

DOMESTIC LONE WOLF TERRORISTS: AN EXAMINATION OF PATTERNS IN
DOMESTIC LONE WOLF TARGETS, WEAPONS, AND IDEOLOGIES

by

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DEDICATION

This is dedicated to my mother, Sharon L. Gall, whose love and support was unwavering and memory continues to inspire me.

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I would like to thank my Chair, Allan Turner. Your knowledge, mentorship, and support through this seemingly endless process, were the keys to my successful completion.

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ABSTRACT

DOMESTIC LONE WOLF TERRORISTS: AN EXAMINATION OF PATTERNS IN DOMESTIC LONE WOLF TARGETS, WEAPONS, AND IDEOLOGIES

Julie M. Gall, Ph.D.

George Mason University, 2014

Dissertation Directors: Dr. C. Allan Turner and Dr. Brian Lawton

This study identified patterns in domestic lone wolf terrorist attacks by examining data from the RAND Database of Worldwide Terrorism Incidents (RDWTI) and the University of Maryland Study of Terrorism and Responses to Terrorism (START) Global Terrorism Database (GTD). To date, the databases have captured information on 92 separate attacks by domestic lone wolf terrorists. This study reviewed the incidents and identified patterns in the targets attacked, weapons utilized, and ideologies of the domestic lone wolves; emerging patterns from the other variables of interest; and the lethality of single-incident versus multi-incident domestic lone wolves. Descriptive statistics, cross-tabulations, and graphs were utilized to analyze and display the findings.

The analysis yielded several noteworthy findings. Contrary to what was hypothesized, in most cases the ideology held by a domestic lone wolf did not predict the type of target attacked. Second, explosive devices were used in more than 50% of

domestic lone wolf attacks. Whereas the use of explosive devices increased in the 1990s, firearm usage was fairly stable over the time period examined. Lastly, single incident domestic lone wolves (i.e., terrorists who engaged in only a single attack prior to death or apprehension) were found to be more lethal, in terms of casualties, than multi-incident domestic lone wolves.

Future research should investigate the relationship of these findings to the behavior of larger terrorist organizations. If, in fact, domestic lone wolves do not behave, hold ideological motivations, or target venues in a similar fashion to group terrorists, then the counterterrorism and intelligence communities, as well as policy makers, should pay additional attention to this unique breed of terrorists, since their actions may not be predictable on the basis of how better-known terrorist organizations act.

CHAPTER 1: Introduction

A section of the Supermax prison in Florence, Colorado, called “Bomber’s Row,” is home to a number of notorious American terrorists. Among its most noteworthy, past and present, are Theodore Kaczynski, Timothy McVeigh¹, and Eric Rudolph. There’s some irony in the fact of this little community of home-grown terrorists residing in an underground prison in Colorado. Now separated by thick walls, each terrorist already had been virtually as isolated before they were incarcerated. Being a member of a group was never in the cards for any of them.²

Over the past several years, attacks by Americans on their own fellow citizens in Maryland, Texas, and Virginia have suggested that domestic lone wolf terrorist incidents may be becoming more frequent, visible, and deadly. No longer are hooded men mailing seemingly innocuous packages to targets, nor are they hiding for years in rural cabins. Today’s domestic lone wolves brazenly hold citizens hostage, open fire on military bases, and assault employees outside federal buildings.

The attention of the federal government and the American people after 9/11 “shifted dramatically away from the threat posed by domestic terrorist lone wolves” (Turchie & Puckett, 2007, p. 274). At that time, the nation was reeling from the deadliest attack ever experienced on American soil. Thousands of lives were lost and it was perceived that America’s greatest enemies lived on the other side of the world, not next

¹ Timothy McVeigh was executed in 2001 (Kushner, 2003).

² Turchie & Puckett, 2007, p.1.

door. This shift in focus was dramatic; prior to 9/11 the images of domestic terrorists such as Theodore Kaczynski and Eric Rudolph had been etched into the minds of first responders and the public alike. Now burning buildings and individuals of Middle Eastern descent are more commonly associated with the term “terrorism.” However, as this study addressed, it appears that the threat of domestic lone wolves has returned.

This study examined data from the RAND Database of Worldwide Terrorism Incidents (RDWTI) and the University of Maryland Study of Terrorism and Responses to Terrorism (START) Global Terrorism Database (GTD) to identify patterns relating to domestic lone wolf terrorist attacks. To date, the databases have captured information on 92 separate attacks by domestic lone wolf terrorists. This study reviewed the incidents and identified patterns in the targets attacked, weapons utilized, and ideologies of the domestic lone wolves; emerging patterns from the other variables of interest; and the lethality of single-incident versus multi-incident domestic lone wolves. Lastly, it offers interpretations as to understand what these findings may mean for policy makers.

Purpose of the Study

Although public concern regarding lone wolves waned after 9/11, as attention shifted to international threats, more recently the media, public, and government have recognized them as a threat once more. In 2011 Janet Napolitano, Secretary of the Department of Homeland Security, told a congressional hearing that domestic lone wolf terrorism was a growing threat to the nation (“Understanding the Homeland Threat Landscape,” 2011). Secretary Napolitano stressed that there was no reason to think that domestic lone wolf attacks would not continue. Her warning has proven accurate. In

recent years, the United States has seen lone gunmen hold citizens hostage, such as in the Discovery Building attack (START GTD, 2012), and open fire on innocent men and women, as in John Patrick Bedell's 2010 attack on the Pentagon (START GTD, 2012).

Local agencies such as the New York Police Department (NYPD) also recognize lone wolves and homegrown terrorists as an ongoing concern. Moreover, the likes of Theodore Kaczynski and Eric Rudolph still linger in the minds of first responders and the public (Associated Press, 2005; Kelly, 2011). As such attacks are likely to recur, first responders must prepare for such events and researchers must seek to create effective policies aimed at detection and prevention (Eby, 2012; Kelly, 2011).

Self-radicalized lone wolf terrorists, or those who act on their own without being influenced by an outsider (Crone & Harrow, 2011), are on an upward trend in the United States and pose a threat to domestic security (Bates, 2012). America long believed that it was immune from the type of terrorist radicalization often associated with European countries, but this is not the case. Bergan and Hoffman (2010) argue that the United States and Europe are now seeing similar numbers of incidents involving lone wolves and homegrown radicals. Furthermore, the domestic terrorist threat does not stem from one group or ideology; violent Islamic extremists, anarchists, and white supremacists all present cause for concern ("Confronting the Terrorist Threat to the Homeland," 2007; U.S. Senate Committee on Homeland Security and Governmental Affairs, 2008). Although the United States should remain concerned with individuals who are sympathetic to Islamic causes, lone wolves need not hold any particular ideology in order

to inflict harm (Marks, 2003). Domestic lone wolf terrorists come in many ideological shapes, from neo-Nazism to eco-terrorism.

Individual terrorists are less likely to be detected by law enforcement than those with ties to known terrorist organizations. Hewitt (2003) suggests that “many law enforcement officials and terrorism analysts think that such loners will pose the greatest threat to the security of the United States over the next few years, since they are hard to identify before they act, and hard to track down afterwards” (p. 79).

Scholars on domestic lone wolf terrorism contend that research on the topic remains extremely scarce (Eby, 2012; Pantucci, 2011; Spaaij, 2010). Policies created without a full understanding of the problem are less likely to be effective in preventing lone wolf terrorism. The limited research in the field is worrisome, as the existing literature suggests that lone wolf attacks are more lethal than those undertaken by terrorist organizations (Phillips, 2011). Working and planning alone allows lone wolves to accomplish acts that would likely be anticipated by law enforcement if attempted by organized groups.

Hewitt (2003) indicates that approximately one in six victims of terrorist attacks have been killed by individuals acting alone. Their lethality suggests the need for additional research into their activities. Like terrorist networks, lone wolves seek to further a political, social, or other cause through the use of threatened or actual physical force (Phillips, 2011). However, it is important to differentiate the actions of lone wolves from those of lone assassins or non-terrorist criminals. The key difference is that the lone wolf’s end goal, or motivation, is shrouded in a political, ideological, religious, or social

cause that inspires his or her actions (Spaaij, 2010). The actions of lone assassins, non-terrorist criminals, or individuals with a mental illness, on the other hand, may be motivated by a convenient opportunity or a momentary impulse. These differences will be further discussed in the following literature review.

The purpose of this study was to conduct an in-depth analysis of domestic lone wolf data and identify patterns in domestic lone wolf targets, weapons, and ideologies. As there is no reason to expect the phenomenon of lone wolves to cease, and as the literature on their actions is so limited, identification of patterns in their targets, weapons, and ideologies is beneficial. Such patterns could prove useful to both the law enforcement and intelligence communities as a means of identifying potential targets, prevalent weapons used, and ideologies of domestic lone wolves. Ideally, this knowledge will assist agencies seeking to create effective policies aimed at detection and prevention.

Research Questions

This study examined the following research questions relating to domestic lone wolf terrorist attacks:

- What are the patterns of domestic lone wolf attacks, specifically with regard to the targets attacked, weapons used, and motivating ideologies?
- What patterns emerge over time in relation to the variables of interest?
- In terms of lethality, are single-incident domestic lone wolves more or less deadly than multi-incident terrorists?

Organization of the Dissertation

Following the introductory chapter, Chapter 2 provides a review the relevant literature, including definitions of the terms *terrorism*, *domestic terrorism*, and *lone wolf*

terrorism, as well as a discussion of major themes in the lone wolf literature, case studies, the variables examined in this study, and supporting theoretical foundations. Chapter 3 discusses the methodology used to analyze the available data. The results of the analysis are reported in Chapter 4. Lastly, Chapter 5 offers a discussion of the results, limitations of the study, and suggestions for future research.

CHAPTER 2: Literature Review

This literature review defines the terms *terrorism*, *domestic terrorism*, and *lone wolf terrorism*. It offers a brief discussion of the origins of terrorism and the contextual nature of the term. The chapter also provides discussion of some of the major themes in the lone wolf literature, including the concept of Leaderless Resistance and the work of William Pierce.³ Following this, two case studies of domestic lone wolf terrorists (Theodore Kaczynski and Eric Rudolph) are presented. The review concludes with a discussion of the primary variables examined in this study: weapons, targets, ideology, and lethality, and supporting theoretical framework.

Unfortunately, extensive literature on this subject does not exist; the vast majority of the literature on terrorism focuses on organized groups. Albeit not a new phenomenon, lone wolf terrorism has only recently come to the attention of most terrorism scholars. This study is intended to make a contribution to the existing literature.

Definition of Terrorism

The term *terrorism* is difficult to define. Over the years, scholars have come to differing conclusions as to what actions fall under the umbrella of terrorism. Moreover,

³ William Pierce was the head of a neo-Nazi group, the National Alliance, a follower of George Lincoln Rockwell, and a professor of physics at Oregon State University (Kushner, 2003). He is often referred to as Andrew McDonald, his pen name, and the name he published *Hunter* and *The Turner Diaries* under. These works of fiction depict domestic lone wolves who engage in acts of terrorism in the name of white supremacy.

the general public's interpretation of the word also wavers; one has only to refer to the cliché "one man's terrorist is another man's freedom fighter" to understand the complexity of the word (Fagin, 2006). Nevertheless, this section reviews the history behind the term and the U.S. Federal Code's definition of the word.

Before there was a word to describe terrorist actions, terrorism existed. The origin of the modern definitions of the terms *terror*, *terrorism*, and *terrorist* are rooted in the French Revolution's Reign of Terror, which occurred from 1793 to 1794 (Fagin, 2006). In the late eighteenth century, common people were burdened by the taxes placed upon them by the government, but from which the nobility were excluded. Those who challenged these taxes and France's rigid class system believed that violent action was the only means of ending their repression (Fagin, 2006). Although they used violence as a means of demonstrating their desires, at the time their actions had a positive connotation. These revolutionaries welcomed being described as such (Hoffman, 2006; White, 2002). This positive understanding of terrorism, however, did not last.

By the early twentieth century, "terrorism was used to describe the violent activities of a number of groups including: labor organizations, anarchists, nationalist groups revolting against foreign powers, and ultranationalist political organizations" (White, 2002, p. 5). The modern interpretation of the word is pejorative; terrorism is now synonymous with violence, hate, and destruction (White, 2009). Terrorism conjures up images of devastation, violence, and death, all of which are not consistent with the French revolutionaries' hopes for tax equity and legitimate government.

As time passes and as new, tragic terrorist events occur, the definitions of terror, terrorism, and terrorists continue to evolve, making a single, widely accepted understanding elusive to scholars. Though the definitions of terrorism may vary, violence and political motives remain constant and crucial elements.

U.S. Federal Code Title 22, Chapter 38, Section 2656

According to the U.S. Code, “the term ‘terrorism’ means premeditated, politically motivated violence perpetrated against noncombatant targets by subnational groups or clandestine agents” (22 U.S.C. § 2656). This statute requires that, to be legally classified as terrorism, an action must involve preplanned violence against citizens or other non-military targets, motivated by political ideologies. Given the rigidity of this definition, more tailored definitions of domestic terrorists and lone wolves are provided in the following sections. Once again, it is important to note that scholars have not agreed on a single definition of domestic lone wolf terrorists (Spaaij, 2012). Most often, researchers expand upon an existing definition or create a new one so as not to exclude data points that do not fit precisely within a standard definition.

U.S. Federal Code Title 18, Chapter 113B, Section 2331

Title 18 of the U.S. code provides a definition of the term domestic terrorism. In order for an attack to be classified as domestic terrorism, per the Code’s definition, the following criteria must be met. The attack must:

- (A) involve acts dangerous to human life that are a violation of the criminal laws of the United States or of any State;
- (B) appear to be intended –
 - a. to intimidate or coerce a civilian population;
 - b. to influence the policy of a government by intimidation or coercion; or

- c. to affect the conduct of a government by mass destruction, assassination, or kidnapping; and
- (C) occur primarily within the territorial jurisdiction of the United States.

Simply put, domestic terrorism meets the requirements of the general definition of terrorism, but stipulates that the acts also must occur within the jurisdictional boundaries of the United States. Figure 1 demonstrates the three key components of domestic terrorism, or the elements that separate terrorists from groups or individuals who engage in hate crimes (Terrorism Trends Conference, February 2013).

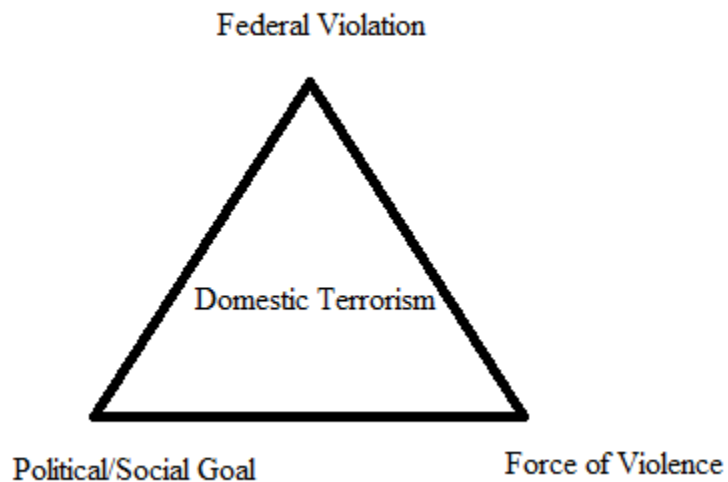


Figure 1. Domestic Terrorism Triangle

The term *domestic terrorism* is often used synonymously with *homegrown terrorism*. However, there are nuanced differences between the two definitions. Homegrown terrorists are Americans who are radicalized within American borders and

commit terrorist acts on American soil (Kilroy, 2008). Domestic terrorists who commit attacks on American soil did not necessarily become radicalized within the United States. The common denominator between the two is the location of the event (i.e., within the jurisdictional boundaries of the United States). Enders and Sandler (2005) suggested that perpetrators of domestic terrorism are homegrown, but per the U.S. Code's definition that assessment is perhaps too restrictive. As discussed above, there is no mention in the definition as to where a domestic terrorist must be radicalized in order to fall within the purview of the term (22 U.S.C. § 2656). Thus, a homegrown terrorist will always be a domestic terrorist, but a domestic terrorist may not always be homegrown.

Both scholars and the U.S. Code approach the question of defining the "host country" in the same manner, indicating that it is the place where domestic terrorism is initiated and concludes. The host country thus faces the greatest ramifications of domestic incidents (Enders & Sandler, 2005). Not only do the events occur within their jurisdictional boundaries, but they are also responsible for housing the terrorist. This is concerning, as some scholars have argued that domestic terrorists are responsible for the majority of terrorists attacks in the United States.

From his examination of terrorism data, Kilroy (2008) suggests that homegrown (domestic) terrorists are responsible for 77% of all terrorist incidents in the United States, far outnumbering attacks by individuals from foreign counties (Kilroy, 2008). These attacks were linked to individuals with ideologies formed around religious and racial

differences.⁴ This finding only underscores the seriousness of the threat posed by domestic terrorists and the need for additional research on the subject.

Definition of Domestic Lone Wolf

The U.S. Code does not include a specific definition of “lone wolf terrorism.” Since there exists no standardized profile of a lone wolf terrorist, it is not surprising that such a definition has not been enacted into law (Bakker & de Craaf, 2010). However, academics working in the field have reached a general consensus on the meaning of the term. The most frequently cited definition comes from Burton and Stewart (2008), who define a lone wolf terrorist as “a person who acts on his or her own without orders from – or even connections to – an organization” (p. 17). For the purpose of this study, domestic lone wolf terrorists are defined as *standalone operatives who do not belong to an organized terrorist group nor are sleeper agents⁵, and who attempt or carry out violent acts against noncombatants to achieve an ideological, political, social, or religious goal.*⁶

In addition to the fact that most lone wolves carry out their attacks independent of any order from an established group, most of them were never part of an organized terrorist group. In other words, lone wolves have not defected, nor are they sleeper agents of larger groups; the very nature of a lone wolf terrorist suggests that the person was never part of a group – in contrast to the habits of their fur-covered, four-legged

⁴ For example, this would include terrorists sympathetic to Christian Identity movements, militia movements, those promoting Black supremacy, or those that sanction violence as a means of expressing religious differences (Kilroy, 2008).

⁵ A sleeper agent is defined as a member of a larger group that remains dormant until given an order to carry out an attack (Burton & Stewart, 2008).

⁶ Furthermore, at the time of the attack, the individual did not participate in, nor was a member of an organized terrorist network.

namesakes. As Spaaij (2012) explained, the animals referred to as lone wolves have left a pack and chosen to travel alone. Lone wolf terrorists, on the other hand, likely never operated within a network, choosing instead to operate individually. Thus, lone wolves are markedly different from an operative embedded in a sleeper cell. A sleeper will infiltrate an organization, but will remain dormant until given a signal to act. These individuals, though ultimately acting alone, are part of a larger network and are often controlled by a hierarchal leader (Burton & Stewart, 2008). On the other hand, lone wolves are unique in their standalone nature.

Despite acting alone, lone wolves may take “ideological cues from broader movements or groups espousing extremist ideas,” or they may be generally sympathetic to extremist movements (Bjelopera, 2012, p. 53). Lone wolves may develop a personal ideology loosely based on or influenced by a particular terrorist agenda, even if they do not subscribe to an organized terrorist network. There may be instances in which a lone wolf had been part of a group but, prior to the attack, severed all ties from that organization. If so, the former connection could explain the actor’s ideology and perhaps also how the skills necessary for carrying out a mission were acquired. However, this appears to be an exception and not the norm. Although the definition of lone wolf is generally agreed upon by scholars, a codified definition does not exist.

Lone wolves utilize a variation of Beam’s (1992) tactic of “Leaderless Resistance” (further discussed below), a method of furthering an organization’s cause (in this case, a personal ideology) through the use of individual operators that appear to be unaffiliated with the aforementioned organization (Bakker & de Craaf, 2010; Spaaij,

2012). As suggested, lone wolves do not require outside intervention or direction; they are “self-motivated and self-educated homegrown terrorists ... who simply feel as though they have been slighted and are waging their own personal jihad” (Ezell, Behr, & Collins, 2012, p. 4). In most instances, lone wolves are not radicalized through a recognized terrorist organization, nor are they trained or influenced by powerful leaders (Horgan, 2005; Kushner, 2003). Lone wolves develop their ideologies, plans, and actions by themselves. This independent action is often difficult for scholars from other fields to grasp, given that terrorism is most commonly understood as a group activity (Horgan, 2005; Instituut voor Veiligheids-en Crisismanagement, 2007; Moghaddam, 2005).

Lone wolf terrorist attacks are often difficult to disentangle from the actions of lone assassins or individuals who engage in hate crimes. What separates the lone wolf terrorist from other singular assailants is an end goal shrouded in a political, ideological, religious, or social cause that directs his or her actions (Spaij, 2010). Lone assassins or individuals who engage in hate crimes may have a much more limited or individualized motive for their crime, such as intolerance for different races, ethnicities, or lifestyle choices. When a defined end goal for engaging in a crime appears non-existent (e.g., in cases of a random act of violence) or is something other than the ideologies outlined in the definition of terrorism, the perpetrator cannot be labeled a lone wolf terrorist (Burton & Stewart, 2008).

From their experience on the Federal Bureau of Investigation UNABOM Taskforce, as well as analyses of similar case studies, Turchie and Puckett (2007) identified the following criteria for defining lone wolves:

- (A) the terrorist act was conceived and executed by one or a few individuals not operating in the context of an organized group;
- (B) there was conscious acceptance of lethal violence as a means of achieving an ideological, political, or religious goal;
- (C) although personal motivations for lethal violence might be present, accomplishing a larger ideological, political, or religious goal was always a primary objective;
- (D) there was conscious acceptance of the possibility of death or injury to parties not associated with the primary target;
- (E) it did not appear that the perpetrator intended suicide; and
- (F) homicide resulted from the act, or would have resulted had law enforcement or other circumstances not intervened. (p. 240)

Most of these criteria are in alignment with the U.S. Code's references to terrorist violence as a means of achieving one's goal and as the result of a personal ideology. Turchie and Puckett (2007) differ by including factors related to the outcome of the attack. Moreover, they propose that lone wolf attacks may be committed by more than a single individual and still meet the criteria for this category. As mentioned previously, for the purpose of this study a domestic lone wolf terrorist is to be considered a standalone operative.

Spaaij (2012) also argues for more specific criteria to define lone wolf terrorism. The author suggests that in order to meet the threshold for lone wolf terrorism, perpetrators must (a) operate individually, (b) not belong to an organized terrorist network, and (c) conceive their tactics and targets without influence or direction from any outside command. Although he does not present any specific description of goals or outcomes, Spaaij clearly describes lone wolves as operating completely independently, in accord with the working definition of this study.

Brief History of Lone Wolf Terrorism

Lone wolf terrorism is not new to the United States and is certainly not new to the world. “Acts of terrorism carried out by single individuals can be found, for instance, in nineteenth century anarchism, with some proponents considering individual acts of violence to be an important part of revolutionary activity” (Spaaij, 2012, p. 23). These individuals have proven just as effective (i.e., deadly) as organized groups (Simon, 2013; Spaaij, 2012). Single operators have wreaked havoc on buildings, such as the National Museum of the Marine Corps or the Internal Revenue Service Building in Austin, Texas, and on communities such as the cities and towns targeted by Joseph Paul Franklin (START GTD, 2012).

Many of the best-known domestic lone wolf attacks occurred in the twentieth century, amidst a variety of racial tensions. These domestic lone wolves, motivated by White supremacist, Ku Klux Klan, and Aryan Nation ideologies, engaged in violent acts to promote their beliefs (Instituut voor Veiligheids-en Crisismanagement, 2007; Spaaij, 2012). In the decade following 9/11, the United States has witnessed 43 attacks by Jihadists and anti-immigration or anti-government terrorists (Spaaij, 2012; START GTD, 2012). For example, in 2003, Dwight Watson drove a tractor onto the Constitutional Gardens in Washington, D.C., claiming that he had a bomb (Eby, 2012). Watson blamed the government for tobacco policies that ruined him financially. His act, while it did not injure civilians, was motivated by Watson’s belief that government policies were affecting tobacco farmers in America. A second example of a modern domestic lone wolf attack occurred over a five-day period in May 2002. During that time, Luke Helder

placed pipe bombs in mailboxes in various locations throughout Iowa, Illinois, Indiana, and Nebraska, in protest of what he perceived to be excessive governmental power (START GTD, 2012). His actions were a means of spreading his message to a larger group.

Whereas other nations have had more frequent encounters with homegrown terrorists (Bergan & Hoffman, 2010), the Instituut voor Veiligheids-en Crisismanagment found that “lone wolf terrorism is far more prevalent in the United States” than in other countries in their sample (2007, p. 17). Using data on terrorism events from 1968 to 2007 in 14 countries, the authors identified 30 lone wolves in the United States; Germany ranked second with nine such reported incidents. Moreover, the authors state that lone wolf terrorism accounts for 42% of all terrorism cases in the United States (Instituut voor Veiligheids-en Crisismanagment, 2007) This report suggests that the movement of leaderless resistance, the individualized nature of the American culture, and the accessibility of firearms in the United States have contributed to this finding.

Leaderless Resistance

Leaderless Resistance is a terrorist strategy developed in the 1990s by American militia leader and Ku Klux Klansman Louis Beam. It is advocated by many militant anti-government groups in the United States (Kushner, 2003), such as the Aryan Nations or the Earth Liberation Front (Martin, 2011). Leaderless Resistance was developed as a means of avoiding disclosure of information to police informants who had infiltrated terrorist groups (White, 2002). Under Leaderless Resistance, individuals operate independently from a group or organization, but in a manner that furthers a particular

organization's or movement's cause. As a result, independent operators may engage in attacks without direct communication with an overarching leader. Police are less able to detect these individuals because they do not operate within common channels. Although lone wolves, unlike practitioners of Leaderless Resistance, do not act in order to further an organization's cause, they do operate independently to further their own personal cause. Individuals applying the strategy of Leaderless Resistance operate secretly and in isolation, allowing organizations to avoid legal or criminal involvement and responsibility, because the blame can be placed on an isolated individual (Kushner, 2003). In order to be effective in carrying out attacks, Beam (1992) argues that individual operators must acquire the skills and information necessary to complete a mission, since they would not have the luxury of falling back on an organized system with central control and advanced training.

Leaderless Resistance is still used today to circumvent the activity of police informants in terrorist groups. Large groups, regardless of how discrete they attempt to be, cannot always evade detection by law enforcement (White, 2002). Groups, based on their size alone, are an easier target for police to identify. Although many group-based networks have avoided detection until after they completed an attack, both White (2002) and Beam (1992) affirmed that individuals who operate separately from large groups and do not report to a central headquarters are far less likely to be detected by law enforcement. As Beam (1992) describes, police would have difficulty gathering information on a terrorist group if the group did not exist. Similarly, if an individual is acting in the name of or on behalf of an organization but is not directly tied to the

organization, police agencies will likely run into roadblocks when attempting to locate the individual terrorist or, subsequent to the terrorist action, a larger group on which to place blame.

Lone wolves are an example of the utilization of the strategy of Leaderless Resistance. However, instead of operating individually to promote an organization's cause, they seek to further a personal goal. By definition, being a "lone wolf" suggests that terrorists do not act in conjunction with a group; while the individual may be sympathetic to an organization's cause, he or she is not a part of it. Lone wolves act completely on their own. Although a lone wolf's primary goal may not be to circumvent police detection, the overall strategic goal of operating in a solitary manner is in alignment with both a lone wolf's objective and the premise of Leaderless Resistance.

William Pierce's *Hunter* and *The Turner Diaries*

William Pierce was the head of a neo-Nazi group, the National Alliance; a follower of George Lincoln Rockwell;⁷ and a professor of physics at Oregon State University (Kushner, 2003). He is often referred to as Andrew McDonald, his pen name and the name under which he published *Hunter* and *The Turner Diaries*, two works of fiction depicting domestic lone wolves who engage in acts of terrorism in the name of white supremacy. It has been claimed that *The Turner Diaries* was the blueprint for the 1995 Oklahoma City bombing that killed 168 people and injured more than 500 (White, 2002), as perpetrator Timothy McVeigh, when arrested, had a copy of the novel in his

⁷ Rockwell was the founder of the American Nazi Party (Simonelli, 1999).

possession. The following section provides a brief synopsis of the books, which describe relatively accurate depictions of the actions and ideologies of known domestic lone wolves.

Hunter

Lone individuals committing acts of terror are not new phenomena, but one of the first appearances of the term “lone wolf” was Pierce/MacDonald’s right-wing fantasy novel *Hunter* (White, 2002). The main character, Oscar Yeager, an engineer by profession, makes it his life’s mission to target and murder mixed-race couples. (In German, *yeager* means “hunter,” an appropriate word to describe the actions of the book’s main character.) Oscar believes that the white race should be pure and that whites should be proud of their heritage; multiracial couples threaten his ideal. “The novel describes how an individual extremist can murder people of color and Jews in the name of white supremacy” (White, 2002, p. 43).

Acting upon his belief that blacks are intellectually inferior to whites and that Jews act as if they are owed everything, Oscar begins murdering blacks and opposing the Jewish-driven media and The System (i.e., government). Oscar kills many mixed-race couples and hopes that other “enlightened” people will engage in similar actions. Moreover, he believes that murdering couples of multiple races will help to protect the white race. Ultimately, his goal is to “educate” other whites, informing them of their history and the need to protect each other from blacks and Jews. He suggests that people can be manipulated; therefore, he begins an effort to disseminate literature to promote his cause. To further the effort, he joins an organization called the National League and takes

advantage of its media visibility to distribute literature to a large number of individuals. The book ends with millions of people following the information distributed by the National League, hundreds of blacks dead as a result of race riots, and Oscar slowly slipping away to sleep, dreaming of the future of the white race.

The Turner Diaries

In *The Turner Diaries* Pierce depicts a man who, after being inducted into a terrorist group, kills racial and ethnic “inferiors” at the direction of *The Book*, a “holy” text that describes “God’s plan to create a racially pure world in the face of Jews and people of color” (White, 2002, p. 48). White (2002) states that this text is well known within the domestic lone wolf terrorist community. The protagonist’s attack on the J. Edgar Hoover Building, the main office of the Federal Bureau of Investigation, is eerily similar to the actions of Timothy McVeigh⁸ on the morning of April 19, 1995.

The novel is formatted as diary entries describing the daily actions of Earl Turner, an electrical engineer who was raised in Los Angeles and worked in Washington, D.C. during the Old Era (which individuals reading the text today would interpret as the 1990s). After being imprisoned for owning a weapon, a crime in this alternate reality, Turner joins a society called The Organization, a group determined to restore whites to power. The Organization and its followers are convinced that society has deteriorated as a result of oppressive, liberty-restricting laws and corrupt leadership. The Organization

⁸ Timothy McVeigh’s status as a domestic lone wolf is contested in the research literature. According to the definition of a domestic lone wolf terrorist used in this study, McVeigh does not meet the criteria. Although his actions on April 19, 1995 were completed in a solitary manner, two other individuals, Terry Nichols and Michael Fortier, were convicted as conspirators in the attack (Kushner, 2003).

rails against The System (the government), due to its corrupt ways that favor African Americans, individuals of Jewish decent, and other racial and ethnic minorities.

As The Organization sees it, The System is responsible for racially integrating schools and allowing non-whites to hold positions of power, ultimately rendering whites powerless. Turner views himself as a patriot in The Organization's quest to restore power to its rightful owners. In The Organization's quest to preserve "white America," it finds no action too extreme. The killing of blacks and minorities is not inhumane or genocide, but rather the removal of a liberal disease that must be extracted from the American flesh.

Turner, at the direction of The Organization, concocts a plan to detonate an explosive device inside the Hoover Building, ultimately seeking to destroy the computer-based passport system (a system designed to track the movement of citizens). Readers of the text might draw comparisons between this fictitious assault on the Hoover Building and the attack Timothy McVeigh waged on Oklahoma City's Murrah Building in 1995. McVeigh's attack on that building was nearly an exact replica of Turner's plan.⁹ As noted above, McVeigh had a copy of the novel on his person at the time of his arrest, shortly after the bomb exploded in Oklahoma City (Thomas, 2001). *The Turner Diaries* has been called "a how-to manual for low-level terrorism" (White, 2002, p. 229), "the Bible of the racist right," and "the handbook for white victory" (Kushner, 2003, p. 369).

Pierce's work is an example of the type of propaganda available to potential lone wolves. The texts support particular ideologies and detail how the characters carried out

⁹ In both the text and in McVeigh's attack, the terrorists built bombs that were placed in the back of rental trucks and parked in front of government buildings. Both attacks were successful and injured or killed hundreds of people.

their plans. While Pierce's work describes the lives and actions of fictitious domestic lone wolves, the next section provides a factual account of two real-life domestic lone wolf terrorists.

Domestic Lone Wolf Case Studies

Two of the most infamous domestic lone wolf terrorists of our time are Theodore Kaczynski and Eric Rudolph. As a result of their horrific acts, both Kaczynski and Rudolph currently reside (and will remain indefinitely) in USP Florence ADMAX in Florence, Colorado. Their attacks are among the 92 cases that make up the data to be examined in this study.

Theodore (Ted) Kaczynski, the Unabomber

Before the Federal Bureau of Investigation (FBI) knew the name Theodore Kaczynski or the face behind his bombings, it knew the terrorist's targets: airplanes and universities. The FBI's code name for Kaczynski's case file was UNABOM. These letters denoted the targets attacked (**UN**iversities and **A**irlines) and the weapons (**BOM**bs) used in terrorist acts across the United States between 1978 and 1995 (Kushner, 2003; Turchie & Puckett, 2007). The media later adapted this code name into a descriptive term, the Unabomber. The most vivid image from that time was of a police sketch depicting "a mustached man in a hooded sweatshirt, wearing aviator glasses" (Kushner, 2003, p. 379). In 1995, a name would become forever associated with the image.

Kaczynski is a Harvard-educated mathematician who, prior to his capture, lived as a recluse. He was responsible for "sixteen package and letter bombs that resulted in three deaths and nearly two dozen injuries" (Kushner, 2003, p. 378). Kaczynski was

generally opposed to the advancement of technology in the United States, which he believed was destroying society. He made it his mission to halt any technology advances in the United States, targeting individuals whom he viewed as symbols of technological innovation and progress (Springer, 2009).

Kaczynski's reign of terror lasted nearly 17 years, with his final attack coming mere days after Timothy McVeigh's assault on the Alfred P. Murrah Federal Building in Oklahoma City, Oklahoma. Many attribute Kaczynski's downfall to his desire to see his manifesto, "Industrial Society and Its Future," published; he had stated that, if it were published, he would cease future attacks. In 1995, *The Washington Post* and *New York Times* co-published the manifesto, in which the Unabomber "railed against technology, consumerism, advertising, and corporations – all in relation to the individual's loss of freedom. ... [The manifesto] also presented justifications for violence" (Kushner, 2003, p. 379). Kaczynski's brother read the published work and recognized similarities between it and writings by his brother, Ted. David Kaczynski would later contact the FBI, directing agents to a mountain cabin where Theodore Kaczynski had resided for more than 25 years (Kushner, 2003). At the cabin, federal investigators discovered bombs, bomb-making materials, packages, and the typewriter used to write the Unabomber's manifesto (Kushner, 2003).

Kaczynski's trial began in 1997, but was impeded by delays, as he attempted to fire his attorneys and a psychiatric evaluation was performed. He was later found mentally competent to stand trial. However, some scholars have suggested that the psychiatric evaluation implied that he was a paranoid schizophrenic (Kushner, 2003). In

1998, Kaczynski accepted a plea agreement, pleading guilty to 13 federal bombing offenses. He was later sentenced to life in prison without possibility of parole (Kushner, 2003). The type of criminal that Kaczynski represented was not known or understood before his case, but today he is categorized as a domestic lone wolf terrorist (Turchie & Puckett, 2007).

Eric Rudolph

Eric Rudolph was responsible for a two-state bombing spree between 1996 and 1998. He was behind bombings in 1996, including one at Centennial Park during the Atlanta Olympics and one in 1998 at an abortion clinic (Kushner, 2003; White, 2002). Not until 1997 were these bombings linked to the same person or was Rudolph identified as a possible suspect (Kushner, 2003). Scholars have suggested that Rudolph was a real-life example of Pierce's *Hunter* (White, 2002). Rudolph railed against abortion and the gay and lesbian community. Today he remains a legend of far right-wing folklore (White, 2002).

When the FBI located a storage facility belonging to Rudolph in 1998, he had already gone into hiding, utilizing survivalist skills that he had gained from his short stint in the U.S. Army (Kushner, 2003). The FBI did find at the site a copy of a book titled *How to Build Bombs of Mass Destruction*. Rudolph was on the run for several years and remained on the FBI's Most Wanted List until his capture in 2003, when a police officer arrested him for attempted burglary while he was digging through a dumpster (Gettleman & Halbfinger, 2003). Rudolph was sentenced in 2005 to four consecutive life terms plus 120 years, and he will serve his sentence without the possibility of parole (Dewan, 2005).

Rudolph's ideology was intertwined with his strict religious interpretations. He believed that abortion was murder and he held an anti-abortion, anti-homosexual, and racist agenda (Springer, 2009). Like Kaczynski, Rudolph employed explosives to carry out his message of intolerance of the LGBT community and of women who sought abortions. His targets, carefully selected to bring the most attention to his cause, were "soft" locations – public events and abortion clinics.

The similarities between Kaczynski and Rudolph tie them together as domestic lone wolves and exemplary case studies. Their independent actions, their means of expressing their ideologies, and their targets all meet the criteria of domestic lone wolf terrorists. The American public will never forget these individuals, nor should they. Such individuals continue to pose a great threat to the nation. The next section of the literature review examines research on the main variables of interest: weapons, targets, ideologies, and lethality of domestic lone wolves.

Weapons

The aforementioned case studies described two of the most prolific domestic lone wolf terrorists that the United States has ever witnessed. As demonstrated, their weapons used, targets attacked, and ideologies were quite similar. The following discussion explores existing research evidence related to these variables.

Spaaij (2012) examined lone wolf attacks in 15 countries, as documented in the Global Terrorism Database (GTD) and RAND-MIPT Terrorism Knowledge Base (TKB), for the period from 1968 to 2010. He found that assassinations, armed attacks, hijackings, and hostage taking were the most frequent actions in lone wolf attacks. Although attacks

in the United States have involved a myriad of weapons (ranging from chemicals to flying planes into buildings), Spaaij (2012) reports that explosives and firearms were the weapons most frequently used. Both Rudolph and Kaczynski utilized readily available materials that could be purchased at hardware or grocery stores to build their explosive devices (Kushner, 2003). The Instituut voor Veiligheids-en Crisismanagment (2007) has indicated that firearms are the weapon of choice among lone wolf terrorists in the United States, given their relatively easy accessibility.

Spaaij (2010) contends that the predominant use of firearms by lone wolf terrorists differs from group-based terrorism methods, which tend to rely heavily on bombings. Moreover, experts posit that firearms are used most frequently in lone wolf attacks because manufacturing sophisticated explosive devices requires technical skills that individuals working alone usually do not possess (Spaaij, 2012). As most lone wolves were likely never part of an organized terrorist group, they would have never received the type of training necessary to build an explosive device. That is not to say that lone wolves are unintelligent, however. Acquiring the skills necessary to construct a sophisticated bomb is difficult, but not impossible. Eric Rudolph's stint in the military may have provided him with skills necessary to build bombs. Of course, instructions, books, or videos on bomb making can be found on Internet sites. Nevertheless, Burton and Stewart (2008) argue that "websites and military manuals [that] provide instruction on such things as making bombs and marksmanship [are] no substitute for hands-on experience in the real world" (p. 3). These authors suggest that the training provided by experienced individuals foster greater proficiency in making explosives or using firearms.

Moreover, learning to build an explosive is a time-intensive activity better suited to groups than to individuals, as varying skill sets of other members can be leveraged. A lone attacker may not have the necessary skills to create such a device (Stewart, 2011).

In recent years, especially since 9/11, the United States has attempted to prevent terrorists from accessing materials necessary to construct bombs. For example, the Safe Explosive Act and other federal laws “require a criminal background check and proof of identification” in order to purchase most explosives (Fagin, 2006, p. 136). Moreover, as of 2005, individuals seeking hazardous materials licensing are required to undergo FBI background checks (Fagin, 2006). While the federal government has taken steps to prevent terrorists from gaining access to bomb-making materials, technologies continue to be developed faster than the government can address any potential issues. Moreover, lone wolves increasingly use the Internet to identify workarounds to the previously mentioned laws.

Scholars such as Simon (2013) have blamed technology for making it easier for lone wolves to learn the tricks of the trade without joining organized terrorist networks, thereby contributing to increases in the numbers of lone wolf attacks. Given that virtually every terrorist group has an online forum to disseminate information, lone wolves can read materials placed on these networks and become informed. Furthermore, the Internet can serve as a mechanism for lone wolves to locate like-minded individuals. Lone wolves can also use the Internet to study detailed accounts of terrorist events, learning from past successes or failures. The Internet is also a key resource in the purchase of weapons and

bomb-making materials, as well as in surveillance of potential targets (e.g., through the use of maps of locations and buildings, or transportation schedules).

Targets

Per U.S. Code Title 22, Chapter 38, Section 2656, the definition of terrorism requires the targets of an attack to be noncombatants – for instance, government officials, politicians, health practitioners, religious leaders, and other civilians (Hoffman, 2006; Instituut voor Veiligheids-en Crisismanagement, 2007; Spaaij, 2012). Hoffman, an instructor at the Combating Terrorism Center at the U.S. Military Academy, suggests that nonhuman targets such as embassies, other diplomatic installations, or religious venues are routinely attacked. The venue targeted by a lone wolf may be a symbolic center, such as (for those with strong anti-government ideologies) the seat of the U.S. government, Washington, D.C. (Webb & Cutter, 2009). As will be discussed, targets attacked by lone wolves are usually soft (less difficult to attack) or symbolic (important to their ideology).

Soft targets, those with limited or no security protection in the form of controlled access, security personnel, or cameras can be easily accessed and are therefore less difficult to attack (Stewart, 2012). Lone wolves can approach these targets undetected to gain information on the best tactics to use. Hardened targets, or locations routinely subjected to increased security, are associated with a decreased likelihood of attack, since it is more difficult for lone wolves to access the location (Ezell, Behr, & Collins, 2012). A lone wolf desires a target important or symbolic to his or her cause, but also must weigh the difficulty of attacking a preferred target. Working alone also limits the types of targets that can be attacked. Stewart (2011) observed that terrorist organizations have

more significant resources and likely could create a more damaging attack than standalone operators. Although this pattern does not hold true for every lone wolf, it is plausible that single individuals would usually have greater difficulty in creating a large-scale event without a support network.

Not only do lone wolf terrorists tend to attack soft or symbolic targets, but they also usually choose targets close to home. Venues close to the residence of a lone wolf are easier to survey and therefore less difficult settings on which to prepare attacks (Smith, 2008). Lone wolf attacks are often premeditated, carefully planned, and self-financed (Hoffman, 2006; Spaaij, 2010). These terrorists generally want the opportunity to strategize, review the location of a target, and carefully plan the attack; their goal is to see their mission completed.

Ideologies

Terrorist acts are designed to communicate a specific message or to call attention to a political, religious, or social cause. Terrorists utilize armed propaganda, violence geared toward furthering their cause, in an attempt to generate public support (Hoffman, 2006). Their actions instill fear in citizens and incite panic within the targeted community. Rarely do attacks engender support from anyone other than those already committed to a cause. Nonetheless, lone wolves persist in their actions as they seek to have their message heard.

A lone wolf's motivation to engage in terrorism is derived from the belief that his or her cause or purpose is to combat wrongdoing. This cause or purpose can be understood as an ideology. White (2009) concludes that for lone wolves, ideology is all-

consuming. Their deep-seated beliefs, regardless of the specific content of those beliefs, drive them to act on behalf of a misconstrued understanding of a greater good or higher cause. White (2009) specifically notes the frequent appearance of religion as a particular lone wolf ideology and justification for terrorist actions. Because standalone terrorists do not have a group to fall back upon, White (2009) argues, religion provides a perceived justification for their actions. Other ideologies form around political (anti-government) or social (special-interest group) causes. However, it is not unusual for lone wolves to concoct their own personal ideology, which may be either a variation of a known ideology or something altogether unique to themselves.

Lone wolves can sustain commitment to such out-of-the-ordinary ideologies because they are “beholden to nobody but themselves, [and thus] they alone can determine the course of action they will take” (Simon, 2013, p. 39). Additionally, because they do not have an organized network overseeing them, they “do not even have to consider whether the ends justify the means,” since they are the ones dictating what their ideology says is necessary, or right (Simon, 2013, p. 39). The categories of motivating ideologies found in this study include personal, anti-government, or political concerns, religious differences, racial differences, and a catch-all category for unknown motives.

The aforementioned categories of ideologies are not the only ones found within the terrorist community. Many are similar to the motivations of group terrorists, such as anti-government sentiments or an ideology stemming from a particular religious belief, but the category of “personal ideology” is unique to lone wolves. As noted, lone wolves have the freedom to concoct and act on an ideology that serves the whims of an

individual, not the doctrine of a larger, organized group. While previous research has identified aspects of personal ideologies that are comparable to better-known motivations, the true reasoning behind these personal ideologies is understood only by the lone wolf terrorist that created it.

Lethality

White (2002) states that “most lone wolves tend to be single-event terrorists” (p. 43); this, however, does not make them any less deadly. (This single-event generalization does not apply to all lone wolves, of course; both Kaczynski and Rudolph crafted and engaged in numerous attacks before they were finally apprehended, and Kaczynski’s reign of terror lasted nearly two decades.) Although Timothy McVeigh is recognized as the deadliest domestic terrorist in U.S. history, former U.S. Army Major Nidal Malik Hasan,¹⁰ who opposed U.S. involvement in Iraq and Afghanistan, ranks among the deadliest domestic lone wolf terrorists. In 2009, Hasan fired on soldiers in a readiness center at Fort Hood, Texas, killing 13 people and injuring 32.

Given the limited research on this topic, this study examined the lethality of single-incident domestic lone wolf terrorists as compared to multi-incident domestic lone wolves. Although this study did not seek to determine if domestic lone wolves are more deadly than group-based terrorists, future research should consider this question.

¹⁰ Although both the RDWTI and GTD databases include Hasan as a domestic lone wolf, recently identified intelligence has linked him to Islamic radicals. It may eventually be shown that he was not acting in isolation, but was guided by someone else. Moreover, the Department of Defense classified the incident as workplace violence; however, the U.S. Senate released a report describing the shooting as a terrorist attack (U.S. Senate Committee on Homeland Security and Governmental Affairs, 2011).

Identification and Detection

Lone wolves choose not to affiliate with extremist networks because they desire to stay well hidden and avoid detection (Spaaij, 2012). Avoidance of law enforcement, or generally maintaining a low profile, allows lone wolves to gather reconnaissance on targets, maintain their anonymity, and continue their mission. The European Police Chiefs Convention commented that, as lone wolves receive no guidance from other criminals, “their activities can be unpredictable and difficult to prevent” (Spaaij, 2012, p. 2). The Convention points out that “the changing dynamics in our societies, together with technological advances, may encourage isolate[d], disaffected individuals to turn into violent extremists, to the extreme of becoming ‘lone wolf’ terrorists” (Spaaij, 2012, p. 2). Technology not only allows terrorists to research the skills needed to construct a bomb or read literature that supports their ideology, but also provides a screen for lone wolves to hide behind when concocting a plan to cause destruction.

Lone wolves, for the aforementioned reasons, can be exceptionally dangerous. They are difficult to detect or identify and are resistant to many counterterrorism efforts. Preventing their actions is also difficult because they do not associate with known terrorist organizations, act independently (German, 2005; Instituut voor Veiligheids-en Crisismanagement, 2007), and do not communicate their intentions to other individuals (Bakker & de Craaf, 2010). There is no chance of a plot being leaked, as lone wolves maintain sole responsibility for planning an attack. Additionally, lone wolves tend to be loners or outsiders, such as Ted Kaczynski or Eric Rudolph (Springer, 2009). Living and operating on the fringe of society allows standalone operators to remain anonymous.

While some characteristics of the best-known lone wolves are similar, Special Agent Patrick O'Connor of the FBI's Joint Terrorism Taskforce (JTTF) has suggested that lone wolves are united largely by their differences (Terrorism Trends Conference, 2013). Put differently, they are similar because they are so dissimilar. There is no standard profile that fits lone wolves; they are actors connected only in definition. Their backgrounds, ideologies, and styles of attack all vary. This is perhaps the most difficult situation for law enforcement to mitigate: how does one prevent, or even identify, a terrorist who does not fit a predetermined model?

Much of the research literature suggests that lone wolves are the greatest cause for concern within the counterterrorism community because they operate alone, do not have a standard profile, and may work on the fringes of society. However, not all scholars agree with this assessment. Stewart (2011) suggests that lone wolves are more likely than group terrorists to be detected by law enforcement, because someone acting alone must expose himself during the planning stages and implementation of an attack. Stewart (2011) explains:

Lone-wolf attacks must follow the same planning process as an attack conducted by a small cell or hierarchical group. This means that lone wolves are also vulnerable to detection during their planning and preparation for an attack – even more so, since a lone wolf must conduct each step of the process alone and therefore must expose himself to detection on multiple occasions rather than delegate risky tasks such as surveillance to someone else in order to reduce the risk of detection. A lone wolf must conduct all the preoperational surveillance, acquire all the weapons, assemble and test all the components of the improvised explosive device (if one is to be used) and then deploy everything required for the attack before launching it. (p. 4)

If lone wolves do expose themselves to detection on multiple occasions, as Stewart (2011) proposes, there may be numerous opportunities for law enforcement to identify them. However, they can carry out much of their planning by utilizing technology and thus limit their exposure.

Impact of Technology

The significant role of technology, specifically the Internet, in the actions of lone wolf terrorists deserves particular attention. Lone wolves have used the Internet to identify potential targets, to research methods of constructing explosive devices, and to read literature produced by like-minded individuals. The Internet is also a key component in the radicalization of homegrown, domestic extremists. It provides “ideological motivation, encouragement, justification, target information, and instruction on techniques, all in an anonymous environment” (ITAC Lonewolves, 2007, p. 1). In this respect, there has been no time in history more capable of producing lone wolf attacks; the Internet provides potential attackers with a wealth of information at their fingertips.

Perhaps the most valuable features of the Internet (at least in the minds of domestic terrorists) are its “ease of access, lack of regulation, vast potential audiences, and fast flow of information” (Forest, 2006, p. 59). For domestic terrorists and lone wolves alike, the growth of the Internet has brought geographically separated but like-minded individuals into the same arena. Furthermore, even a novice Internet user can gain useful information from the thousands of terrorist propaganda sites. Forest (2006) reports that nearly every known terrorist organization has a presence on the Internet and uses it to actively promote their goals. For them, the Internet has been a crucial and cost-

free method of disseminating information. Although lone wolves may not seek out groups for participation purposes, they may still learn from information provided by terrorist organizations.

The educational utility of terrorist websites is vital to lone wolves. Since they operate alone, they have limited, if any, opportunities to hone their skills or develop the technical expertise necessary to carry out successful attacks (Stewart, 2011). Lone operators often lack the capabilities or resources to create a bomb or plan an attack. For example, Kaczynski was intellectually brilliant, yet he constructed and mailed several bombs that failed to detonate. Had he had access to the magnitude of online instructional tools now available, he could have caused even greater damage.

To conclude the literature review, I provide a theoretical framework, drawn from the psychological field, to provide an understanding of why lone wolves engage in terrorism.

Theoretical Foundation

A theory in the field of criminology may not be fully applicable to every criminal – or, in this case, to every terrorist. Whereas there are traditional criminological theories to explain why some juveniles engage in delinquency or how social bonds reduce the likelihood of criminal activity, there is no comprehensive theory to explain terrorism (LaFree & Dugan, 2009). Much of the literature available that discusses terrorist behavior

has been produced by researchers working in the field of psychology.¹¹ The bulk of this literature offers insights into terrorist characteristics and ideologies. From this pool of material emerges the concept of normality, that is, the suggestion that terrorists, in general, do not differ psychologically from non-terrorist criminals. Scholarly research also has provided general characteristics of terrorists and their motivations for engaging in terrorist actions. Closely tied to motivation is the concept of symbolism, or the suggestion that lone wolves pick their targets based on the target's perceived symbolic nature.

Normality

Given that terrorists engage in horrific actions that result in destruction, suffering, and death, the public may desire to attribute these actions to some type of impairment, rather than to rational action (Horgan, 2005). However, the research evidence suggests that most terrorists do not have an identifiable psychopathology (Bakker & de Craaf, 2010). In fact, their psychological normality is generally agreed upon by terrorism scholars (Mullins, 2009). Those researchers who have attempted to explain the high level of psychopathology among terrorists have provided explanations with little validity (Crenshaw, 1981; Moghaddam, 2005). Explanations of terrorist psychopathology tend to oversimplify a complicated issue, as there is “no single motivation or personality that can be valid for all circumstances” (Crenshaw, 1981, p. 390). While the normality of group-

¹¹ Although research on terrorism has expanded dramatically, a criminological theory to explain terrorism has yet to be developed (LaFree & Dugan, 2009). At most, criminology researchers have used deterrence theory to explain why, in certain situations, terrorists are deterred from engaging in acts of violence; however, studies applying deterrence theory have shown little promise (LaFree & Dugan, 2009). Even scholars traditionally known for their work in criminology use literature from the psychological field to explain terrorist actions (LaFree & Ackerman, 2009).

based terrorists is widely accepted, the psychopathological status of lone wolves remains disputed (Crenshaw, 1981; Mullins, 2009).

Lone Wolves Differ

Although terrorists in general do not differ psychologically from non-terrorist criminals, lone wolves, as a very specific population, differ from group-based terrorists in their psychopathology. The research evidence suggests that while “most [group-based] terrorists do not suffer from any identifiable psychopathology, the rate of psychological disturbance and social ineptitude among lone wolves is relatively high” (Bakker & de Craaf, 2010, p. 5). Three of the five lone wolf terrorists studied by Spaaij (2010) had been diagnosed with some type of personality disorder. The author conducted an in-depth qualitative analysis of these terrorists utilizing RAND data, police and media reports, and psychological evaluations (Spaaij, 2010). Hewitt (2003), noting that most terrorists do not differ from non-terrorist criminals, found that six of the 27 individuals (specifically the loners) in his study showed signs of mental illness. In certain cases, lone wolves both physically and psychologically withdraw themselves from mainstream society (Spaaij, 2010). Moreover, they may suffer from social ineptitude, preferring to be and act alone. Ted Kaczynski, for example, lived as a recluse for about 25 years prior to committing his acts of terrorism (Spaaij, 2010).

Lone Wolves' Psychological Basis Is Poorly Studied

Although these studies suggest that lone wolves have a higher rate of mental illness, others claim that the methodologies are poorly constructed and that there is little systematic evidence to support the notion. Horgan and Taylor (2001) contend that “the

psychological basis of terrorist behavior remains poorly understood” (p. 16). Some scholars, Horgan and Taylor argue, have assumed that certain aspects of the individual’s life or personal characteristics can predict the differences between terrorists and non-terrorists, but they found no systematic evidence to support the notion that terrorists are psychologically different from non-terrorist criminals. They reject the claim that “there are relatively static personal qualities that can in some sense predict or be identified as essential propertities of the terrorist” (Horgan & Taylor, 2001, p. 17). Generally, terrorists have few characteristics in common and generally dissimilar backgrounds. Taylor and Horgan (2006) further argue that much of the research conducted on the psychology of terrorists was completed in the 1980s by psychiatrists assessing imprisoned individuals. The results of these examinations suggested that terrorism is a process by which individuals are gradually indoctrinated, rather than the result of a psychological difference from non-terrorist criminals.

Characteristics

Regardless of the presence of any psychopathology, researchers have found some common characteristics of lone wolves. Turchie and Puckett (2007) and Springer (2009), identified the following as defining characteristics:

- Loners
- Intelligent
- Socially awkward, with difficulty in making or maintaining relationships
- Bitter
- Showing no remorse for acts of violence
- Development of personal ideologies
- Belief in the righteousness of their ideology

Moreover, Turchie and Puckett (2007) found that lone wolves typically have poor familial relationships, possess above-average intelligence, are socially isolated, lack satisfactory intimate relationships, and work in low-status occupations. Moghaddam (2005) and Springer (2009) added to this list the observations noting that lone wolves typically have high levels of educational attainment and come from families who are financially stable. There are other similar features, such as having poor family relationships, although the reasons for these problems differ across the spectrum of terrorists (Turchie & Puckett, 2007).

Because terrorists – and lone wolves in particular – fail to connect with groups or other people, the resulting isolation pushes them farther away from the rest of society. As a consequence of this isolation, many lone wolves form an attachment to an ideology, not a group, with the knowledge that their ideologies would never reject them (Turchie & Puckett, 2007). As Turchie and Puckett (2007) explain, lone wolves replace feelings of isolation with a strong sense of “belonging to the cause, [to] the ideology itself”; this allows a lone wolf to “focus all his energy and attention on action in its service” (p. 271). Moreover, the sense of isolation from an early age is a significant factor in lone wolves’ rejection of the formal and organized structure of established terrorist groups (Turchie & Puckett, 2007). The ideologies themselves vary considerably, but this practice of forming a distinctive personal ideology is a characteristic of lone wolves in general (Turchie & Puckett, 2007).

Turchie and Puckett (2007) suggest two defining aspects of lone wolf terrorists that set them apart from other solitary criminals. The first is that their crimes result in

“big V” violence – that is, violence at the societal level, not merely the individual level. Secondly, the actions of lone wolves are often the result of an ideology that does not find value in victims, monetary gain, or “any personal gain outside the notoriety of their acts” (Turchie & Puckett, 2007, p. 262). Turchie and Puckett examined some of the most infamous names in history – such as Kaczynski, Rudolph, Joseph Paul Franklin, and Buford O’Neal Furrow, Jr. – noting that all these individuals were motivated by their ideologies.

Advice for Lone Wolves

Alex Curtis, a white supremacist who writes for an online forum, provides an interesting set of suggestions for lone wolves. Turchie and Puckett (2007) call this advice a “checklist for avoiding attention from law enforcement while performing stealthy acts of lone terrorism” (p. 238). Curtis’s recommendations included the following:

- Live a modest life
- Work at a menial or low-paying job
- Drive a nondescript vehicle
- Avoid social gatherings
- Avoid drugs and alcohol
- Avoid identifiable markers, such as tattoos

By adhering to this advice, Curtis argues that lone wolves can reduce the likelihood of drawing the attention of law enforcement.

Motivation

Lone wolves do not adhere to the same set of beliefs as established terrorist groups; while they may sympathize with some of these large organizations, they tend to form their own deeply-seated reasons for engaging in acts of terror. Because they do not adhere to a well-established reasoning for engaging in terrorism, each ideology is carefully created by an individual lone wolf.

People are not born with terrorist inclinations. The beliefs of a terrorist are the result of training, interactions with terrorist groups, or self-radicalization, usually through the Internet (Gable & Jackson, 2011). As discussed previously, while many lone wolves suffer from some type of psychological problem, not all terrorist acts are a result of these issues. Rather, deep-seated beliefs or suggestive propaganda encourage a belief system in which violence becomes a legitimate way to achieve political or social goals. Lone wolves take it upon themselves to engage in violent action as a way of expressing their grievances or dissent with a larger group (Crenshaw, 1981). Their commitment to an ideology develops over time.

Terrorism, regardless of its definition or variety, always involves the quest for power (Hoffman, 2006). Group-based terrorists and lone wolves alike seek power to dominate and coerce; they engage in acts of violence to garner attention and recognition, and they seek to intimidate larger audiences (Enders & Sandler, 2005; Hoffman, 2006). Planned acts of violence are a tool to shock (and, in some cases, impress) but also to capture the attention of the media, public, and the government in the hope of effecting political change (Hoffman, 2006).

Terrorists view their strategy as justified by the existence of a perceived injustice or deprivation (Moghaddam, 2005). Many terrorists develop an “us versus them” mentality that lowers their inhibitions to a level at which the killing or injuring of people is legitimized. Martin (2010) states that “lone wolves have a vague and sometimes delusional assumption that their actions will further a greater cause against a corrupt or evil social order” (p. 340). Their motivation for engaging in terrorism is derived from the belief that their cause or purpose, is to combat wrongdoing. Moreover, displaced aggression, feelings of frustration or isolation, and economic or political conditions that threaten one’s personal identity or religious views are often contributing factors to a lone wolf’s motivation (Moghaddam, 2005).

The better-known terrorist ideologies include White supremacy, nationalism, Black militancy, Islamism, anti-abortion, and left-wing extremism (Bates, 2012; Instituut voor Veiligheids-en Crisismanagment, 2007; Spaaij, 2012). These categories, however, are ideal types; not all ideologies will fit into the prescribed groups, since lone wolves tend to create their own, deeply personal, ideologies (Spaaij, 2012). The goals of lone wolves are often “intrinsically idiosyncratic, completely egocentric, and deeply personal” (Spaaij, 2012, p. 20). Their motivations, though personal, stem from the desire to accomplish a political, ideological, or religious goal that is larger, in their eyes, than themselves (Spaaij, 2012).

Technology’s Influence on Ideology

Pantucci (2011) suggests that the increased growth and use of the Internet in conjunction with the readily available extremist material online has nurtured the growth

of lone wolves. A loner with an inclination toward violence has all the resources at hand to learn about extremism. Online material may motivate a lone wolf to take action or justify an attack, as it offers encouraging evidence that others also support the loner's overarching ideology (Pantucci, 2011). Other sources of persuasive and extremist material can also influence a lone wolf's ideological leanings.

Lone wolves and members of organized terrorist groups alike utilize the Internet to associate with like-minded people, to read ideologically charged material, and to obtain information about acquiring and constructing explosives (Gable & Jackson, 2011). The Internet provides an avenue for terrorists (or potential terrorists) to exchange ideas and even to attend meetings or events. While lone wolves would not attend meetings of this sort, the Internet permits them to search websites for online extremist trainings, bomb-making instructions, or propaganda (U.S. Senate Committee on Homeland Security and Governmental Affairs, 2008). The glossy pages of *Inspire* magazine, the work of William Pierce, and bomb making guides such as *Make a Bomb in the Kitchen of your Mom* (The AQ Chef, 2010) are all readily available on the Web.

Symbolic Targets and Symbolism

The word *symbol* “derives from the Latin *symbolism*, referring to a token of identity” (Tuman, 2010, p. 67). The modern understanding of this term suggests that when something is “described as a symbol it possesses symbolic value ... and may be interpreted to mean something more than [the object] itself” (Tuman, 2010, p. 67).¹²

¹² The object could be a tangible thing, word, sound, or document (Tuman, 2010).

Terrorists often attack locations, buildings, or people based on their symbolism (Spaaij, 2012). While the target may have little tangible value, the terrorist's greater goal is to disrupt routine schedules and cause fear in the civilian population. By terrorists' standards, the greater the public fear, the more successful the attack is considered. Furthermore, by attacking a symbol of something larger than simply a building or event, terrorists are able to shock the public and inflict damage on a symbolic entity.

The literature often refers to symbolic targets as soft targets (Fagin, 2006). Fagin (2006) suggests that soft targets may not have military or strategic value but may hold a greater, more important meaning to those looking to have their message heard. As mentioned above, soft targets have little or no security protection such as controlled access, security personnel, or cameras and are therefore less difficult to attack. Terrorists can approach such targets undetected to gain information on the best way to attack them. Hardened targets, or targets that promote vigilance and security, decrease the likelihood of an effective attack by making it more difficult for lone wolves to access their location (Ezell, Behr & Collins, 2012). However, not all symbolic targets are soft. The White House, for example, is an extremely symbolic target but also exceptionally hardened.

The next chapter of this dissertation describes the methodology used to examine patterns in the data regarding the targets attacked, the weapons used, and the ideologies espoused by domestic lone wolves. It also provides a description of the dataset examined, the analysis conducted, and limitations of the study design.

CHAPTER 3: Methodology

Research Questions and Hypotheses

The following research questions were examined in this study: What are the patterns of domestic lone wolf terrorist attacks, specifically with regard to the targets attacked, weapons used, and motivating ideologies? What patterns emerge over time in relation to the variables of interest? In terms of lethality, are single-incident domestic lone wolves more or less deadly than multi-incident¹³ terrorists? In order to examine these questions, data from The National Consortium for the Study of Terrorism and Responses to Terrorism (START), which houses the Global Terrorism Database (GTD), and the RAND Database of Worldwide Terrorism Incidents (RDWTI) were utilized. Five hypotheses were constructed:

H1: Domestic lone wolf terrorists will attack targets related to their personal ideologies.

H2: The primary weapons utilized by domestic lone wolves will be firearms and improvised explosive devices (IEDs).

H3: Firearms will be found to have been utilized more frequently in the most recent time period examined (i.e., from 9/11 to 2011).

H4: Attacks in the Mid-Atlantic region will be more prevalent than elsewhere in the United States.

¹³ Multi-incident domestic lone wolves are defined in this study as domestic lone wolves who engaged in more than one terrorist attack prior to apprehension or death. None of the domestic lone wolves in this study engaged in a multi-event, such as a Mumbai type attack.

H5: Multi-incident domestic lone wolves will be more lethal than single-incident domestic lone wolf terrorists.

The hypotheses are grounded in the research presented in Chapter 2 and the results of previous studies. Since the literature has shown that lone wolves attack targets based on their perceived symbolic significance (Webb & Cutter, 2009), it is hypothesized that the targets attacked by lone wolves will be tied to their ideologies (H1). In other words, they will attack targets that they believe to be meaningfully related to their cause. For example, Theodore Kaczynski opposed symbols of technology and advancement, and therefore he chose to attack targets (specifically individuals) that he perceived to be promoters of technology. Also the Instituut voor Veiligheids-en Crisismanagement (2007) has suggested that lone wolves will utilize firearms, due to their relative accessibility in the United States, and other researchers have indicated the high likelihood of using simple IEDs that can be made with items from hardware stores (Kushner, 2003); these observations provide a basis for the second hypothesis.

As firearms are more readily obtainable in the United States than items required to construct more sophisticated explosive devices (Instituut voor Veiligheids-en Crisismanagement, 2007), it is hypothesized that attacks using firearms will be more frequent than those utilizing explosives (H2). Attacks utilizing firearms will be more common following 9/11 than in previous time periods (H3). The third hypothesis also addresses the second research question from this study. Over time, it is hypothesized that firearms will be used more consistently than other types of weapons. It is also hypothesized that due to the symbolic nature of the Mid-Atlantic region (specifically,

Washington, D.C., and the surrounding area) and the many structures and business that reside in the area, attacks will be more prevalent in the Mid-Atlantic region than in other areas of the country (H4). Lastly, lone wolves who engage in multiple attacks will cause more casualties than single-incident terrorists (H5) – presumably not just because of the greater number of attacks attempted but also because they may become more effective in their attacks with practice.

Data

The National Consortium for the Study of Terrorism and Responses to Terrorism (START) houses the Global Terrorism Database (GTD), an open-source database of terrorist incidents. The GTD includes information on events that occurred around the world from 1970 to 2011 (additional updates are forthcoming). The database provides information, when available, on the date and location of the incident, weapons used, type of target, number of casualties, and the group or individual responsible. To date, the GTD has collected more than 100,000 cases (START GTD, 2012).

The GTD utilizes publicly available, open-source materials to create each case. These materials include electronic news archives, existing datasets, secondary source materials (e.g., books and journals), and legal documents. The database records up to 120 separate attributes of each incident, including approximately 75 coded variables, depending on the availability of the information. It defines terrorism as “the threatened or actual use of illegal force and violence by a non-state actor to attain a political, economic, religious, or social goal through fear, coercion, or intimidation” (START GTD, 2012).

The RAND Database of Worldwide Terrorism Incidents (RDWTI) is a collection of data from 1972 through 2009. To date, the database has coded over 36,000 terrorist incidents from around the world. Among the items recorded in the RDWTI are the perpetrator, target, weapon, tactic, region, date, and a description of the incident. This database defines terrorism as “violence, or the threat of violence that is calculated to create fear and alarm, intended to coerce certain action, motivations that include a political objective, directed against civilian targets, and committed by a group or individual” (RDWTI, 2013).

In order to collect open-source data not published in English, RAND hires staff members with relevant language skills and regional expertise. Its coverage of incidents is updated by region; at the time of this study, the data for North America were complete through December 2009. In 2009, a fully searchable database of comprehensive data was made available to any user (RDWTI, 2013).

Data Collection

For both databases, variables related to date, geography, weapons, tactics, and targets were captured. All dates (1972 to 2009) from the RAND dataset were included. For the GTD, incidents occurring from the 1970 to 2011 were included. The geographic location was limited to the United States. Initial filtering yielded a total of 2,362 cases. Upon removal of group terrorist perpetrators,¹⁴ 547 cases remained. These cases were labeled either “other” or “unknown.” Cases were excluded from selection if the

¹⁴ Attacks that named the perpetrator as a group (e.g., Animal Liberation Front or Al Qaeda) were considered as falling in this category.

perpetrator was “unknown,” (412 cases) since it could not be definitively stated that the attack was committed by a lone wolf. Moreover, cases were excluded if the description of the attack included more than one perpetrator (e.g., an attack by a small cell rather than a solitary individual). In some instances, cases that appeared to be coded with a single perpetrator, were excluded as well, if the description of the attack suggested that the apparently single perpetrator had coconspirators. Forty seven cases were excluded after reading the description of the incident for additional information on the perpetrator. A total of 88 cases remained after removing all cases that did not meet the criteria of a domestic lone wolf.¹⁵

The RAND data were initially filtered by geographic region (North America) and then more specially limited to the United States. All cases from 1972 to 2009 were included; all weapons, tactics, and targets were included in the search. The 567 U.S. cases identified were then manually filtered by perpetrator.¹⁶ All cases with a known terrorist group listed as the perpetrator were removed, leaving 208 cases that RAND had coded as “other” or “unknown.” These remaining cases were reviewed in greater depth, resulting in the determination that some of the cases coded as “other” met the domestic lone wolf inclusion criteria for inclusion (i.e., that the perpetrator acted alone without coconspirators, held a distinctive political or social ideology, and attacked targets

¹⁵ Initially, only one attack committed by Ted Kaczynski was retrieved from the database. A GTD staff member was contacted for additional information. It was determined that all of Kaczynski’s attacks were in fact included in the database, but that for all but one incident the perpetrator associated with the attack was listed as “unknown.” To determine which attacks were committed by Kaczynski, a list of his attacks was taken from an online source (<http://www.washingtonpost.com/wp-srv/national/longterm/unabomber/bkgrdstories.ted.htm>) and cross-referenced with the GTD. This process ensured that all of his attacks were included in the study.

¹⁶ The database did have an option to filter by perpetrator, but “individual” and “other” were not among the possible selections.

occupied by noncombatants). Some of the cases coded as “unknown” included the name of a domestic lone wolf perpetrator in the notes section; these cases were also retained. Only eight of the initial 567 cases met the domestic lone wolf criteria for inclusion, as even some individual attacks (such as Timothy McVeigh’s) were not truly conducted by domestic lone wolves. Of these eight, four were unique to the RAND database and were added to the incidents from the GTD, creating a dataset of 92 cases.

Data for Analysis

The data examined (N = 92) represent roughly the total incidence of domestic lone wolf attacks in the United States during the years examined. The GTD is currently the “most comprehensive unclassified database on terrorist events in the world” (GTD, 2013). As such, the dataset used for this study approaches, or perhaps even attains, exhaustive coverage of the known domestic lone wolf population.¹⁷ Each case in the data represented a unique domestic lone wolf incident. An initial review of the data revealed that in several instances a single domestic lone wolf was responsible for multiple incidents. These incidents all occurred on different days and do not suggest that a domestic lone wolf engaged in multi-event attack on a single day. Each event, even if committed by the same perpetrator, was treated as a unique case. The 92 incidents involved a total of 36 domestic lone wolves. The majority of the data were collected from

¹⁷ As noted, some incidents with unknown perpetrators or with limited information available may in fact, have been committed by a domestic lone wolf, but this could not be definitively stated. Moreover, the GTD is currently undergoing an update to provide additional information on incidents that occurred prior to 1998. As such, some earlier events could possibly have been overlooked, given the limited information available at the time of data collection. Within the dates examined, this is the most complete list of known domestic lone wolves.

START, since this database was reviewed first and many events from the RAND database were duplicative of the START data.

Variables

The variables of interest in this study were (1) date of the attack, (2) location of the attack (by region), (3) ideology of the perpetrator, (4) type of target (such as a government building or individual), (5) weapon used, (6) the extent to which the attack was successful, and (7) the existence of casualties. Although both datasets contained numerous other variables, the seven chosen for this study were most appropriate to explore the hypotheses of this research. The following subsections provide a description of each variable and the coding scheme.

Date

Two date variables were created for this study. The first date variable provided a chronological account of the attacks, organized by decades across a 42-year time span: 1970 to 1979, 1980 to 1989, 1990 to 1999, 2000 to 2009, and 2010 to 2011. Each incident found in the databases was associated with a particular year; as a result, no category for missing data was created.

The second date-related variable was constructed by separating the data into five groupings, each associated with significant events (or periods) in U.S. history. It was hypothesized that domestic lone wolf terrorists would be motivated by a particular ideology, and therefore these groupings appeared appropriate for analyzing the data. For example, Ted Kaczynski's ideology was heavily influenced by a desire to rally against

the technological advances of the time period in which his attacks occurred (Springer, 2009).

The incidents placed into the first category of this variable occurred during or toward the end of the Vietnam War (or prior to the 1980s). A likely motivation for a domestic lone wolf during this time might have been anti-war or anti-government sentiment. Data related to incidents occurring during the environmentally focused 1980s were coded into a second category. Those domestic lone wolves who planned and executed attacks against the rise of technology or in the dot-com era (i.e., during the 1990s), were coded into a third category. Attacks in the years following the new millennium were separated into two categories: the five years following 9/11, and the end of the Iraq War, or incidents occurring after 2006.

Location

The variable of location was coded into seven categories based on regions of the United States: New England, the Mid-Atlantic, the Southeast, the Southwest, the Midwest, the West, and other. Additional information on the divisions (the states within each category), can be found in the Appendix. As with the date variable, a missing data category was not necessary, since all incidents were associated with a location of some type (even if that location was onboard a plane, but still within the United States).

Initially, Census Bureau divisions¹⁸ were selected to provide a framework for organizing the data. The Census Bureau provided nine categories. It was determined that these categories should be altered to provide larger groups to code the data into, because, had that framework been used, there would have likely been too few cases in each category to identify variations between the categories. Therefore, the groupings of states based on the Census Bureau's four regions (West, Midwest, Northeast, and South) were slightly adjusted to create six categories, adding a separate category for the Mid-Atlantic (as it was hypothesized that this section of the country would experience the most attacks) and reorganizing the South into Southeast and Southwest groupings to provide greater equity in population distribution.

Ideology

The variable of ideology was coded into six categories.¹⁹ The categories included: (1) personal ideology (a self-created ideology unique to the domestic lone wolf), (2) anti-government (action in protest of governmental agencies or authorities), (3) political (actions taken in protest of a political affiliation or as a result of a political belief), (4) religious differences (actions taken against or in the name of a religious belief), (5) racial differences (actions taken against a particular racial group), and (6) unknown (if

¹⁸ The divisions included: New England, Middle Atlantic, East North Central, West North Central, South Atlantic, East South Central, West South Central, Mountain, and Pacific.

¹⁹ The variable coding scheme was categorized by the author.

information on the ideology was limited and therefore a categorization could not be definitively stated).²⁰

The variable categories were chosen based on motivations suggested by the U.S. Code²¹ and previous literature²² to explain the personally crafted ideologies unique to lone wolves. When the motivation behind the attack was unique to the domestic lone wolf, or an amalgam of multiple ideologies, the incident was coded as “personal.” Even though all ideologies are deeply personal, those coded as “personal” simply meant that the motivation behind the attack did not align with a more recognized category provided by either prior literature or the U.S. Code.

Target

The variable that defined the type of target attacked by a domestic lone wolf was coded based on nine categories from the two databases,²³ including an “other” category. Individuals – including presidents, political leaders, or other specific citizens – were coded 1. The additional categories were (2) governmental or federal buildings (including private buildings that housed government offices), (3) medical facilities (hospitals, health clinics, or centers), (4) military establishments (military bases, recruiting stations, or museums), (5) religious buildings (churches, synagogues, mosques, or federations), (6)

²⁰ In both the GTD and RAND datasets, the description of the attack provided information on many of the cases and was used to code the incidents with an ideology. For example, if the description provided information on the perpetrator’s motivation (e.g., Luke Helder wrote letters with each bombing that “bemoaned the power of the government”), then this was enough information to code the case (in Helder’s instance, as an anti-governmental ideology). I chose to err on the side of caution when a category of motivation was not readily apparent, so as not to skew the results.

²¹ The U.S. Code notes “politically motivated violence” as a component of the definition of terrorist.

²² Turchie and Puckett (2007) identified personal motivations and political or religious goals as primary objectives of terrorist attacks.

²³ The titles and descriptions of some categories vary from the categorization provided by the GTD and RAND databases.

transit or train stations, airports, or aircraft, (7) first responders (police officers, firefighters, or EMS personnel),²⁴ (8) mailboxes, and (9) other (general office buildings, universities, gardens, banks, or shopping centers). A category for missing data was not created.

Weapon

Three categories were created for the weapon variable: (1) firearm (a pistol or rifle of any size or caliber), (2) explosive (an IED, a pipe bomb, or a homemade bomb utilizing nitrogen fertilizer and/or potassium nitrate), and (3) other (including incendiary devices, chemical agents, vehicles, and use of multiple weapons). These weapons are unique to the data examined and do not include the universe of possible weapons. A weapon was determined for each case in the study, and therefore a missing data category was not created.

Successful Attack

The variable used to measure the extent to which the domestic lone wolf attack was successful was coded dichotomously. An attack was considered successful if the perpetrator completed his or her mission prior to apprehension or death, or if the individual fled without being captured. For example, if a domestic lone wolf detonated a bomb and was subsequently captured, his or her attack was still successful. The presence of casualties was not required for an attack to be considered successful; a bomb that detonates or a gunman who holds hostages, even without causing injuries, still has the

²⁴ First responders were placed in a separate category from other individuals because the former can be considered hardened targets (i.e., they may carry a weapon, have training in self-defense, and/or personal situational awareness), while general people (i.e. doctors, civilians, etc.) were, for the purposes of this study, considered soft targets.

potential to create fear. An attack was coded as unsuccessful if the perpetrator was apprehended before his or her mission had been completed (e.g., the target was not attacked), a device was found prior to detonation, or a device failed to detonate.

Casualties

The variable created to measure the number of casualties (defined in terms of injuries and/or deaths) was organized into six categories. These categories included measures for no casualties, one casualty, two casualties, three to five casualties, six to ten casualties, and more than ten casualties. There were known quantities of casualties for each attack, so again no missing data category was needed. This variable was utilized to determine if multi-incident domestic lone wolves are more lethal than single-incident domestic lone wolves.

Because the term “lethal” can mean not only deadly but also harmful, it was determined that the variable used to examine lethality should be defined in terms of all casualties (i.e., injuries and fatalities). Although minor injuries are less lethal than a death, there is no method or equation to determine a ratio or formula for lethality. Moreover, because the datasets did not provide the severity of injuries sustained by victims,²⁵ it was even more difficult to define a certain number of injuries as statistically equal to one fatality. Furthermore, it is difficult to account for the effect of psychological trauma in these types of incidents. When a community considers the effect of terrorism,

²⁵ For cases that included a summary of the event, information such as “victim was shot but survived” may have been present. However, additional information on the severity of the injuries was not available.

all casualties are viewed as harmful to a community and can perpetuate fear. For these reasons, the variable “casualties” was defined as injuries and/or deaths.

Analyses

The research questions from this study were addressed utilizing several data analysis methods. To determine patterns in the data regarding the variables of interest, descriptive statistics and frequencies were used. These analyses provided an understanding of the weapons used, targets attacked, and motivating ideologies. More sophisticated statistical tests were not required as the research questions addressing patterns could be explained using a percentage or an overall count within a variable category. When appropriate, cross-tabulation with chi-square analysis was used to determine relationships between the variables of interest, such as weapon usage and casualties. Moreover, the aforementioned analysis was also used to examine whether targets or other variables were related in any way to the ideologies held by the domestic lone wolves in this study.

Reliability

Although only four of the 92 cases in the study appeared in both databases, there was evidence to suggest reliability among the data. The attacks associated with Naveed Afzal Haq, Scott Roeder, Abdulhakim Muhammad, and Nadal Malik Hasan appeared in both the GTD and RDWTI. These cases were coded in virtually identical ways in both databases with regard to the same date, location, weapon utilized, number of casualties,

and reported description of the attack.²⁶ There were some nuanced differences in how perpetrators were coded. For example, the GTD coded perpetrators as “unknown” if no information about a terrorist group was mentioned in the open-source document from which the data were retrieved. For events that occurred after 1997, perpetrators not affiliated with a group-based terrorist network were coded as “individuals.” Similarly, RAND coded perpetrators as “other” when an attacker was known but not identified as part of a terrorist group and as “unknown” when the attacker could not be identified.

Even though only four cases overlapped between the two databases, concerns about reliability do not pose a threat to this study. As discussed, the GTD houses significantly more cases than the RAND database (nearly three times as many) and the GTD includes data on more recent attacks.²⁷ This suggests that the GTD may have more data on lone wolf attacks than RAND. Moreover, several studies cited in the dissertation utilized one or both of the databases in their research (e.g. Eby, 2012; Spaaij, 2010).

Although the number of cases examined was relatively small, based on the databases reviewed, the cases do appear to capture the total population of known domestic lone wolves during the time period examined, thus further establishing reliability. If the data were only a sample of the known population, having only 92 cases could have been statistically problematic. However, it appears that every known domestic lone wolf attack for the dates examined was included in this study.

²⁶ The GTD reported one more casualty than the RDWTI in the attack committed by Nadal Malik Hasan.

²⁷ The GTD includes cases through 2011, the data from the RAND database is only complete through 2009.

Limitations

While analyses of this type are necessary to expand the currently limited number of studies in this field, they have some limitations. The secondary data used in this study come from open-source, unclassified documents, such as news archives, books, journal articles, and existing datasets. The datasets do not have access to data gathered by the law enforcement agencies responsible for investigating the incidents or to self-reported accounts of the events given by lone wolves. However, they represent the most readily available information accessible to researchers. Data gathered by law enforcement may contain information regarding the attacks that is too sensitive to publish.

Prior studies have also noted that domestic terrorist events are often misclassified due to inconsistent definitions (Horgan & Taylor, 2001). As previously mentioned, there are numerous definitions of domestic terrorism and there is no codified definition of lone wolf terrorism among academics (Bakker & de Craaf, 2010). Attacks that meet the threshold of domestic terrorism will not always meet the definition of a lone wolf, as domestic terrorists may be part of a group or small terrorist cell. Recently the American people have seen far greater numbers of mentally disturbed lone gunmen engaging in domestic terrorist attacks, but many of these attacks are not classified as lone wolves because they do not meet the definitional criteria. Moreover, domestic terrorists acting in concert with other individuals outside an organized group also do not meet the definitional standards of a lone wolf.

The data were examined to remove any cases that appeared inappropriate or were based on limited information; as a result, some cases were excluded simply because it

could not be determined if the attack was committed by a domestic lone wolf. If additional information had been available (such as a description of the attack), it may have been determined that certain attacks were indeed committed by a domestic lone wolf (as opposed to by an unknown perpetrator). As reported, cases were excluded from the study if the perpetrator was unknown, or if there was not enough information to indicate definitively that the attack was committed by a domestic lone wolf. As noted above, all but one of Kaczynski's attacks were initially excluded because they were coded as "unknown perpetrator"; it is possible (though it appears unlikely) that other incidents that would have met the criteria were missed in the same way.

A final limitation of the study involves the minimal number of cases extracted from the data for analysis. Although the START and RAND databases include thousands of cases, the results of the search yielded only 92 cases involving 36 domestic lone wolves. The limited number of data points restrict the types of analysis possible, but again the data do appear to represent the universe of known domestic lone wolf attacks in the United States during the specified time period.

CHAPTER 4: Results

This chapter reviews the results of the frequency analysis and provides, where applicable, graphical representations of the data to address the research questions. Additionally, cross-tabulations and chi-square analysis were applied to support or refute the hypotheses. The findings are then discussed.

Descriptive Statistics

Table 1 provides an overview of the descriptive statistics and frequencies of the variables. The variable level information provides an overview of the high level patterns evident in the data. By showing the number of cases per category for each variable, it provides a general understanding of the most commonly used weapons, targets attacked, or common ideologies.

Table 1. Frequencies of Variables

Variables	N	%
Date by Decades		
1970-1979	17	18.5
1980-1989	19	20.7
1990-1999	13	14.1
2000-2009	33	35.9
2010-2011	10	10.9
Total	92	100.0
Date by Eras		
End of Vietnam	17	18.5
Environmental 1980s	19	20.7
Dot-com Era	14	15.2
Five Years Post-9/11	27	29.3
End of Iraq War	15	16.3
Total	92	100.0

Location		
	New England	10
	Mid-Atlantic	11
	Southeast	13
	Southwest	6
	Midwest	30
	West	20
	Other	2
	Total	92
Ideology		
	Personal	20
	Anti-Government	18
	Political	8
	Religious Differences	18
	Racial Differences	13
	Unknown	15
	Total	92
Target		
	Individual	29
	Government or Federal Buildings	6
	Medical Facilities	6
	Military Establishments	7
	Religious Buildings	6
	Transit Stations, Airports, etc.	7
	First Responders	2
	Mailboxes	19
	Other	10
	Total	92
Weapon		
	Firearm	29
	Explosive	53
	Other	10
	Total	92
Attack Successful		
	Yes	65
	No	27
	Total	92
Casualties		
	No Casualties	50
	1 Casualty	26
	2 Casualties	7
	3-5 Casualties	3
	6-10 Casualties	3
	10+ Casualties	3
	Total	92

Date

The result of the frequency analysis for the date variable coded by decades revealed that slightly less than half of all known domestic lone wolf attacks occurred after 2000 (43 cases, 46.8% of the sample). Roughly one-quarter of the attacks took place during the 1980s (19 cases; 20.7%), whereas the 1970s and 1990s were fairly quiet in comparison. Because static measurements, such as decades, were not considered the most appropriate way to organize the data, given that domestic lone wolves organize attacks surrounding a particular ideology and belief, a secondary date variable was created. The variable categories correspond with movements, important political or social issues, and advances in technology that are significant to lone wolf terrorism.

The results from analyzing the second date variable (coded by eras) suggested that approximately one-third of all domestic lone wolf attacks occurred in the five years following 9/11 (27 cases, 29.3% of the sample). Perhaps this increase occurred because terrorists perceived the United States to have weakened defenses and thought that if one attack was successful, others might be possible as well. However, it could also be the result of the increased availability of the Internet. As indicated in the literature review, the Internet has given modern-day domestic lone wolves greater ability to conduct research, prepare for an attack, and discuss ideologies with likeminded individuals (Simon, 2013).

As shown in the frequency table, the date variable coded by eras was more evenly distributed across categories than time measured by decades. The end of the Vietnam War (17 cases, 18.5%), the environmentally focused 1980s (19 cases, 20.7%), the dot-

com era (14 cases, 15.2%), and the end of the Iraq War (15 cases, 16.3%) were all approximately equal in frequency of cases. This can be seen as an indication that domestic lone wolf attacks are a response to important events or movements, advances in technology, or the perception of weakened defenses. It is also a more meaningful finding than the count of attacks per decade across the time period in this study. Because this variable is tied to events in history, of which could be a trigger factor prior to an attack, this date variable is more appropriate to use when examining data on lone wolf terrorism than a variable coded by decades.

Perhaps the most worrisome finding from this variable was that the many of domestic lone wolf attacks in the United States have occurred within the last decade, and that they have increased drastically since the 1990s or the dot-com era. It can be suggested that the prevalence and wide availability of the Internet has impacted this finding. The trend may suggest that the United States is likely to continue to see higher numbers of domestic lone wolf attacks in the near future, unless additional measures are taken to detect and prevent them.

Location

The results of the frequency analysis suggest that the most likely location for a domestic lone wolf attack is the Midwest. Thirty, or 32.6%, of the 92 attacks were carried out in the 12 states contained in this region. This finding may be somewhat skewed, however, as 25 of the 30 cases stem from three domestic lone wolves who initiated several attacks over a short time period in the 1980s and then in 2002. A single domestic

lone wolf, Luke Helder, was responsible for 15 of the 30 attacks during a four-day terror campaign in May 2002.

The Mid-Atlantic, Southeastern, and New England regions saw nearly equal numbers of attacks 11 (12% of the sample), 13 (14.1% of the sample), and 10 (10.9% of the sample), respectively. The relatively low frequency of attacks in the Mid-Atlantic in comparison to those in the Midwest was unexpected, as one of the study's hypotheses suggested that the Mid-Atlantic would be the most frequently targeted location. One possible explanation is that the hardened targets of the Mid-Atlantic region, specifically in the greater Washington, D.C. area (such as governmental buildings or military installations), are more difficult to attack than soft targets elsewhere. The primary targets attacked in the Midwest were individuals and mailboxes, both of which are considered soft targets.

Ideology

The literature suggested that lone wolves tend to create their own deep-seated ideologies (Spaij, 2012) and do not adhere to the more recognized ideologies of group-based terrorist organizations. The results of the frequency analysis support this notion. Twenty (21.7%) of the 92 domestic lone wolf attacks in this study were identified as motivated by a unique personal ideology – although, as with the findings associated with the location variable, this outcome is skewed by a single domestic lone wolf, Ted Kaczynski, whose 14 attacks were all motivated by a personal ideology.

Holding an anti-government ideology and being motivated by a perceived religious difference were the second most frequent motivations behind domestic lone

wolf incidents. These categories yielded 18 cases each, or nearly 40% of the sample when considered together. The variable “racial differences,” or ideologies motivated by an individual’s hatred of a particular racial group or disapproval of interracial relationships, yielded 13 cases (14.1% of the sample).

There were also 15 (16.3%) domestic lone wolf incidents coded as “unknown”²⁸ with regard to ideology, because there was insufficient information to place them in a pre-defined group. The domestic lone wolves coded with an unknown ideology either did not hold a recognizable motivation (e.g. anti-government), or did not divulge or leave behind evidence of their motivation. This finding may also speak to the limited information available in general regarding lone wolves. It is possible that researchers simply do not know enough about each individual’s motivation to be able to determine if the ideology is truly unique to the lone wolf terrorist, or if it appears to be more in line with a broader ideological category. Given that the attacks by lone wolves involve no coconspirators, the only person who can authoritatively attest to the driving motivation is the terrorist who committed the act. However, if a manifesto or other information is not left behind, and if the lone wolf is killed during the attack or prior to apprehension, then there is no definitive way to determine motivation.

Although not represented in the frequency table, only one of the seven multi-incident domestic lone wolves in this study changed their ideology between attacks²⁹.

²⁸ As outlined in Chapter 3, cases with limited information regarding ideologies, but that met all the definitional criteria for lone wolves, were included in the study. However, without conclusive information, these ideologies were coded as “unknown.”

²⁹ See appendix for table.

Joseph Paul Franklin committed a total of fifteen attacks between 1976 and 1980. Thirteen of his attacks were committed against mixed race couples (coded as a racial differences ideology), while two of his earliest, but not first, attacks were on synagogues (coded as holding a religious differences ideology). This suggests that the majority of lone wolves have a single ideology and the same motivations are maintained throughout all attacks. This pattern is significant for the law enforcement and intelligence communities, as it is one aspect of domestic lone wolf terrorism that appears consistent across nearly all cases.

Weapon

The results suggested that explosives were the most common type of weapon used by the domestic lone wolves studied (53 cases, 57.6%). Firearms, hypothesized to be the most frequently used weapon, were used only 31.5% of the time (29 cases). Less common weapons, such as incendiary devices, chemicals, vehicles, airplanes, or the use of multiple weapons during a single attack (all coded as “other”), were used in 10 incidents (10.9%).

As discussed above, the literature posits that lone wolves primarily utilize firearms during attacks (Spaij, 2012). For example, firearms are easily accessible and fairly inexpensive, little knowledge of the weapon is needed to operate it, and the materials needed to create more elaborate bombs are often difficult to obtain without drawing the attention of law enforcement or the intelligence community (Stewart, 2011). Contrary to the literature, however, the results of this study suggest that an explosive of

some type was used in more than half of the attacks by domestic lone wolves occurring between 1970 and 2011.

Although this study did not identify the type of explosive device used in each attack, it is possible that rudimentary bombs were employed, utilizing items commonly found at home improvement and sporting goods stores.³⁰ Obtaining the materials needed to create these devices would not arouse the attention of law enforcement or intelligence personnel. As will be discussed, the Internet may have had a significant impact on the use of rudimentary explosive devices. Online bombing making guides may be responsible for the frequent use of these weapons. Future research should consider examining the extent to which lone wolves utilize the Internet for planning and preparing for attacks.

The results also indicate that domestic lone wolves most frequently use a single type of weapon, firearm, explosive, or vehicle, rather than multiple weapons at once (e.g., strategically placing bombs in a public location and then positioning oneself as a sharpshooter to attack fleeing victims). This is likely due to the unique nature of lone wolf terrorists. The ability to use multiple weapons during an attack would be more easily accomplished with more than one attacker.

Target

Attacks targeting individuals, as well as those targeting the mailbox of an individual (with the intent of inflicting harm on a person), were the most common type attempted by domestic lone wolves in this study. Of the 92 cases, 29 (31.5%) of the

³⁰ Such items include matches, pipes, Christmas lights, batteries, clocks, and gunpowder. These items are discussed in a 2010 article, "Make a Bomb in the Kitchen of your Mom," published by *Inspire* magazine.

attacks targeted individuals and 19 (20.7%) targeted mailboxes. The remaining categories of the target variable were about equally divided in frequency. The category created for “other” targets (e.g., universities, shopping centers, and general office buildings) comprised 10 cases (10.9%). Attacks on military establishments and on transit stations, airports, and aircraft each represented seven cases (7.6% of per target). Government or federal buildings, medical facilities, and religious buildings yielded six cases each (6.5% per target). First responders were the least targeted of all the groups or places studied, with only two such attacks.

Thus, the data suggest that domestic lone wolves generally concentrate their attacks in a focused way, targeting individuals or their mailboxes rather than a large crowd or a general office building. Prior research suggests that hardened targets are associated with a decreased likelihood of attack (Ezell, Behr & Collins, 2012). The aforementioned finding supports this notion, as the targets most commonly attacked were soft (i.e., lacking such forms of security as physical barriers and cameras).

Not only are attacks by lone wolves concentrated in a focused way on specific targets, but they are also concentrated by era. Figure 2 demonstrates that the majority of attacks on individuals occurred in the two earliest time periods examined. Moreover, all attacks on mailboxes occurred in the five years following 9/11. More recently, the end of the Iraq War era saw increases in attacks on military establishments and government and federal buildings. However, the remaining attacks were distributed more evenly across the time periods examined. Aside from the patterns previously mentioned, there did not appear to be any obvious patterns in targets attacked across the eras.

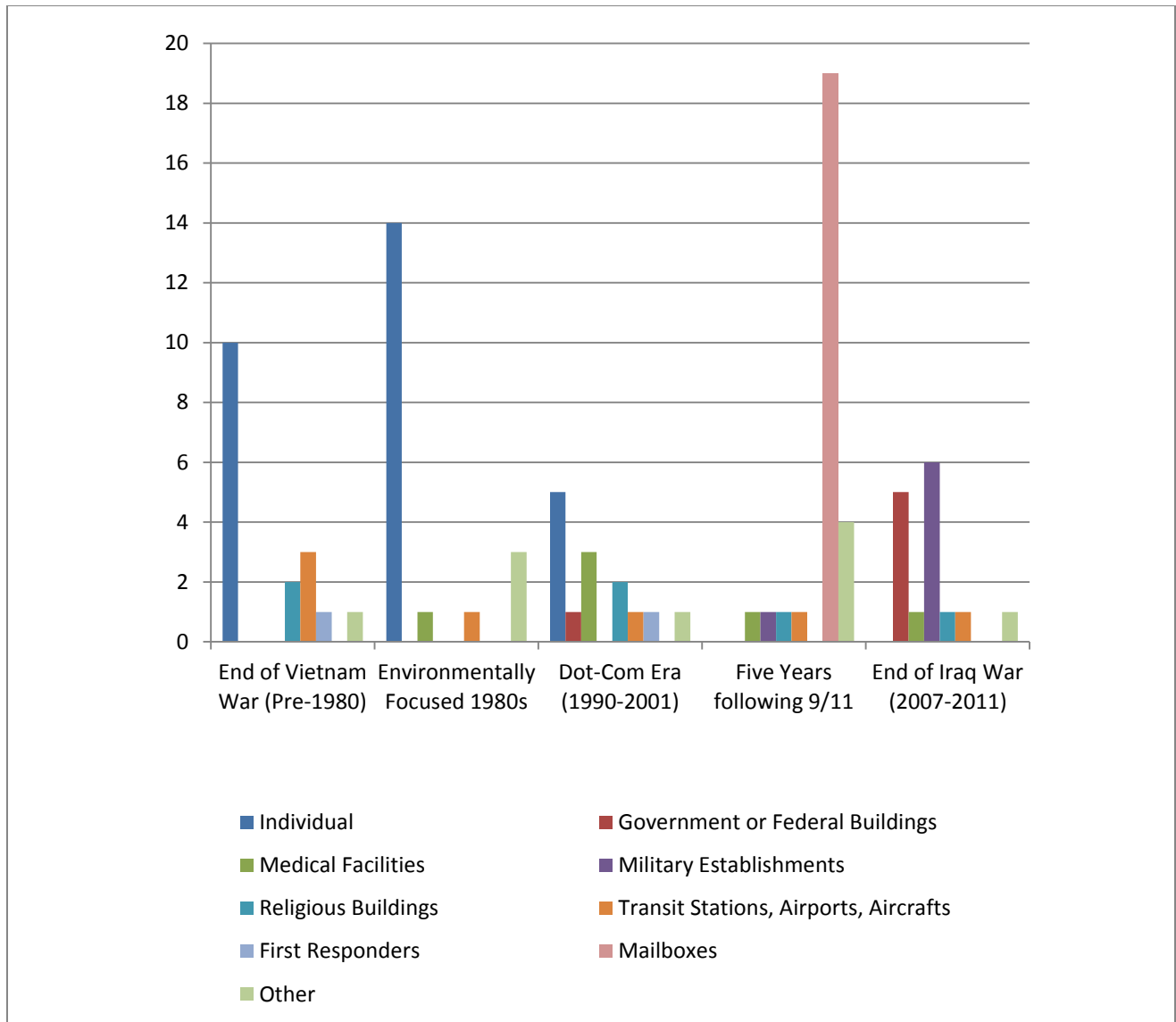


Figure 2. Targets Attacked by Domestic Lone Wolves over Time

Success of Attack

Perhaps the most concerning finding of the study was that more than two-thirds (70.7%) of the attacks attempted by domestic lone wolves were successful. In other

words, in the great majority of instances the attacker completed his or her mission prior to apprehension or death, or fled without being captured. That suggests that approximately a third (29.3%) of domestic lone wolves were either apprehended prior to completing their missions or failed in their plots for some other reason (i.e. law enforcement learned of the attack, a target was not assassinated, or an explosive did not detonate).

Of the 65 successful attacks, 43 were aimed at soft targets (e.g. individuals, religious buildings, mailboxes, etc.). This fact, combined with the total distribution of targets, shows that domestic lone wolves were more likely to accomplish their attacks when the target was soft. Overall, 60 of 92 total attacks were on attempted soft targets, including individuals, medical facilities, religious buildings, and mailboxes. Only 22 of the attacks examined were attempted on hardened targets; 10 were coded as “other” (see Appendix for more information). This is a noteworthy finding for both the law enforcement and intelligence communities. It exemplifies the need to pay additional attention to potential attacks on soft targets.

Casualties

Although the data suggest that many domestic lone wolf terrorist attacks are successful, generally they have not yielded high casualty counts. More than half (54.3%) of attacks in this dataset did not result in any casualties, and an additional 26 (or 28.3%) resulted in a single casualty. In two of the 26 attacks, the domestic lone wolf himself was that casualty and the attack did not result in any noncombatant deaths or injuries. In the remaining 14.2% of the cases, two or more casualties occurred. The category for three to

five casualties held seven cases (7.6%), and the categories for seven to ten casualties and more than ten casualties held three cases each.

The most deadly domestic lone wolf attack to date on U.S. soil occurred on November 6, 2009, when then U.S. Army Major Nidal Malik Hasan opened fire on a readiness center in Fort Hood, Texas, killing or injuring 45 individuals. A report released by the U.S. Senate Committee on Homeland Security and Governmental Affairs (2011) noted that the military classified Hasan's attack as an act of workplace violence. However, the Senate concluded that the shooting was a terrorist attack. The Senate's evaluation of the incident determined that Hasan was a homegrown, self-radicalized Islamic extremist whose religiously motivated attack harmed not only military personnel, but also a noncombatant (civilian).

Hypotheses

Relation of Targets to Ideologies

Hypothesis 1 posited that domestic lone wolf terrorists would often attack targets symbolically related to their personal ideologies. In order to test this hypothesis, a new variable³¹ was created to identify whether or not the domestic lone wolf's ideology "matched" the corresponding target attacked. For example, if the domestic lone wolf's ideology was anti-government, it would be expected that the target attacked would be a governmental or federal building. If the ideology and target matched, the incident was coded "yes"; if the two did not match, the incident was coded "no." Conversely, if the

³¹ The coding guidelines for this variable can be found in the Appendix.

attack was motivated by an ideology centered on racial differences but the domestic lone wolf attacked a military establishment, the case was coded as a non-match. A “missing” category was also created for cases with unknown ideologies, as a motivation could not be definitively identified.

Given the limited number of cases in the data set, I erred on the side of inclusiveness when completing the coding. It is possible for an ideology to match multiple targets (e.g., a domestic lone wolf who holds an anti-government ideology could reasonably attack government buildings, military installations, or even first responders as a way of carrying out that ideology). Furthermore, a domestic lone wolf holding a more personalized ideology could be a match to any target, given that the motivations behind the attack are unique to the individual. For this reason, domestic lone wolves with personal ideologies were placed into a separate category.

There are still limitations with this approach. First, in cases where a domestic lone wolf did not clearly state his or her ideology (e.g., in a manifesto), it is possible that the ideology coded by START was simply deduced from the target attacked and does not represent the actual ideology held by the lone wolf.³² Second, the results offer an explanation of the targets attacked in relation to ideologies on an incident level, not per domestic lone wolf. Of the seven multi-incident domestic lone wolves in the data set, two were coded with different ideologies across the attacks committed. Thus, it seemed more meaningful to report this measure on an incident level rather than an individual level.

³² As noted, the data were collected from secondary sources; ideologies are not self-reported and therefore it is difficult to know the exact motivation behind the attack in many cases.

The results, shown in Table 2, suggest that in slightly more than 40% of valid³³ cases (35 out of 79 total cases in which both ideology and target were available for examination), the targets attacked by domestic lone wolves were not symbolically related to their ideologies. This may seem to be a surprising result, but it is possible that the ideologies coded³⁴ for the domestic lone wolves are not representative of their true motivation because scholars have yet to understand them. Because their motivating ideologies are so deeply personal, it may be difficult to categorize them into predetermined categories.

Table 2. Ideology and Target Match

Variable	N	Percent	Valid %
Ideo_Tar_Match			
Yes	24	26.1	30.4
No	35	38.0	44.3
Personal	20	21.7	25.3
Total	79	85.9	100.0
Missing Data	13	14.1	
Total	92	100	

Of the 79 valid cases, 20 were coded as “personal,” suggesting that the ideology and target did in fact match, because the domestic lone wolf would have selected that target based on their own understanding of a motivation. If these cases are considered as having matching ideology and target, then in roughly half of the valid incidents, the

³³ A valid case refers to the instances where an ideology and target were both available for examination (this excludes cases in which the ideology could not be definitively stated).

³⁴ Domestic lone wolves with documented ideologies (i.e. Kaczynski’s manifesto) are exempt from this assertion.

ideology corresponded with the predicted target. This interpretation of the findings provides some support for Hypothesis 1.

Primary Weapons Utilized

The second research question of this study involved an examination of the primary weapons utilized by domestic lone wolf terrorists. As mentioned, the literature suggested that lone wolves tend to use firearms during their attacks because they are easy to obtain and conceal (Instituut voor Veiligheids-en Crisismanagment, 2007). It was hypothesized that the primary weapons utilized by domestic lone wolves would be firearms and improvised explosive devices (IEDs). As shown in Table 3 below, this hypothesis was correct; the vast majority of domestic lone wolves (89.1%) used firearms and IEDs in their attacks. However, explosive devices were used more frequently than firearms (57.6% compared to 31.5%). The other weapons examined (incendiary devices, chemicals, or vehicles) were not found to be common amongst this group of terrorists.

Table 3. Weapon Usage by Domestic Lone Wolves

Variable	N	Valid %
Weapon		
Firearm	29	31.5
Explosive	53	57.6
Other	10	10.9
Total	92	100.0

Another interesting question related to this finding is whether or not the likelihood of completing an attack is associated with the type of weapon used by the domestic lone

wolf. A secondary analysis found little difference between firearms and explosives with regard to the frequency of success. Table 4 shows that of the successful attacks in the dataset, 46.2% of the attacks involved an explosive and 41.5% of the attacks involved a firearm. On the other hand, the vast majority (85.2%) of the unsuccessful attacks involved the use of an explosive device.

Table 4. Weapon Usage by Successful Attack

Weapon Utilized	Successful Attack		Total
	Yes	No	
Firearm	27 (41.5%)	2 (7.4%)	29 (31.5%)
Explosive	30 (46.2%)	23 (85.2%)	53 (57.6%)
Other	8 (12.3%)	2 (7.4%)	10 (10.9%)
Total	65 (100%)	27 (100%)	92 (100%)

Note: Chi square 12.516, $p = .002$

This result may suggest that law enforcement and intelligence communities have more effective methods of identifying or tracking terrorists who procure equipment necessary to construct bombs, resulting in attacks being foiled and terrorists being arrested prior to the completion of a bomb-related incident. Alternatively, the finding may also be attributed to a contention already present in the research literature. As discussed, lone wolves (likely never having been a part of a terrorist group) may not have the opportunity to gain the types of skills necessary to build more sophisticated or functioning bombs (Instituut voor Veiligheids-en Crisismanagment, 2007). This resulted in a greater number of unsuccessful attacks when an explosive device of some kind was used.

Firearm Usage by Domestic Lone Wolves

Hypothesis 3 stated that the use of firearms would increase over time. Figure 3 demonstrates that, although firearm usage has remained fairly stable over the time period examined, the use of explosives peaked in the dot com era and remained at an elevated level into the five year following 9/11. The initial spike in explosive usage is likely the result of the increased availability of the Internet and of online bomb-building guides and remained elevated as a residual effect of 9/11. In contrast, the use of explosives declined significantly after 2007 while firearms became the predominate weapon utilized by domestic lone wolves. This shift may have resulted from legislation regulating the sale of materials required to build more sophisticated bombs, or perhaps an increased availability of firearms in the United States; the latter explanation is supported by previous research.

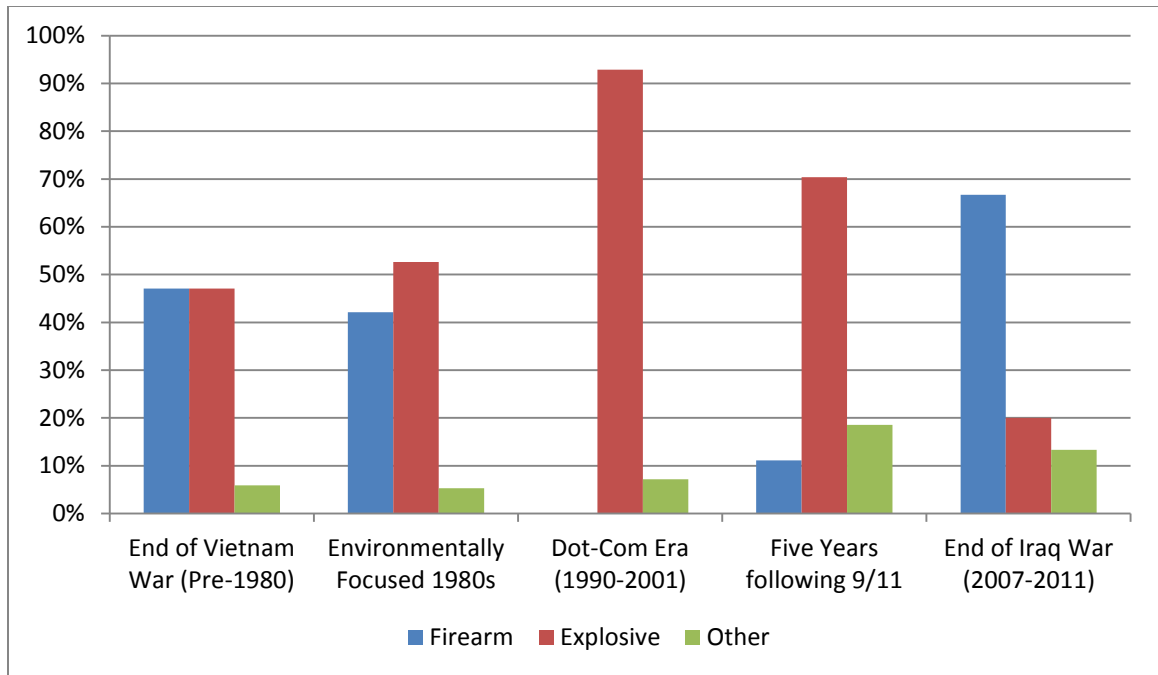


Figure 3. Weapon Usage by Domestic Lone Wolves over Time³⁵

Prevalence of Attacks in the Mid-Atlantic

Hypothesis 4 suggested that attacks in the Mid-Atlantic region might be more prevalent than in other regions. This hypothesis is not supported by the data. Rather, as the data suggest that the Midwest region incurred the most attacks during the time period examined. Furthermore, both the Southeast and Western states experienced more attacks than the Mid-Atlantic region. In fact, only New England and the Southwest experienced fewer attacks across the dates examined.

³⁵ Figure 3 controls for the number of years in each time frame. The data presented in Figure 3 is the ratio of incidents by type by year.

However, and as mentioned previously, these findings may be skewed by the fact that 25 of the 30 cases found in the Midwest stem from three domestic lone wolves who initiated several attacks over a short time period in the 1980s and in 2002. These outbursts inflated the number of attacks associated with this section of the country. As a result, it is difficult to draw a firm conclusion regarding the relationship between geographic region and domestic lone wolf attacks. However, this may be the result of the Mid-Atlantic target's being exceptionally hardened.

Table 5. Attacks by Geographic Region

Variable	N	Valid %
Location		
New England	10	10.9
Mid-Atlantic	11	12.0
Southeast	13	14.1
Southwest	6	6.5
Midwest	30	32.6
West	20	21.7
Other	2	2.2
Total	92	100.0

The aforementioned findings notwithstanding, nine of the 15 most recent attacks (those listed as occurring during the end of the Iraq War era, or 2007-2011) have occurred in the Mid-Atlantic region. This may suggest a recent trend of domestic lone wolf attacks occurring in and around the nation's capital. Although this finding was not sustained over the larger time period examined (1970 to 2011), it is important to note where the modern day domestic lone wolves have been concentrating their attacks. The recent trend may also suggest that these modern domestic lone wolves prefer a larger

audience for their attacks and are hence attacking high-profile targets. Many of the domestic lone wolf attacks occurring in prior eras targeted individuals or mailboxes (that were associated with a particular individual), attacks that would have gained them less attention unless a pattern of multiple incidents developed.

Lethality of Single-Incident versus Multi-Incident Domestic Lone Wolves

The fifth hypothesis of this study suggested that multi-incident domestic lone wolves would be more lethal than single-incident terrorists. As represented in Table 6, this hypothesis was not confirmed. On average, single-incident domestic lone wolf attacks have resulted in a greater average number of casualties per event than multi-incident domestic lone wolves. Single incident domestic lone wolves were responsible for a total of 95 injuries and/or deaths across 29 different incidents, for an average of 3.3 casualties per incident. Multi-incident domestic lone wolves inflicted 76 deaths or injuries over 62 incidents, for an average of 1.2 casualties per incident. Contrary to what was hypothesized, the multi-incident domestic lone wolves did not seem as successful in causing casualties as domestic lone wolves who completed only a single attack. This, however, may be a result of several outliers in both categories.

Due to the significant range in casualties and the multiple incidents with one or no injuries or deaths, both the median and range are reported in Table 6 in order to provide several measures on which to evaluate the data. Given the variation between the lowest and highest numbers, the median provided a more realistic indication of the number of casualties per incident (one that is not subject to distortion by severe outliers). The median number of casualties was zero for both the single-incident and multi-incident

groups; the range was from 0 to 45 for the single-incident group and from 0 to 39 for the multi-incident group.

As mentioned, several outliers in each group impacted the overall average. For example, the single attacks completed by Joseph Stack and Nidal Hasan resulted in 17 and 45 casualties, respectively. Of the remaining 27 single-incident domestic lone wolves, 22 had either one victim or no victims. In other words, the vast majority of single incident domestic lone wolf attacks did not produce casualties nearly as high as the Stack and Hasan attacks; instead, the average is skewed by two terrorists whose attacks were exceptionally injurious.

Of the seven multi-incident domestic lone wolves, three were responsible for 75 of the 76 casualties listed in the table below. Joseph Paul Franklin, Muharem Kurbegovic, and Ted Kaczynski completed a total of 33 attacks. As in the case of the single-incident domestic lone wolves, the results were skewed by a few very prolific attackers. The remaining four multi-incident domestic lone wolves, although responsible for 29 attacks, resulted in only a single casualty.

Table 6. Average and Total Number of Casualties per Domestic Lone Wolf

Terrorist	Average Casualties per Incident	Total Casualties
Single-Incident Terrorists*		
Lee, J.	1	1
Bedell, J.	3	3
Stack, J.	17	17
Hasan, N.	45	45
Von Brunn, J.	1	1
Muhammad, A.	2	2
Roeder, S.	1	1
NcMenemy, D.	0	0
Haq, N.	6	6
Taheri-azar, M.	9	9
Elwirelwir, E.	0	0
Kim, D.	0	0
Hadayet, H.	7	7
Bishop, C.	1	1
Kholya, H.	1	1
Long, N.	1	1
Shapiro, H.	0	0
King, E.	0	0
De la Beckwith, B.	0	0
Fromme, L.	0	0
Trutt, F.	0	0
Schoonover, K.	0	0
Hanson, R.	0	0
Mititch, M.	0	0
Lit, P.	0	0
Watson, D.	0	0
Evans, P.	0	0
Terry, R.	0	0
Ortega, O.	0	0
Tafoya, E.	1	1
Total	3.2	96
Median	0	---
Range	0-45	---
Multi-Incident Terrorists		
Melaku, Y. (5 incidents)	0	0
Helder, L. (18 incidents)	0	0
Alexander, F. (3 incidents)	0	0
Franklin, P. (15 incidents)	1.4	21
Kurbegovic, M. (2 incidents)	19.5	39
Rudolph, E. (3 incidents)	0.3	1
Kaczynski, T. (16 incidents)	0.9	15
Total	---	76
Median	0	---
Range	0-39	---
Average Casualties per Incident		
Single-Incident Domestic Lone Wolves	3.2	---
Multi-Incident Domestic Lone Wolves	1.2	---

CHAPTER 5: Discussion and Conclusion

This study sought to identify patterns in domestic lone wolf terrorist attacks by examining data from the RAND Database of Worldwide Terrorism Incidents (RDWTI) and the University of Maryland Study of Terrorism and Responses to Terrorism (START) Global Terrorism Database (GTD). Specifically, this dissertation involved a review of the incidents contained in these databases with the purpose of identifying patterns in the targets attacked, the weapons utilized, and the ideologies of the domestic lone wolves. The goal of the study was to identify factors that might be useful considerations for policy makers.

Discussion

Ideological Importance of Target

Although it was hypothesized that the targets attacked by domestic lone wolf terrorists would be related to their motivating ideologies, the ideologies of domestic lone wolves do not, in the majority of cases, predict the type of target that they will attack. In 38% of the attacks, the domestic lone wolves did not select a target related to their ideology. For example, Luke Helder, a domestic lone wolf whose ideology was identified as anti-government, did not exclusively attack government or federal buildings. His attacks were limited to mailboxes. This study revealed that 21.7% of attacks were motivated by a personal ideology. Because these ideologies are unique to the individual

domestic lone wolf, it could not be definitively determined if the target matched the ideology, as it was possible that any target could match.

As noted, and as I will discuss further below, even in those cases where the target selected and the perpetrator's ideology do appear to align, that relationship may be simply a result of one of the study's limitations. Because the RAND and START databases coded secondary data, the initial coders may have determined a lone wolf's ideology based on the target attacked (and not through a manifesto or outside method of identification), thereby skewing the outcome.

Future research could create more specific target categories, such as religious symbols or items symbolic of government authority, in an attempt to link the choice of target to more precise groups. The tendency to use more inclusive categories speaks to the unique nature of lone wolves, as this study found that many of them followed a distinctive, personal ideology. The suggested reorganization of categories could yield results that would more strongly support the first hypothesis of this study (i.e. domestic lone wolf terrorists will attack targets related to their personal ideologies).

Until future research addresses the current limitations in lone wolf data, it is recommended that policy makers should not focus primarily on the ideologies of lone wolves when seeking to identify and inform potential targets. Instead, policy makers should look at the totality of targets attacked by previous lone wolves and concentrate prevention measures on the most frequently type of targets attacked.

Preferred Weapon of Choice

This research found explosive devices to be the weapon of choice among domestic lone wolf terrorists. In more than half (57.6%) of all attacks, a bomb of some type was utilized. This finding was consistent with previous research. Other scholars (Kushner, 2003; Spaaij, 2012) have noted that improvised explosive devices can be made with materials that are readily available at a hardware or home improvement store and are thus a preferred choice among lone wolf terrorists. Moreover, technological advances have given way to new means of constructing bombs. Internet forums and online bomb-making guides have supported a new breed of terrorists.

Although bombs were used in more than half of the attacks, explosive devices were involved in 85.2% of the unsuccessful attacks. This very large percentage suggests that even though domestic lone wolves can obtain the materials needed to construct simple devices, without proper training (which other criminals often obtain through membership in terrorist organizations) they may not be successful bombers. This finding reinforces the importance of continuing to make the components of more sophisticated bombs difficult to obtain (i.e., limiting access to fertilizers, nitrates, and or oxidizers), as the materials used in basic devices will likely always be accessible. Not all means of acquiring the components for explosive devices can be blocked, but other steps can be taken to prevent attacks. For example, increasing situational awareness at large events, health clinics, or government buildings could also lessen the occurrence and impact of attacks.

The study determined that firearms were used in 41.5% of successful attacks. In other words, domestic lone wolves were frequently successful (i.e., they completed their attack prior to escape, apprehension, or death) when using a firearm. In only 7.4% of unsuccessful attacks did the domestic lone wolf utilize a firearm. As a result, attacks using firearms should be treated just as seriously as incidents utilizing a different weapon modality, even though firearms are not the most frequently used weapon among domestic lone wolves. It is not possible to determine from the data why firearms were a more successful weapon in domestic lone wolf attacks. However, one could posit that firearms are easy to conceal and can be used at a distance, thereby giving domestic lone wolves who use firearms a greater chance of successfully achieving their objectives, even if they are later apprehended by law enforcement.

Policy recommendations related to this finding may prove difficult to implement, given the challenging political climate. In view of the broad accessibility of firearms in the United States and the constitutional right of citizens to own a gun, attempts to prevent these attacks through preemptive action are extraordinarily challenging, because any attempt to prevent a seemingly ordinary citizen from acquiring a firearm faces fierce opposition in the U.S. Although European countries have had success with regulating the sale and ownership of firearms through a licensing system (Saunders, 2012), lone wolves are still likely to cause harm even without easy access to guns. Policy makers in the United States should continue efforts to prevent domestic lone wolves from obtaining firearms, but they must also recognize that if action is taken to limit accessibility, other weapon modalities will simply be used more frequently.

Incident Location

Contrary to the hypothesis, the Mid-Atlantic region did not see the greatest number of domestic lone wolf attacks across the time period examined (1970-2011). It was anticipated that, given the number of high value targets near Washington, D.C. and the flow of high profile persons (such as members of Congress) through this region, it would have experienced more attacks than any other region of the country. The analysis showed that the Midwest region experienced the greatest number of attacks. However, further analysis determined that the apparently large numbers of attacks in the Midwest resulted from the actions of two specific domestic lone wolves. Nine of the fifteen most recent domestic lone wolf attacks did, in fact, occur in the Mid-Atlantic region. This recent trend confirms, in part, the fourth hypothesis of the study, at least with respect to the most recent period studied (i.e. 2007-2011). Thus, it is important to maintain the counterterrorism and intelligence work currently being done in this region.

Single-Incident vs. Multi-Incident Domestic Lone Wolves

The analysis also found that single-incident domestic lone wolves are more lethal than multi-incident domestic lone wolves. In the 30 separate single-incident domestic lone wolf attacks examined, 96 casualties resulted. In comparison, the 62 attacks by the six multi-incident domestic lone wolves yielded 76 casualties. Although multi-incident domestic lone wolves had additional time to hone their attack skills, the attacks by single-incident domestic lone wolves averaged more casualties than those by multi-incident domestic lone wolves.

Even though the single-incident domestic lone wolves of this study were the more lethal, it is recommended that policy makers and the intelligence and law enforcement communities focus on methods for identifying multi-incident domestic lone wolves after their initial attack (so as to avoid future incidents). Single-incident domestic lone wolves fall into the category because the law enforcement community was successful in capturing or neutralizing them before they could do anything else. However, multi-incident domestic lone wolves may continue to be more difficult to apprehend for the very reason that some may choose to engage in less lethal means of attack (e.g. mailing bombs rather than a large public attack) and subsequently have the opportunity to commit additional crimes.

Technology's Influence on Domestic Lone Wolf Terrorism

Technology's influence on lone wolf attacks emerged as a theme in the literature review. Although use of the Internet was not a measured variable of this study, the importance of this theme became apparent from the research. For example, it was determined that approximately one-third of all domestic lone wolf attacks identified by this study occurred in the five years following 9/11. One possible reason is the growing accessibility of the Internet at that time. Domestic lone wolves today have many advantages relative to their pre-Internet counterparts.

The lone wolves of previous time periods truly plotted, operated, and lived in isolation. Modern day lone wolves can access relevant Internet sites with the click of a computer button, whereas the lone wolves of the past had to be more active in the planning phases. Without the Internet, lone wolves would have to purchase or rent

materials supporting their cause (thereby potentially exposing themselves to detection by law enforcement), or to seek relevant training such as in how to construct explosives. Moreover, the Internet provides lone wolves with the opportunity to review building plans, read forums, blogs, and other publications that sympathize with their cause, and perhaps even discuss tactics with or receive encouragement from like-minded individuals.

The Term “Lone Wolf”

In the wake of recent attacks by the Islamic State in Iraq and the Levant (ISIL), the need for a new term or an amended definition of “lone wolf” is emerging, as this term does not, nor should it, encompass all the actions of lone terrorists. One of ISIL’s tactics is to circulate propaganda on social media encouraging those faithful to their cause to attack Westerners (Killalea, 2014). Those who choose to engage in these attacks may be incorrectly categorized by the news media, and subsequently by databases that utilize news articles, as lone wolves simply because the terrorist seems to be acting on his or her own. This practice perpetuates a false definition of lone wolf terrorism, outside what academics generally agree upon. In this dissertation I have defined a domestic lone wolf as a standalone operative who does not belong to an organized terrorist group. Individuals acting out of faithfulness to ISIL should instead be classified as individual operators within a larger organization, as they would likely be operating by themselves but in conjunction with, or at the behest of, a known terrorist organization. This situation further exemplifies the need for a codified definition of a lone wolf, as the term is often used as a

catch phrase to provide an example of a generally understood tactic rather than a defined type of terrorist.

Moreover, future research is needed to examine the extent to which technology influences lone wolf terrorists and if those that utilize technology can still be considered a lone wolf. The term *lone wolf* recalls the image of Ted Kaczynski, the unkempt recluse who plotted acts of terror in isolation. All aspects of Kaczynski's actions meet the definitional criteria of a lone wolf. He devised a deeply personal ideology without the influence of others, and he constructed and mailed explosives to noncombatant targets, all without the advantages of modern technology³⁶ or prior training. It is suggested by this author that terrorists that rely heavily on technology, either to learn skills for engaging in an attack, converse with likeminded individuals, or receive encouragement from large terrorist organizations (via the Internet), are not a lone wolf in the true sense of the term. A more accurate term could be used to define those terrorists whose actions are heavily influenced by modern technologies.

The new term used to describe individual terrorists who are influenced by technology, would still be required to meet the definitional criteria of a domestic terrorist and the other standards for lone wolf terrorism, but it would emphasize the distinct patterns of action that arise when a terrorist acting alone has online access to like-minded individuals and other resources that may influence access his or her ideology or how an attack is planned.

³⁶ Given Kaczynski's ideology, even had the Internet been readily available in the 1980s, he almost certainly would not have utilized it for an attack.

The following questions should be addressed in determining the nature and usefulness of this new category of technology-driven individual actors: (a) To what extent does technology influence individual terrorists? (b) Are the tactics of individual terrorists different from those of lone wolves? (c) Are individual terrorists who utilize technological advances more successful than traditional types of lone wolves (such as Ted Kaczynski)? In examining these questions, perhaps we would find that lone wolves heavily influenced by technology are, in fact, more closely related to those sympathetic to causes like the ones promoted by ISIL, as they are working with a cause in mind other than their own personal ideology.³⁷ An individual terrorist in this sense would conduct attacks by himself or herself and would thus still appear to be working individually (because he or she is not affiliated with a larger terrorist organization), but would use the Internet as a discussion or informational forum to gain support from a larger audience of likeminded individuals.

If two different definitions of a lone wolf existed, this would of course further reduce the pool of terrorists falling into either category. However, future research could focus specifically on true lone wolves (or on individual operators) to understand those individuals' specific weapons, ideologies, and targets. Perhaps we would find that the two groups are very different. The term "lone wolf" would then be reserved for terrorists such as Ted Kaczynski and those individual actors who truly act in a solitary fashion. Researchers would then be able to determine the differences in patterns (if any) between

³⁷ This statement makes the assumption that individual terrorists who heavily utilize the Internet are swayed by or engage in attacks because they receive support from an online community and do not hold a self-created ideology.

true lone wolves and individuals who engage in attacks by themselves but with support or encouragement from a larger group. The resulting information could help to guide policy makers and law enforcement with regard to aspects of lone wolves and might help them to identify risks before they materialize. In addition to this, databases that collect data on lone wolf attacks should consider including a variable on the extent to which the Internet or other technology sources were used in the planning or preparation of the attack. This information would further help to determine true lone wolves from those individual operators who are influenced by third parties.

Limitations

There were several limitations to this study, some of which have been previously discussed. As noted above, the secondary data used in this study are derived from open-source, unclassified documents, such as news archives, books, journal articles, and existing datasets. Much of this information is not the result of rigorously created research projects or of subject matter experts' opinions, but rather represents anecdotal information. For instance, in the coding of lone wolf incidents, some classifications of ideology may have been assigned based on the target attacked and not on any direct evidence of the lone wolf's beliefs. Therefore, if the analysis of ideology and target match, this could simply be the reaffirmation of educated guessing made by coders and not of a lone wolf's self-reported ideology. In very few instances does a lone wolf leave behind definitive evidence or publish a manifesto stating his or her motivations for an attack.

A second limitation involves the definition of the term *lone wolf*. Prior studies have noted that domestic terrorist events are often misclassified due to inconsistent definitions. There are numerous definitions of domestic terrorism, and there is no consensus regarding the definition of lone wolf terrorism in the academic realm. It is possible that incidents were coded incorrectly based on the definition used at the time, as the term has only recently taken shape.

A final limitation of the study involved the limited number of cases extracted from the data. While the START and RAND databases contain thousands of cases, searches of these databases yielded only 92 cases of domestic lone wolf terrorism, carried out by 36 different individuals. It is known that, in some instances, not all attacks were included in the databases. For example, the extensive literature on Ted Kaczynski depicts him as a multi-incident domestic lone wolf, whereas both the START and RAND databases reported that Kaczynski was involved in only one attack. This error suggests that other domestic lone wolves may have been overlooked or not included.

Future Research

Future research should examine what similarities exist between lone wolves and terrorists who operate as part of a group, specifically with regard to the ideologies, primary targets, and most commonly used weapons of each category. Prior research has stressed that lone wolves, since they operate in a solitary manner, are unique. However, it should be determined whether this is the only differentiating characteristic between lone wolves and terrorist groups. If, in fact, lone wolves have additional defining characteristics, it may be possible to develop more specific criteria or an algorithm to

help in predicting future attacks. Even if specific characteristics cannot be determined, any additional information regarding lone wolves and how they differ from terrorist organizations would be useful to the intelligence and law enforcement communities.

Another interesting issue to examine would be the lethality rates of terrorist groups in comparison to lone wolves. More specifically, are large terrorist groups more or less deadly per incident than lone wolves? As was suggested in this study, a person (or group) who carries out multiple attacks may not necessarily inflict greater numbers of casualties. Further research should consider whether the counterterrorism and intelligence communities are focusing their attention on mitigating the efforts of the more lethal terrorists.

Conclusion

This study identified patterns in domestic lone wolf terrorist attacks through the examination of data from the RAND Database of Worldwide Terrorism Incidents (RDWTI) and the University of Maryland Study of Terrorism and Responses to Terrorism (START) Global Terrorism Database (GTD). The analysis yielded several findings. Contrary to what was hypothesized, the ideology of a domestic lone wolf does not predict the type of target attacked in the majority of cases. A second finding was that explosive devices were used in slightly more than 50% of domestic lone wolf attacks; however, firearms were more likely to be used in successful attacks. And, while the use of explosive devices increased following 9/11, firearm usage was fairly stable over the time period examined. Lastly, single-incident domestic lone wolves (i.e., terrorists who

engaged in only a single attack prior to death or apprehension) were found to be more lethal in terms of casualties than multi-incident domestic lone wolves.

These findings add to the limited literature available on the topic of lone wolves. It is recommended that future research should compare these findings with similar data on attacks perpetrated by larger terrorist organizations. If in fact, lone wolves do not behave similarly to terrorist groups, it reinforces the need for the counterterrorism and intelligence communities, as well as policy makers, to continue to identify the differences between these two types of terrorists, as it may benefit those attempting to prevent lone wolf terrorist attacks from occurring in the future.

APPENDIX A. Summary of Domestic Lone Wolves

Lone Wolf	Target	Weapon(s)	Ideology	Date	Location
Oscar Ortega	White House	Firearm	Unknown	11/11/11	Washington, DC
Yonathan Melaku	Coast Guard	Firearm	Religious	11/01/10	Woodbridge, VA
	Marine Station	Firearm	Religious	10/25/10	Chantilly, VA
	Pentagon	Firearm	Religious	10/19/10	Arlington, VA
	Marine Museum	Firearm	Religious	10/28/10	Triangle, VA
	Marine Museum	Firearm	Religious	10/16/10	Triangle, VA
James Lee	Discovery Building	Firearm/Explosive	Personal / Enviro	09/01/10	Silver Spring, MD
John Bedell	Pentagon	Firearm	Unknown	03/04/10	Arlington, VA
Roosevelt Terry	Train Station	Explosive	Unknown	02/25/10	New York City, NY
Joseph Stack	IRS Building	Aircraft	Personal	02/18/10	Austin, TX
Nidal Malik Hasan	Army Base	Firearm	Religious	11/06/09	Fort Hood, TX
James von Brunn	Holocaust Museum	Firearm	Political	06/10/09	Washington, DC
Muhammad, A.	Military Station	Firearm	Unknown	06/01/09	Little Rock, AR
Scott Roeder	Lutheran Church	Firearm	Religious	05/31/09	Wichita, KS
Paul Ross Evans	Women's Center	Explosive	Religious	04/25/07	Austin, TX
David McMenemy	Women's Center	Vehicle	Religious	09/11/06	Davenport, IA
Naveed Afzal Haq	Jewish Federation	Firearm	Unknown	07/28/06	Seattle, WA
Taheri-azar, M.	University of NC	Vehicle	Religious	03/03/06	Chapel Hill, NC
Eid Elwirelwir	Air Force Base	Vehicle	Religious	03/31/03	Riverside County, CA
Dwight Watson	Const. Gardens	Vehicle	Political	03/17/03	Washington, DC
Steve Kim	United Nations	Firearm	Political	10/03/02	New York City, NY
Preston Lit	Mailbox	Explosive	Political	05/13/02	Philadelphia, PA
Luke Helder	Mailbox	Explosive	Anti-Government	05/07/02	Amarillo, TX
	Mailbox	Explosive	Anti-Government	05/06/02	Pueblo, CO
	Mailbox	Explosive	Anti-Government	05/06/02	Salida, CO
	Mailbox	Explosive	Anti-Government	05/04/02	Albion, NE
	Mailbox	Explosive	Anti-Government	05/04/02	Seward, NE
	Mailbox	Explosive	Anti-Government	05/04/02	Ohioa, NE
	Mailbox	Explosive	Anti-Government	05/04/02	Davenport, NE
	Mailbox	Explosive	Anti-Government	05/04/02	Columbus, NE
	Mailbox	Explosive	Anti-Government	05/04/02	Cairo, NE
	Mailbox	Explosive	Anti-Government	05/04/02	Scotia, NE
	Mailbox	Explosive	Anti-Government	05/03/02	Elizabeth, IL
	Mailbox	Explosive	Anti-Government	05/03/02	Morrison, IL
	Mailbox	Explosive	Anti-Government	05/03/02	Mount Carroll, IL
	Mailbox	Explosive	Anti-Government	05/03/02	Eldridge, IA
	Mailbox	Explosive	Anti-Government	05/03/02	Bloomington, IN
	Mailbox	Explosive	Anti-Government	05/03/02	Anamosa, IA
	Mailbox	Explosive	Anti-Government	05/03/02	Farley, IA
	Mailbox	Explosive	Anti-Government	05/03/02	Ashbury, IA
Hesham Hadayet	Ticketing (LAX)	Firearm	Political	07/04/02	Los Angeles, CA
Charles Bishop	Bank of America	Aircraft	Religious	01/05/02	Tampa, FL
Milan S. Mititch	Mitchell Intern'l	Explosive	Political	07/19/00	Milwaukee, WI
Frank Alexander	ATF Office	Explosive	Unknown	03/29/99	Las Vegas, NV
	Ministries	Explosive	Unknown	03/28/99	San Antonio, TX

	President Clinton	Explosive	Unknown	03/26/99	Washington, DC
Randal Hanson	Women's Clinic	Incendiary	Unknown	04/06/98	Fargo, ND
Schoonover, K.	First Responders	Chemical	Unknown	03/26/98	Marina Del Rey, CA
Eric Rudolph	Abortion Clinic	Explosive	Religious	01/29/98	Birmingham, GA
	Abortion Clinic	Explosive	Religious	01/16/97	Sandy Springs, GA
	LGBT Nightclub	Explosive	Religious	02/21/97	Atlanta, GA
Harry Shapiro	Synagogue	Explosive	Religious	02/13/97	Jacksonville, FL
Fran Trutt	U.S. Surgical Corp	Explosive	Unknown	11/11/88	Norwalk, CT
Ted Kaczynski	Gilbert P. Murray	Explosive	Personal	04/24/95	Sacramento, CA
	Thomas J. Mosser	Explosive	Personal	12/10/94	North Caldwell, NJ
	David Gelernter	Explosive	Personal	06/24/93	New Haven, CT
	Charles Epstein	Explosive	Personal	06/22/93	Tiburon, CA
	Gary Wright	Explosive	Personal	02/20/87	Salt Lake City, UT
	Hugh Scrutton	Explosive	Personal	12/11/85	Sacramento, CA
	James McConnell	Explosive	Personal	11/15/85	Ann Arbor, MI
	Boeing Corp.	Explosive	Personal	06/13/85	Auburn, WA
	John Hauser	Explosive	Personal	05/15/85	Berkeley, CA
	D. Angelakos	Explosive	Personal	07/02/82	Berkeley, CA
	Janet Smith	Explosive	Personal	05/05/82	Nashville, TN
	University of Utah	Explosive	Personal	10/08/81	Salt Lake City, UT
	Percy Wood	Explosive	Personal	06/10/80	Chicago, IL
	American Airlines	Explosive	Personal	11/15/79	Chicago, IL
	John Harris	Explosive	Personal	05/09/79	Evanston, IL
	Terry Marker	Explosive	Personal	03/25/78	Evanston, IL
Hussein Kholya	Rio Airway 252	Firearm/Explosive	Political	02/15/83	aboard Flight 252
Eugene A. Tafoya	Faisal A. Zagallai	Firearm	Political	10/14/80	Fort Collins, CO
Joseph Franklin	Fields & Martin	Firearm	Racial	08/20/80	Salt Lake City, UT
	Smothers & Mikula	Firearm	Racial	06/15/80	Johnstown, PA
	Lane & Brown	Firearm	Racial	06/08/80	Cincinnati, OH
	Vernon Jordan	Firearm	Racial	05/29/80	Fort Wayne, IN
	Rebecca Bergstrom	Firearm	Racial	05/--/80*	Tomah, WI
	Theo Watkins	Firearm	Racial	01/14/80	Indianapolis, IN
	Lawrence Reese	Firearm	Racial	01/12/80	Indianapolis, IN
	Taylor & Bressette	Firearm	Racial	10/21/79	Oklahoma City, OK
	Raymond Turner	Firearm	Racial	08/18/79	Falls Church, VA
	Harold McIver	Firearm	Racial	07/12/79	Doraville, GA
	Tatum & Hilton	Firearm	Racial	07/29/78	Chattanooga, TN
	Flynt & Reeves	Firearm	Racial	03/06/78	Lawrenceville, GA
	Israel Synagogue	Firearm	Religious	10/08/77	Richmond Heights, MO
	Synagogue	Explosive	Religious	07/29/77	Chattanooga, TN
	Two individuals	Chemical	Racial	09/06/76	Washington, DC
Neal Long	Dr. Charles Glatt	Firearm	Unknown	09/19/75	Dayton, OH
Lynette Fromme	President Ford	Firearm	Unknown	09/05/75	Sacramento, CA
Kurbegovic, M.	Bus Depot	Explosive	Unknown	08/16/74	Los Angeles, CA
	Pan Am Terminal	Explosive	Personal	08/06/74	Los Angeles, CA
Byron Beckwith	A.I. Botnick	Explosive	Personal	09/26/73	New Orleans, LA
Ernest J. King	Police Station	Explosive	Unknown	09/06/70	Fitchburg, MA

*The date on file was listed as "May 1980."

**Total number of incidents: 92; total number of domestic lone wolves terrorists: 36.

APPENDIX B. Coding Scheme

Variables

Date (Date_1)	Coded = 1	Coded = 2	Coded = 3	Coded = 4	Coded = 5
	1970-1979	1980-1989	1990-1999	2000-2009	2010-2011

- This variable was coded into decades to determine longitudinal distribution.

Date (Date_2)	Coded = 1	Coded = 2	Coded = 3	Coded = 4	Coded = 5
	End of Vietnam War (Pre-1980)	Environmentally focused 1980s (1980-1989).	Rise of Technology / Dot Com Era (1990-9/11/01).	Five years post 9/11	End of Iraq War (2006-2011)

- This variable was coded into eras, denoting significant events in history. The eras are closely tied to ideology – for example, it is expected that domestic lone wolves with anti-technology ideologies will be most prevalent in the technology era.

Location	Coded = 1	Coded = 2	Coded = 3	Coded = 4	Coded = 5	Coded = 6
	New England (CT, DE, ME, MA, NH, NJ, NY, PA, RI, VT)	Mid-Atlantic (DC, MD, VA, WV)	Southeast (AL, AR, FL, GA, KY, LA, MS, NC, SC, TN)	Southwest (AZ, NM, OK, TX)	Midwest (IA, IL, IN, KS, MI, MN, MO, NE, ND, OH, SD, WI)	West (AK, CA, CO, HI, ID, MT, NV, OR, UT, WA, WY)

Ideology	Coded = 1	Coded = 2	Coded = 3	Coded = 4	Coded = 5	Coded = 6
	Personal	Anti-Gov't	Political	Religious Differences	Racial Differences	Unknown

- Personal Ideology: A self-created ideology that is unique to the domestic lone wolf (it may be a mixture of other identified ideologies).
- Anti-Government: An action in protest of governmental agencies or authorities.

- Political: An action taken in protest of a political affiliation or as a result of a political belief.
- Religious Differences: An action taken against a religious belief or in the name of a religious belief.
- Racial Differences: An action taken against a particular racial group.
- Unknown: A particular ideology was not identified or known.

Target	Coded = 1	Coded = 2	Coded = 3	Coded = 4
	Individual	Gov't or Federal Building	Medical Facility	Military Establishment

Target	Coded = 5	Coded = 6	Coded = 7	Coded = 8
	Religious Building	Transit Station	First Responders	Mailbox

Target	Coded = 9
	Other

- Individual: Including individuals / citizens, presidents, and/or leaders.
- Governmental / Federal Buildings: Buildings housing federal offices or associated with the government or federal agencies.
- Medical Facility: Hospitals, health clinics or centers.
- Military Establishment: Military base, recruiting station, or museum.
- Religious Building: Churches, Synagogues, Mosque, federations or other religious entities.
- Transit Station / Airport / Aircraft: Train station, airport (ticket counter or terminal), and airplane.
- First Responders: First responders to include: police, fire and EMS.
- Mailbox: The attack occurred within a mailbox (i.e. a bomb was mailed or placed in a mailbox) with the intention of harming the individual associated with the box.
- Other : General office buildings, universities, gardens, banks, and/or shopping centers.

Weapon	Coded = 1	Coded = 2	Coded = 3
	Firearm	Explosive	Other

- Firearm: A pistol or rifle of any size or caliber.
- Explosive: Improvised explosive device, such as a pipe bomb, or simply described by the database as a “bomb.” Includes homemade devices utilizing nitrogen fertilizer or potassium nitrate. Projectiles and/or shrapnel.
- Other: Incendiary devices: device utilizing materials designed to start a fire, i.e. gasoline, kerosene, chlorine trifluoride, or white phosphorus. Chemicals: cyanide,

mace, anthrax. Vehicles: automobile or tractor. Aircraft: airplanes. Multiple weapons: use of more than one weapon during an attack.

Attack Successful	Coded = 0	Coded = 1
	Yes	No

- Yes: The perpetrator completed their mission prior to apprehension or death, or fled without being captured.
- No: The perpetrator was apprehended before his / her mission had been completed or a device failed to detonate (i.e. a target was assassinated or an explosive device was diffused prior to detonation).

Casualties	Coded = 0	Coded = 1	Coded = 2	Coded = 3	Coded = 4	Coded = 5
	No casualties	1 casualty	2 casualties	3-5 casualties	6-10 casualties	More than 10

- Casualties: Injuries and/or deaths – includes death of terrorist, if killed upon apprehension or as a result of the attack.

Ideo_Tar_Match	Coded = 0	Coded = 1	Coded = 99
	Yes	No	System Missing

- Yes: The ideology and target matched.
 - Personal ideology and any target.
 - Anti-Government ideology and government or federal building.
 - Political ideology and government or federal building or military establishment.
 - Religious differences and religious buildings or medical facilities.
 - Racial differences and individuals.
- No: The ideology and target did not match.
 - Combinations not included above.
- System Missing: Cases with unknown ideologies, as a motivation could not be definitively identified.

APPENDIX C: Multi-incident Lone Wolves' Ideologies

	Ideology						Total
	Personal	Anti-Gov't	Political	Religious	Racial	Unknown	
Lone Wolf							
Melaku	0	0	0	5	0	0	5
Helder	0	18	0	0	0	0	18
Alexander	0	0	0	0	0	0	3
Kaczynski	16	0	0	0	0	0	16
Franklin	0	0	0	2	13	0	15
Kurbegovic	2	0	0	0	0	0	2
Rudolph	0	0	0	3	0	0	3
Total	18	18	0	10	13	0	62

APPENDIX D: Frequencies of Targets Attacked – Soft vs. Hard

Soft Targets			
Variable	N	Valid %	Soft Target
Target			
Individual	29	31.5	Yes
Government or Federal Building	6	6.5	No
Medical Facility	6	6.5	Yes
Military Establishment	7	7.6	No
Religious Building	6	6.5	Yes
Transit Station, Airport, Aircraft	7	7.6	No
First Responder	2	2.2	No
Mailbox or Post Office	19	20.7	Yes
Other	10	10.9	n/a
Total	92	100.0	

*Soft targets are those with limited or no security protection in the form of controlled access, security personnel, or cameras can be easily accessed and are therefore less difficult to attack (Stewart, 2012).

**Hardened targets are targets that promote vigilance and security, and are associated with a decreased likelihood of an effective attack by making it more difficult for a terrorist to access their location (Ezell, Behr & Collins, 2012).

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