appeared to be motivated by different psychological drivers, they shared certain commonalities. In the case of husband-and-wife Syed Rizwan Farook and Tashfeen Malik (December 2015) and Omar Mateen (June 2016), even though each was married and had infant children, they appeared to have self-radicalized themselves into violent extremism to such an extent that they had become desensitized to the consequences of their violent attacks on the fate of their children and families.¹⁵

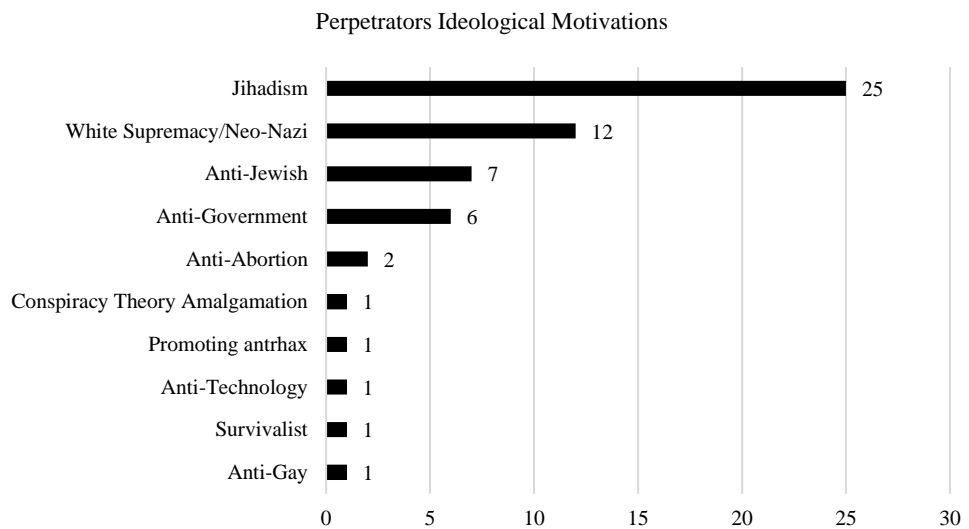
In a related psychological driver, several of the lone actor terrorists had a history of engaging in domestic violence. With men being the overwhelming majority of attackers, as Joan Smith explains, such perpetrators share a sense of perverse entitlement that causes them to “seek to control every aspect of the lives of their wives and children” without any interest in “considering their long-term welfare” or “protecting them from the consequences of [their] horrific public acts of violence. It is a chilling view of family relationships in which becoming a husband and father appears to have more to do with confirming a man’s status ... than forming close attachments.”¹⁶ Examples of lone actor terrorists who reportedly had abused their wives or girlfriends include Faisal Shahzad (May 2010),¹⁷ Tamerland Tsarnaev (April

2013),¹⁸ Robert Lewis Dear Jr. (November 2015),¹⁹ Omar Mateen (June 2016),²⁰ Cesar Sayoc Jr. (October 2018),²¹ and others.

5. Ideological Motivations

In this study's sample of 52 cases, five of the perpetrators appeared to be motivated by more than one extremist ideology, so a total of 57 ideological views are considered. Of these, Jihadism was most prevalent (N=25, 43.8 per cent), followed by white supremacy/Neo-Nazi (N=12, 21.0 per cent), anti-Jewish (N=7, 12.2 per cent), anti-government (N=6, 10.5 per cent), anti-abortion (N=2, 3.5 per cent), anti-gay (N=1, 1.7 per cent), survivalist (N=1, 1.7 per cent), anti-technology (N=1, 1.7 per cent), promoting anthrax (N=1, 1.7 per cent), and what can be considered as an amalgamation of conspiracy theories (N=1, 1.7 per cent) (see Figure 2).

Figure 2. Ideologies Motivating Lone Actor Attacks in the United States, 1970s – 2019



6. Modus Operandi: Tactics, Weapons and Target Selection

Lone actor terrorists employed a variety of tactics, weapons, and targeting.

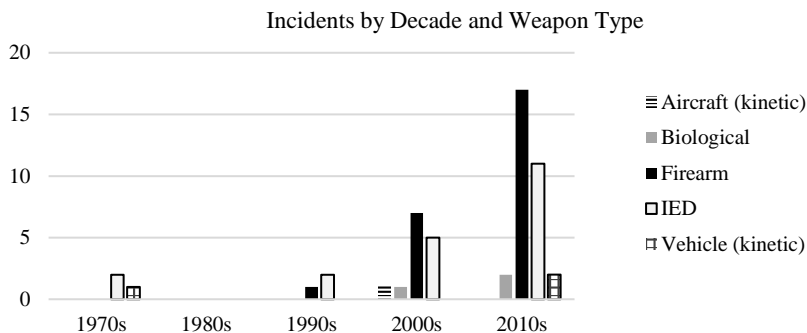
Tactics

In terms of tactics, out of the 52 attacks, nine involved serial attacks (21.4 per cent). With four of the nine serial attacks occurring in the 2010-2019 period, such tactics are expected to continue to be used by lone actor terrorists. Serial killing attacks are defined as involving “a temporal separation between the different murders” by a single perpetrator, characterized by a distinctive time period between the murders, with “cooling-off” periods.²² Note that attacks where the attackers manage to escape but continue their attack are not considered as serial attacks.

Weapons

With regard to employment of weapons, 57 weapons were used in the 52 incidents, with five of the perpetrators employing two different weapons in their attacks. Of the 57 weapons, firearms accounted for almost half: (N=28, 49.1 per cent), bombs for almost one quarter (N=14, 24.5 per cent), with the remainder accounting, with the exception of vehicle bombs, for less than 5 per cent each: package bombs (N=2, 3.5 per cent), anthrax letters (N=1, 1.7 per cent), ricin letters (N=2, 3.5 per cent), aircraft (N=1, 1.7 per cent), vehicle bomb (N=3, 5.2 per cent), vehicle ramming (N=3, 5.2 per cent), knife (N=1, 1.7 per cent), drone (N=1, 1.7 per cent), grenade (N=1, 1.7 per cent). In five of the incidents, three firearms and bombs were employed, in one a firearm and grenade, while one involved vehicle ramming and a knife. The distribution of incidents by weapon type and decade are shown in Figure 3.

Figure 3. Weapon Types employed or planned by Perpetrators by Decade



As Figure 3 shows, the relative use of firearms had increased since the 1990s. The overall number of lone actor attack incidents has increased significantly as well over the entire period covered by this study.

For comparison purposes, in the FBI's lone offender study (N=52), firearms also were the most common type of weapon (n=35, 67 per cent), followed by bomb explosives (n=14, 27 per cent), bladed instruments (knives) (4 per cent), vehicles/airplane (6 per cent).²³ Based on these two databases, the overwhelming majority of weapons used or intended to be used in these attacks were low-tech. The single high-tech weapon employed in an attack was anthrax. With Bruce Ivins, the single actor perpetrator who was viewed as the alleged sender of the anthrax letters working at a biodefense laboratory, it can be hypothesized that for lone actor perpetrators of such high-tech attacks, it would be necessary for them to be insiders or otherwise associated with sophisticated laboratories in order to produce such weaponized bio-agents.

Targeting

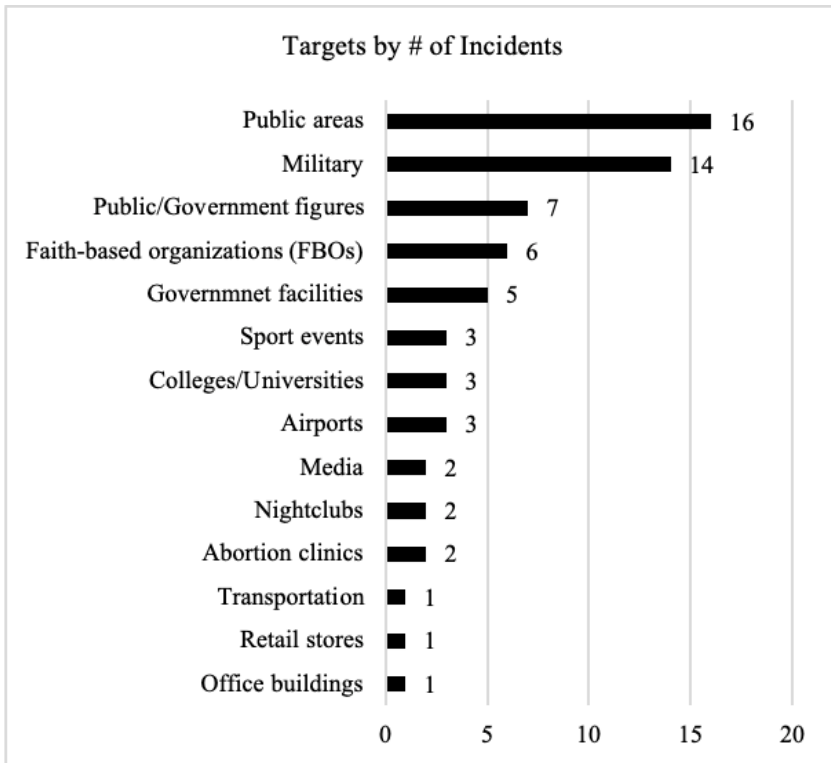
In terms of the target selection for the attacks and plots in the 52 incidents, several attacks included two or three targets, bringing the total of target types to 66 (see Figure 4). Targeting public areas was predominant (N=16, 24.2 per cent), followed by military facilities/personnel (N=14, 21.2 per cent), public/government figures (N=7, 10.6 per cent); faith-based

organizations (FBOs) (N=6, 9.0 per cent), government facilities (N=5, 7.5 per cent), airports (N=3, 4.5 per cent), colleges/ universities (N=3, 4.5 per cent), sports events (N=3, 4.5 per cent), abortion clinics (N=2, 3.0 per cent), nightclubs (N=2, 3.0 per cent), office buildings (N=1, 1.5 per cent), retail stores (N=1, 1.5 per cent), transportation (N=1, 1.5 per cent), and media (N=2, 3.0 per cent).

7. Resolution of Plots and Incidents

The 52 incidents were resolved in several ways. First, 42 attacks were executed by the attackers, with one of them, an attempted vehicular bombing in Times Square, failing to explode (May 2010). Second, of the 38 attacks carried out by single attackers, 26 of the perpetrators were arrested following their incident (68.4 per cent); eight were killed in a shootout following their attack (21.0 per cent), with one killed when the bomb exploded in his vehicle; and three committed suicide at the scene of their attack (7.8 per cent). Third, in the four attacks that involved two attackers, five were arrested and three were killed in a shootout.

Figure 4. Targets by Number of Incidents (Plots and Attacks)



Fourth, of the 52 incidents, 10 (19.2 percent) involved plots that were thwarted through US government's law enforcement undercover preemption by the arrest of the alleged perpetrators.

Preventing Lone Actor Terrorist Attacks

Based on this study's seven objectives breakdown of the magnitude of the threats posed by lone actor terrorists in the 52 incidents, half a dozen generalizable findings highlight measures that could preempt and prevent such attacks during their pre-incident preparatory phases.

First, when it comes to preventative measures, it is important to be aware of the nature of the lone actor terrorists in order to prepare to defend against them with appropriate response measures. Based on the 52 incidents, the lone actors are likely to be males, with a majority of the operatives attacking alone, although it is still possible for some of the attackers to be two-person "lone actors," with one of them the primary attacker. Also, in their modus operandi, the weapons chosen are likely to be low-tech firearms, followed by bombs. However, one should also anticipate other weapons to be employed such as vehicles, weaponized letters/packages, knives, and drones. As demonstrated by the 2001 anthrax letter attacks, however, even a single lone actor may be capable of developing certain types of high-tech weapons. Therefore, these types of sophisticated weapons need to be considered as well in formulating threat assessments of the types of weapons possibly to be employed by them. At the same time, their targets are still likely to be primarily public spaces, followed by military facilities and personnel, public and government officials, faith-based organizations (FBOs), colleges/universities, and transportation facilities such as airports.

There are a number of important findings from analyzing the relationships of the various data fields developed for this study, particularly for more effectively preventing attacks by lone actor terrorists based on the types of tactics, weapons, and targets. The study also developed a measure of relative death and injury consequences per attack that provides insight into response measures that might show the greatest impact relative to the level of effort/cost, and therefore, a rough return on investment (ROI).

It is important for counter-terrorism, law enforcement, and infrastructural protection agencies, therefore, to prioritize their response measures to upgrade the defensive posture of the facilities most at risk of being attacked by lone actor terrorists.

Second, it is crucial to identify such perpetrators' pre-incident suspicious behaviors and mindsets. This can provide early warning indicators that a suspect might be transitioning through a trajectory from hateful on- and off-line utterances to terrorist activity. This is confirmed by the FBI's lone offender study, which concluded that "prior research and operational experience support the conclusion that acts of targeted violence, including lone offender terrorist attacks, may be preventable through early recognition and reporting of concerning behavior."²⁴ As explained by the FBI's study, early warning observables about such individuals that can lead to preemptive intervention need to be noticed by bystanders, such as family members; peers such as co-workers, classmates, friends and acquaintances; employers, mental health professionals, religious leaders, and law enforcement officers; and even "strangers," such as vendors who sell them precursor materials or weapons, including observing their suspicious behavior in "online or offline public spaces."²⁵

Although detailed information about how the ten plots were foiled is not publicly available, it can be assumed that their perpetrators' early warning observables likely led to bystanders' informing their suspicions to law enforcement authorities for early preemption. Such awareness by bystanders is so important because at least two significant mass shooting attacks among the 42 cases could have been prevented if their perpetrators' extremist views had been reported by their workplace colleagues to appropriate authorities. This was the case with Major Nidal Hasan (November 2009) and with Farook (December 2015), whose extremist views were known to their colleagues. In the case of Farook and his wife, neighbors in their apartment

building had also noticed their stockpiling of weapons. While viewed in isolation, such concerning activities might not have indicated potential terrorist activity, once correlated with each other, they indicated a high risk of becoming a violent insider threat to their fellow workers. When such early warning signs become noticeable to fellow co-workers and supervisors, they need to be reported to appropriate authorities for preemptive response. As the DHS motto states: “when you see something, say something.”

Third, the need for early preemption of such perpetrators makes it crucial for law enforcement authorities to employ the practice of stings against them. As explained by Oroszi and Ellis, the FBI, which is the lead agency in investigating acts of terrorism in the US, will in such cases receive a tip from a “bystander” who might notice a susceptible individual’s expression of extremist beliefs, whether in social media or in person, that might indicate an imminent trajectory into violence, this would be followed by the deployment of an undercover agent or informant to befriend them. The FBI would arrange a sting in which the potential terrorist would have the opportunity to attempt to carry out an operation, such as detonating a bomb supplied to them. This practice is justified, Oroszi and Ellis argue, because “if the person shows a predisposition toward perpetrating the crime, ultimately chooses the crime and the target, and takes steps toward accomplishing the infraction, then they were not entrapped, they were caught.”²⁶

Fourth, several of the study’s perpetrators had been previously incarcerated for criminal activity. They were radicalized into extremism while in prison, and turned to terrorism following their release. In such cases, it is the responsibility of their parole bodies to continue watching them during their post-release phase to ensure they do not proceed to engage in terrorist violence. In the FBI study, for example, 35 offenders (70 per cent) were arrested at least once as an adult before their attack. With such lone actors likely to self-fund their terrorist attacks, law enforcement authorities need to be aware how such criminal activities, most of which, when viewed singly on their own may not necessarily indicate a link to terrorism, but that when such operatives are identified as motivated by an extremist ideology such a correlation will likely point to a nexus to a potential terrorist attack. It is at this point that these warning indicators represent the probable establishment of a seedbed for a lone actor or cell activity in that locality, thus warranting the activation of a counterterrorism target-zone investigation.

Fifth, in another preventative measure, the case of lone actors who conduct mailed letter or package bomb campaigns, advances in detection technologies now make it more likely to identify them for arrest. This was not the case when Ted Kaczynski had embarked on his weaponized package mailing spree from May 1978 to April 1995, with a single tip by his brother leading to his arrest. In the current period, technological advances in biometric fingerprint and DNA detection of such senders, including the automated capability to digitally reverse engineer the transport movement of mailed letters and packages, now make it possible for law enforcement authorities to quickly identify and apprehend such threat actors. This was the case with Cesar Sayoc, Jr., who was identified and arrested as a possible suspect within days of the biometric identification of his weaponized packages.

Sixth, a useful preventative methodology to forecast the likelihood of individuals who demonstrate a susceptibility into becoming lone actor terrorists is to apply pathways to violence (PTV) models to map their possible trajectories into violence. In these PTV models, a trajectory into violence is outlined into distinct pre-incident phases, such as triggers (a traumatic event, such as personal, professional, and ideological crises), ideation/fantasy (thinking about taking revenge of some sort to avenge a perceived grievance, including being driven by an extremist ideology), crossing a threshold into preparatory activities (such as acquiring weapons/ammunition), and approaching a target to conduct an attack. Once such early warning indicators are noticed, for instance, by an organization’s threat assessment team, these signs

need to be aggregated to form a risk score (such as low, medium, or high) for appropriate intervention and mitigation, whether by mental health counselors or law enforcement agencies.

Finally, the radicalization of susceptible individuals into becoming lone actor terrorists can be preempted through various preventative community-level approaches. These would include providing vulnerable subjects appropriate programs that would promote peaceful alternatives to the pursuit of violence to fulfill their objectives by providing them with a sense of belonging and giving a new meaning to their lives.²⁷ This is important “because the best way to stop terrorism is by preventing its causes.”²⁸

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Appendix: 52 Significant US Incidents, 1970s to 2019

To generate the chapter's findings, 52 significant incidents involving lone actor terrorists were selected covering the period from the early 1970s to late 2019.

6 August to 20 August 1974: On 6 August 1974, Muharem Kurbegovic, 31, a Yugoslavian immigrant, set off a homemade bomb at Los Angeles International Airport, killing three people and wounding 36 others. In his more than two week-long bombing spree, he also firebombed the houses of a judge and two police commissioners, as well as one of the commissioner's cars. He also burned down two Marina Del Rey apartment buildings and threatened Los Angeles with a gas attack. He was nicknamed "The Alphabet Bomber" because of his alleged plan to attack places in an order that would make an anagram of Aliens of America. "A" for airport, "L" for locker, etc.²⁹ With his announcements to the media about his forthcoming bombings, which created large-scale panic in the city, a 1,000-man Los Angeles Police Department (LAPD) task force was established to apprehend him.³⁰ He was arrested on 20 August 1974. He stood trial in 1980 and was sentenced to life in prison. He claimed his motivation was to "undermine and erode the foundation of Western Civilization, which is the Holy Bible."³¹

25 May 1978 to 24 April 1995: Ted Kaczynski, known as the "Unabomber," 36-year-old at the start of his attacks, conducted a mail package bombing campaign, which killed three people and wounded 23 others. Nine of the 16 known package bombs were delivered via the mail service to target universities, airlines, and newspapers.³²

Kaczynski was a former university professor of mathematics turned environmentalist anarchist, who believed that his bombings were necessary to call attention to how modern technologies and scientific research have destabilized society, increased psychological suffering, and eroded human freedom. While still on the loose, a break in the case occurred when, in cooperation with authorities, the New York Times and Washington Post published Kaczynski's diatribe against technological advancement (known as the "Unabomber Manifesto") on 19 September 1995, in exchange for an end to his violence. It was at that time that David Kaczynski recognized the manifesto as his brother's writing and notified law enforcement authorities. This led to the FBI-ATF task force's eventual identification of his cabin in Montana, leading to his arrest on 3 April 1996.³³ On 22 January 1996 Kaczynski accepted a plea agreement sentencing him to life imprisonment without parole.

25 January 1993: Mir Aimal Kansi, 29 (or 34), carried out a shooting spree against vehicles waiting at a red traffic light to make a left turn into the main entrance of the CIA Headquarters in McLean, Virginia. Two people were killed and three others were wounded. Kansi then returned to his vehicle, and after arriving at his apartment in Reston, Virginia, booked a flight to Pakistan, his home country. On 15 June 1997, he was arrested by a team of FBI officers at his hotel room in Dera Ghazi Khan in the Punjab province, and extradited to the US. Following his trial in the US, he was sentenced to death. Kansi had entered the US in 1991, using forged papers under his assumed name, which also enabled him to purchase a fake US green card. Reportedly, his motivation for the attack was a desire to punish the US government for bombing Iraq, its involvement in the killing of Palestinians, and the involvement of the CIA in the internal affairs of Muslim countries.³⁴

19 April 1995: Timothy McVeigh, 26, drove a bomb-laden truck to the front of the Alfred P. Murrah Federal Building, Oklahoma City, Oklahoma, and detonated a fuse setting off an explosion that destroyed the northside of the building. The explosion killed 168 people, and wounded 684 others. A Gulf War army veteran, McVeigh reportedly sought revenge against what he regarded as a tyrannical federal government that was responsible for several incidents involving the deaths of far-right militants. He was arrested shortly after the bombing, indicted on 160 state offenses and 11 federal offenses, including the use of a weapon of mass destruction. He was found guilty on all counts in 1997 and, after being sentenced to death, was

executed on 11 June 2001. Two of his fellow conspirators in the plot, Terry Nichols, 40, and Michael Fortier, 26, were also arrested and sentenced to long-term imprisonment, with Nichols playing an operational role in helping to build the explosive device.

27 July 1996 to 29 January 1998: Eric Robert Rudolph, 29, a Christian Identity White Supremacist, began conducting a series of bombings, including at the 1996 Summer Olympics, Atlanta, Georgia, abortion clinics, and a gay bar in Atlanta. These bombings killed three people and wounded 150 others. Becoming a fugitive, he was arrested in Murphy, North Carolina, on 31 May 2003. On 8 April 2005, Rudolph agreed to a plea deal to plead guilty on all charges in exchange for life imprisonment.

18 September to 15 October 2001: In the immediate aftermath of Al-Qaeda's 9/11 attacks, a batch of several letters containing anthrax bacterial spores were dropped at a mailbox in Princeton, New Jersey. Two letters, which reportedly contained a potent form of *Bacillus anthracis* (the causative agent of anthrax), arrived at the offices of Senators Tom Daschle and Patrick Leahy on 15 October.³⁵ Letters were also sent to the offices of news organizations and US Congressional lawmakers. The attacks infected 22 persons, with five of them dying as a consequence.³⁶ Several additional copycat hoax letters were reportedly sent by others. During the course of a seven-year investigation by the FBI it was concluded that Bruce Ivins, 56, a senior biodefense researcher who had worked with *Bacillus anthracis* at the US Army Medical Research Institute of Infectious Diseases (USAMRIID) in Frederick, Maryland, was the "sole perpetrator of the anthrax attacks."³⁷ The motive for the letter attacks had also not been conclusively proven, with one possibility being that Ivins may have viewed the letters' lethal impact as an opportunity to rejuvenate interest in his anthrax vaccine program that was facing closure. He committed suicide in July 2008 (reportedly fearing that he was about to be arrested).

2 July 2002: Hesham Mohamed Hadayet, 41, opened fire at the airline ticket counter of El Al, Israel's national airline, at Los Angeles International Airport, California. Two people were killed and four others were wounded. Hadayet was fatally shot by an El Al security guard. Hadayet, an Egyptian national, had a green card which allowed him to work as a limousine driver. He was married (with a child) and was living in Irvine, California.

October 2002: In what became known as the "DC Sniper Attacks" or the "Beltway Sniper Attacks," over a three weeks long period, John Allen Muhammad, 41, and Lee Boyd Malvo, 17, used their 1990 Chevrolet Caprice sedan to launch a series of coordinated sniper attacks in Maryland and Virginia. Ten people were killed and three others were wounded. Their murderous spree included armed robberies in several other states that resulted in seven deaths, with seven others wounded. After being captured and arrested, Muhammad was sentenced to death in September 2003, while Malvo was sentenced to six consecutive life sentences without parole. As one of the motivations for the shooting spree, it was reported that Muhammad - who was born as John Allen Williams and had converted to Islam in 1987 when he joined the Nation of Islam - had written jihadi diatribes against the US, with his ultimate goal to "shut things down" across the US.³⁸

28 July 2006: Naveed Afzal Haq, 30, carried out a shooting attack at the Jewish Federation of Greater Seattle building, Seattle, Washington, killing one person and wounding five others. During the incident, Haq called 911, telling the operators that "These are Jews and I'm tired of getting pushed around and our people getting pushed around by the situation in the Middle East."³⁹ He also demanded that the US withdraw its military forces from Iraq. When he walked out of the building with his hands on his head he was arrested by the police. On 15 December 2009 he was found guilty on all counts, including aggravated first-degree murder, and was sentenced to life without parole plus 120 years.

1 June 2009: Carlos Bledsoe (aka Abdulhakim Mujahid Muhammad), 23, carried out a drive-by shooting attack on US Army soldiers in front of a US military recruiting office in Little Rock, Arkansas, killing one soldier and wounding another. He drove away from the

scene, but was captured by the pursuing police. A convert to Islam, he had gone to Yemen in 2007 to teach English, but after overstaying his visa was deported to the US. He had claimed he was acting on behalf of Al-Qaeda in the Arabian Peninsula (AQAP), but it was likely he was motivated by its ideology. He was also considered to have personal problems.

10 June 2009: James Wenneker von Brunn, 88, a White Supremacist and Neo-Nazi, carried out a shooting attack at the US Holocaust Museum, in Washington, DC, killing Stephen Tyrone Johns, a Museum Special Police Officer. With other security guards returning fire, von Brunn was wounded and then arrested. On 6 January 2010, von Brunn died of natural causes while awaiting trial.

24 September 2009: Michael C. Finton, 29, a convert to Islam known as Talib Islam, was arrested by the FBI for plotting to bomb the Paul Findley Federal Building and the adjacent offices of Congressman Aaron Schock, in downtown Springfield, Illinois. After pleading guilty in a federal court on 9 May 2011, he was sentenced to 28 years' imprisonment. Finton was arrested by an FBI undercover agent who was posing as an Al-Qaeda operative.

24 September 2009: Hosam Maher Husein Smadi, 19, a Jordanian citizen staying in the US on an expired 2007 visa, was arrested by the FBI for plotting to bomb Fountain Place, a tall building in Dallas, Texas.⁴⁰ Coming under FBI radar for his suspicious activities, Smadi had been placed under continuous surveillance, including entrapping him into believing he was involved with an Al-Qaeda sleeper cell that was supplying him with chemicals for a bomb explosive. On 20 October 2010, he was sentenced to 24 years' imprisonment.

5 November 2009: Major Nidal Hasan, 39, a US Army Medical Corps psychiatrist, carried out a shooting rampage at his military base in Fort Hood, Texas, killing 13 people and wounding more than 30 others. At the end of his attack, he was wounded by the responding police, as he gave himself up. In August 2013 he was convicted in a court martial and sentenced to death. Numerous early warning red flags were missed by US government and military authorities prior to Major Hassan's shooting rampage. First, in 2007, at his fellowship program at the military's medical school, the Uniformed Services University of the Health Sciences, in Bethesda, Maryland, Major Hassan's supervisors reportedly were "'derelict' in their duties" by failing to take "appropriate action" against him by reporting to the base's security officer his extremist Islamist statements in class and to his student colleagues.⁴¹ Secondly, Major Hasan's more than several dozen email exchanges in December 2008, and January and May 2009 with Anwar al-Awlaki, a prominent Al-Qaeda cleric (and, reportedly, an operational planner, as well) based in Yemen, were known to the FBI's Joint Terrorism Task Force (JTTF) in San Diego, California, which was tracking Awlaki's communications at the time.⁴² Although Major Hasan was on active military duty and was listed as a "Comm Officer" at the Walter Reed Army Medical Center in Washington, DC, this email exchange was considered to constitute 'academic research on Islamic beliefs regarding military service',⁴³ but not sufficiently suspicious to raise warning flags of a possible radicalization that could lead to a terrorist attack. Finally, after Major Hasan was transferred to Fort Hood in June 2009, where he was responsible for counseling soldiers returning from Iraq and Afghanistan, he purchased an FN Herstal semi-automatic tactical pistol and ammunition at the Guns Galore gun store in Killeen, Texas. At the time, this did not raise any suspicions with the FBI background check that was conducted under the National Instant Background Check System when Major Hasan purchased the pistol. However, a suspicion would have been raised if that information had been shared with the JTTF in Washington, DC, which was also tracking him and was aware that he had repeatedly contacted Anwar al Awlaki over the internet.⁴⁴ Reportedly, when Major Hasan was informed in October that he would be deployed to Afghanistan it triggered the set of risky behaviors that led to his walking into a deployment processing center at Fort Hood on 5 November 2009 to conduct his shooting rampage against his fellow soldiers.

18 February 2010: Andrew Joseph Stack III, 53, deliberately crashed his light aircraft into an office building in Austin, Texas, that housed an Internal Revenue Service (IRS) field office,

killing himself and an IRS manager. Thirteen other people were wounded. His suicide note expressed his anger with the government and the IRS.

4 March 2010: John Patrick Bedell, 36, shot and wounded two Pentagon police officers at a security checkpoint at the Pentagon's metro station, in Arlington, Virginia. With the officers returning fire, the shooter was critically wounded and died a few hours later. The shooter, who had been diagnosed with a bipolar disorder, had expressed strong anti-government extremist libertarian views.

1 May 2010: Faisal Shahzad, 30, a Pakistani-American citizen, attempted to detonate a bomb inside a Nissan Pathfinder car in Times Square, New York. After Shahzad fled from the scene, the bomb failed to detonate and its smoke was noticed by a local street vendor, who alerted authorities who succeeded in disarming the bomb. Approximately 53 hours after his attempted bombing, Shahzad was arrested by US Customs and Border Protection (CBP) officers at John F. Kennedy International Airport, after boarding Emirates Flight 202 to Dubai, with his final destination Islamabad, Pakistan. Immediately following the attempted bombing, FBI investigators had quickly discovered his name while checking the identity of the Nissan Pathfinder's Vehicle Identification Number's (VIN) ownership, which they had matched to a telephone number Shahzad had provided when he returned to the US States from Pakistan in early February that year.⁴⁵ Investigators then were able to sufficiently track his activities to determine that he had purchased an airline ticket for his flight, which enabled them to place his name on a 'no-fly' list that ultimately led to his arrest on board the aircraft (just in time for it to be recalled to the gate).⁴⁶ After pleading guilty to the 10 counts against him in October 2010, Shahzad was sentenced to life in prison. Although he had undergone training in bomb-making and the use of weapons at a camp run by the Pakistani Taliban in Waziristan, along the Afghan border, he was the sole operative in his operation.

27 October 2010: Farooque Ahmed, 34, a Pakistani American from Ashburn, Virginia, was arrested by the FBI for plotting to bomb Washington Metro stations at Arlington cemetery, Pentagon City, Crystal City and Court House. On 11 April 2011, after pleading guilty, he was sentenced to 23 years in prison. Ahmed had told his attack plans to an FBI undercover agent who had informed him that he was an Al-Qaeda operative.

October and November 2010: Marine Corps reservist Yonathan Melaku, 22, a naturalized American from Ethiopia and Marine Corps Reserve Lance Corporal, was arrested for carrying out a series of drive-by shootings with a rifle at several military facilities in Northern Virginia. These included the Pentagon, Marine and Coast Guard recruiting offices, and the National Museum of the Marine Corps, in Quantico, Virginia, as well as his attempt to desecrate graves at Arlington National Cemetery. The buildings were unoccupied during the time of the shootings. Upon his arrest, law enforcement agents found bomb making material in his possession. Melaku, who was reportedly self-radicalized into supporting Al-Qaeda, was diagnosed with schizophrenia, and was sentenced to 25 years in prison.⁴⁷

8 December 2010: Antonio Martinez (aka Muhammad Hussain), 21, was arrested and indicted for attempting to use an explosive device to remotely bomb a Catonsville, Maryland, Armed Forces recruitment center and kill military personnel. He had packed what he believed to be barrels of explosives into a sport utility vehicle that had been parked by the recruitment center, while under surveillance by the FBI, which, in a sting operation, had foiled the attack by providing him with fake explosives.

8 January 2011: Jared Lee Loughner, 22, carried out a mass shooting at an outdoor rally for US Representative Gabrielle Giffords in Tucson, Arizona. He killed six people, and injured 13 others, including Representative Giffords. He was overcome by several persons in the crowd and arrested. In November 2012 he was sentenced to life plus 140 years in federal prison. He

was diagnosed with paranoid schizophrenia, but was also driven by an anti-government rage based on various conspiratorial beliefs promoted by far-right polemicists.⁴⁸

17 January, 2011: Kevin William Harpham, 36, a lone actor white supremacist, placed a remote-controlled bomb-laden backpack on a bench along the route of a Martin Luther King, Jr. Day parade in Spokane, Washington. The backpack containing the bomb was discovered at around 9:25 am, and defused, with no one injured. The march was attended by 2,000 people. Harpham, who was arrested on 9 March 2011, was sentenced on 20 December of that year to 32 years in prison.

28 July 2011: Nasser Jason Abdo, 21, a US Army Private First Class, was arrested in Killeen, Texas, near Fort Hood; he was AWOL from his army base in Fort Campbell, Kentucky, and was arrested for planning to attack a restaurant frequented by soldiers near the Fort Hood base. Bomb-making materials were found in his motel room, including large amounts of ammunition, weapons and a bomb in a backpack.

28 September 2011: Rezwan Ferdaus, 26, of Ashland, Maryland, was arrested by the FBI for plotting to use a remote-controlled model aircraft packed with C-4 explosives to attack the Pentagon and the US Capitol Building. He was also charged with supporting Al-Qaeda. In November 2012, he was sentenced to a 17-year imprisonment.

December 2011: Abu Khalid Abdul-Latif (AKA Joseph Anthony Davis), 33, and Walli Mujahidh (AKA Frederick Domingue, Jr.), 32, were arrested and indicted for conspiring to use machine guns and grenades to kill military and civilian employees of the Department of Defense's Military Entrance Processing Stations (MEPS), located in the Federal Center South building in Seattle, Washington. Both had converted to Islam in prison and were radicalized into jihadi extremism.⁴⁹ They were sentenced to long-term imprisonment in 2013.

5 August 2012: Wade Michael Page, 40, fatally shot 6 people and wounded 4 others at the "gurdwara" (Sikh temple), in Oak Creed, Wisconsin. After he was shot in the hip by a responding police officer, Page committed suicide by shooting himself in the head. An Army veteran who had trained in psychological warfare, he had been demoted and discharged more than a decade earlier. Following his military service, he played in white supremacist heavy metal bands with names such as Definite Hate and End Apathy.

3 to 12 February 2013: Christopher Jordan Dorner, 33, a Los Angeles police officer, began a series of shooting on 3 February 2013, in Orange County, Los Angeles, and Riverside County, California. Four people were killed and three others were wounded. His shooting rampage ended on 12 February 2013, when he died during a standoff with police responders. His motivation was reportedly seeking vengeance in the form of "unconventional and asymmetric warfare" against the Los Angeles Police Department's (LAPD) officers and its families for firing him.

15 April 2013: Tamerland Tsarnaev, 26, and his younger brother, Dzhokhar Tsarnaev, 19, detonated two pressure cooker bombs near the finish line of the Boston Marathon, killing three persons and injuring an estimated 264 others. This was followed by subsequent related shootings in nearby Watertown, Massachusetts, on 19 April in which an MIT policeman was killed. With the elder Tsarnaev brother killed in the ensuing gunfight with the police while he and brother Dzhokhar had tried to flee the city, the younger Tsarnaev was wounded and arrested later that evening. He was subsequently convicted and sentenced to death at his trial in Boston in April 2015. Tamerland was considered the primary terrorist operative. Earlier, in March 2011, the Russian Federal Security Service (FSB) reportedly provided the FBI with detailed information that Tamerlan Tsarnaev and his mother Zubeidat Tsarnaeva were "adherents of radical Islam and that he was preparing to travel to Russia to join unspecified "bandit underground groups" in Dagestan and Chechnya.⁵⁰ While in Dagestan and Chechnya, he may have had contact with adherents of radical Islam, his plot was considered "lone actor" as he and his brother did not receive any direct assistance from a foreign terrorist group. Also, it is reported that Al-Qaeda's *Inspire* magazine⁵¹ had provided information enabling the

Tsarnaev brothers to build their pressure cooker bombs in Tamerlan's apartment in Cambridge, Massachusetts, which were "filled with nails, ball bearings and black powder," with the devices triggered by "kitchen-type" egg timers⁵² while reportedly unbeknownst to any of their friends and associates in a position to report such suspicious activities to the appropriate authorities.

14 May 2013: Matthew Ryan Buquet, 37, was arrested in Spokane, Washington, for mailing poisoned letters containing a crude form of ricin to a US District Judge. He was also indicted by a grand jury for mailing a threatening communication to the President of the US and developing, producing, possessing and transferring a biological toxin.

1 November 2013: Paul Anthony Giancia, 23, carried out a shooting rampage with a rifle in Terminal 3 of the Los Angeles International Airport, killing a US government Transportation Security Administration (TSA) officer and wounding seven other people. The shooting spree ended when he was wounded by responding police officers. His motivation was reportedly hatred of TSA and a New World Order conspiracy theory. On 7 November 2016, he was sentenced to life imprisonment without the possibility of parole plus 60 years.

13 April 2014: Frazier Glenn Miller, Jr., 73, of Aurora, Missouri, carried out a pair of shootings at the Jewish Community Center of Greater Kansas City and Village Shalom, a Jewish retirement community, both located in Overland Park, Kansas. Three people were killed, two at the community center and one who was shot at the retirement community. The gunman, originally from North Carolina, a Neo-Nazi activist, was arrested, convicted of murder and other crimes, and sentenced to death.

18 July 2014: Ali Muhammad Brown, 29, was arrested for four terrorism-related killings in Washington State. He had told investigators that the slayings were motivated by his Muslim faith and in revenge against the US for its "evil acts" at home and military intervention in Iraq, Syria, and Afghanistan. Between 2002 and 2004 he had engaged in bank fraud, which prosecutors had charged was in support of the al-Shabaab Somalian terrorist group.⁵³

10 April 2015: Mohammed Abdullah Hassan (previously known as John T. Booker), 20, was arrested for plotting to kill American soldiers with what he thought was a 1,000-pound bomb in a van at the Fort Riley military base in Kansas. The fake bomb was provided to him by an FBI informant.⁵⁴

17 June 2015: Dylann Roof, 21, a White Supremacist, shot and killed 9 people, wounding one other person, during a prayer service at the Emanuel African Methodist Episcopal Church in downtown Charleston, South Carolina. He was arrested, after escaping from the scene of the attack.

16 July 2015: Mohammad Youssef Abdulazeez, 24, opened fire at a recruiting station and a naval reserve center in Chattanooga, Tennessee, killing four Marines and a Navy petty officer. He was killed in a shootout with the responding police officers. Abdulazeez was an electrical engineer and martial arts fighter, who had become radicalized into jihadi extremism.⁵⁵

1 October 2015: Chris Harper-Mercer, 26, a student at The Umpqua Community College, near Roseburg, Oregon, carried out a shooting rampage at the college, killing an assistant professor and eight students in a classroom, as well as wounding eight others. After being wounded in a shootout with the responding police, he killed himself. Mercer reportedly had mental health problems and was obsessed with guns and religion and had leanings toward white supremacy.⁵⁶

27 November 2015: Robert Lewis Dear Jr., 57, carried out a mass shooting attack at a Planned Parenthood clinic in Colorado Springs, Colorado. Three people were killed and nine others were wounded. After a standoff that lasted five hours, police SWAT teams crashed armored vehicles into the lobby, forcing the attacker to surrender. The attacker had also placed multiple propane gas tanks near his car, which he may have planned to fire on to trigger an

explosion. An anti-abortion extremist, Dear was found to be delusional and incompetent to stand trial.

2 December 2015: Syed Rizwan Farook, aged 28, and his wife, Tashfeen Malik, 27, conducted a shooting rampage at the husband's office's holiday party at the Inland Regional Center, in San Bernardino, California, killing 14 people and injuring 22 others. After fleeing the scene, both were killed in a shootout with police later that day. Farook was employed as an environmental health specialist at the San Bernardino County public health department. Neighbors of the couple, who lived in nearby Redlands, had reported afterwards that they had seen them "acting suspiciously in recent weeks," working late at night in their house's garage and receiving numerous packages that appeared out of place. However, they did not report their suspicions "for fear of racial profiling." The only signs of outward radicalization towards extremism, his co-workers stated, were comments to friends about not wanting to remain in the United States (his parents had hailed from Pakistan) and that upon his return from a visit to Saudi Arabia in July 2014, with Malik, his fiancé, he began growing a long beard (a possible sign of Salafist extremism). In his personal dealings with co-workers, with whom he was not overtly friendly, he had engaged in ideological arguments with a co-worker, who did not regard his views as especially extremist. Nevertheless, it appeared that Farook and Malik had long planned their attack, accumulating a large arsenal of highly lethal firearms and ammunition at their apartment, which they shared with Farook's mother, who was divorced from her husband, whom she regarded as abusive. It came as a surprise to Farook's co-workers, therefore, that he and his wife had reportedly maintained a social media relationship with other violent jihadi extremists and that they had posted their allegiance to the Islamic State on the day of their attack.

12 June 2016: Omar Mateen, 29, conducted a shooting rampage at the Pulse Nightclub, in Orlando, Florida, killing 49 persons and wounding 58 others. He was killed in a shootout with the responding police. He had become radicalized into violent Islamist extremism while working at his security company, G4S, where he was employed as a guard for a period of nine years. His radicalization into extremism was known to his co-workers and even the FBI (which did not judge him a security threat), but little was done to remove him from his position as a security guard. In 2013, for example, he was interviewed by the FBI after making inflammatory comments to a co-worker that gave the impression he had possible terrorist ties with Al-Qaeda. In 2014, he again came to the FBI's attention, when they interviewed him over potential connections with Moner Abu Salh, an American suicide bomber in Syria, who had lived near him in Vero Beach, Florida. Despite these potential red flags, however, his firm still kept him as an employee, although he was transferred to a position that did not require holding a firearm at a kiosk at a gated community in Palm Beach County. In his relations with fellow co-workers, however, Mateen was the subject of several complaints over having "issues and just constant anger" and making frequent homophobic and racist remarks. In another instance of early warning "dots not being connected," it was reported that in 2007 he was fired by the Florida Department of Corrections after he had threatened to bring a gun to work. This was significant because if it had involved serious misconduct and had it been revealed it would have hindered his future prospects of working for a security company such as G4S. Finally, an ex-wife had accused him of beating her, but this, too, was reportedly not revealed to G4S.

17 to 19 September 2016: Ahmad Khan Rahimi, 28, planted several bombs in the New York metropolitan area, including at a seaside marathon in New Jersey. Three of the bombs exploded and several did not explode. The three bombings wounded 31 people. The bombs included a pipe bomb and a homemade pressure bomb. On 19 September Rahimi was captured following a shootout with the responding police. He was reportedly influenced by Al-Qaeda's Islamist ideology. In February 2018, he was sentenced to life without parole.

28 November 2016: Abdul Razak Ali Artan, 18, carried out a car ramming and stabbing attack at Ohio State University, in Columbus, Ohio, in which he injured 11 persons. Artan was

a student at the university. The incident ended when a responding police officer shot him dead. That morning he posted a rant on his Facebook page in which he described how he was “at boiling point” and “just couldn’t take it anymore.” He added, “I am sick and tired of seeing my fellow Muslim brothers and sisters being killed and tortured EVERYWHERE. By Allah, I am willing to kill a billion infidels in retribution for a single disabled Muslim.” In the post, Artan also praised American-born Al-Qaeda leader Anwar al-Awlaki, who was killed in a CIA drone strike in 2011 and has been cited as the inspiration for other terror attacks on American soil.

12 August 2017: James Alex Fields Jr., 20, deliberately drove his car into a crowd of people in Charlottesville, Virginia. They were demonstrating peacefully against a protest by a white supremacist rally. One person was killed and 28 were wounded. The driver had espoused Neo-Nazi and white supremacist beliefs. He was arrested for federal hate crime charges, and after being convicted in trial, sentenced to life imprisonment.

31 October 2017: Sayfullo Habibullaevi Saipov, 29, drove his rented pickup truck from Northern New Jersey, proceeded across the George Washington Bridge, and then drove south into lower Manhattan, where he drove for about a mile along a bike path, mowing people along the way, killing eight and wounding 11 others. The vehicle ramming attack ended when he crashed into a school bus. He then jumped out of his wrecked truck brandishing two imitation guns, and shouted, “Allahu Akbar” (Arabic for “God is Greater”) before a New York Police Department (NYPD) officer shot him. In the rental truck, authorities retrieved a handwritten note that, translated into English, said: “ISIS Lives Forever.”

11 December 2017: Akayed Ullah, 27, attempted to detonate an improvised, low-tech, explosive device, which was attached to his body, in a crowded underground corridor of the subway system that connects Times Square to the Port Authority Bus Terminal, in midtown Manhattan, New York. The bomb only partially exploded, injuring the bomber and three bystanders, who sustained minor injuries. The bomber was quickly arrested and hospitalized. It is reported that Ullah began his radicalization into violent extremism in 2014, when he started viewing extremist Islamic State materials on the Internet. He was reportedly influenced by the sermons and writings of Moulana Jasimuddin Rahmani, an extremist Muslim preacher in Bangladesh, who is currently imprisoned for leading a banned group called Ansarullah Bagla Team. It was reported that Ullah had discussed Rahman’s writings with his wife during his September 2017 visit.

23 March 2018: Hafiz Kazi, 51, an Islamist extremist, drove a KIA minivan through the main gate of Travis Air Force Base, near Fairfield, California. His van was filled with five propane tanks, three plastic one-gallon gas cans, several lighters, three phones and a gym bag with personal items, which were deliberately ignited. With flames inside the van, the vehicle crashed shortly after going through the gate. The driver was fatally burned.

3 October 2018: William Clyde Allen III, 39, a Navy veteran from Utah, was arrested in connection with weaponized letters suspected to contain ricin which were mailed to Defense Secretary James Mattis and Chief of Naval Operations Admiral John Richardson; FBI Director Christopher A. Wray; CIA Director Gina Haspel; and Secretary of the Air Force Heather Wilson. The envelopes containing castor seeds, the base of a deadly toxin, were detected during security screening at a mail processing center on the Pentagon campus. He was reportedly a survivalist who believed that World War III was imminent.⁵⁷

Mid-to-Late October 2018: Cesar Sayoc, Jr., 56, of Aventura, Florida, embarked on a several weeks long mailing of 16 explosive-laden packages against two former presidents, public figures, and media organizations such as CNN. He reportedly had a long criminal history. On 26 October, he was arrested and charged with federal crimes, including interstate transportation of an explosive.⁵⁸

27 October 2018: At around 9:54 am, just as the morning Sabbath service had begun at the Tree of Life synagogue in Squirrel Hill, Pittsburgh, Pennsylvania, Robert Bowers, 54, carried out a shooting rampage, killing 11 and wounding seven others. He used an AR-15 style semi-

automatic rifle and three Glock .357 sig handguns. Bowers, a Neo-Nazi White Supremacist, was apprehended when he gave himself up to the responding police at 10:08 am (after wounding 4 police officers).

27 April 2019: John Timothy Earnest, 19, used an AR-15 style rifle to carry out a shooting rampage at a synagogue, in Poway, California, killing one person and wounding three others. Upon fleeing the scene, he called 911 to report the shooting, and was apprehended by a police officer in his car approximately two miles from the synagogue.

3 August 2019: Patrick Crusius, 21, carried out a mass shooting attack at a Walmart department store in El Paso, Texas, killing 22 people and wounding 24 others. He was arrested shortly after the shooting and charged with capital murder. A manifesto he had posted on the online message board 8chan shortly before the attack expressed white nationalist and anti-immigrant themes, including citing the Christchurch mosque shootings, as well as a right-wing conspiracy theory known as 'The Great Replacement', as motivation for the attack.

28 August 2019: William Santino Legan, 19, opened fire with a WASR-10 semi-automatic rifle at the annual Garlic Festival in Gilroy, California, killing three people and wounding 12 others. He bypassed security at the festival's entrance by cutting through a fence to gain entry. Once inside, he sprayed gunfire on the crowd, but within a minute of firing his first shots, he was shot and killed by three uniformed police officers who were on patrol at the festival. Legan had grown up with his family in the local area. Afterwards, investigators who had searched his house found literature on white supremacy, which may have been the ideological basis for the attack.

1 November 2019: Richard Holzer, 27, of Pueblo, Colorado, was arrested by the FBI after he had allegedly accepted what turned out to be phony explosives from undercover agents to bomb the Temple Emanuel synagogue in Pueblo.⁵⁹ Holzer's postings on Facebook had promoted white supremacy and violence, expressing his wish to kill Jews, Hispanics and pedophiles.⁶⁰

Endnotes

¹ The term “lone actor” is used in this chapter. It is recognized that “lone wolf” is a popular usage to characterize what the FBI refers to as “lone offender” attacks. Since the term “lone actor” is also widely used in the literature and encompasses “lone wolf” and “lone offender” type attacks, and is value neutral, it is applied in this article to characterize the type of solo or single offenders examined in the assessment of the threats they present and how to counter them.

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