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A dimensional approach to analyzing lone offender terrorism

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ABSTRACT

The challenge of "lone offender" terrorism is a serious one for law enforcement and security services around the world. Though the tactic has been used for hundreds of years, the rising number—in some countries—and diversity of "lone" attacks are increasingly troublesome. Attempts to clearly define the phenomenon, however, have been rather elusive. In this review, we suggest that viewing the dimensions of lone offender terrorism along a continuum, rather than forcing categorical distinctions, may provide a useful approach for classifying or analyzing lone offender attacks. We introduce three dimensions as a starting point for discussion—Loneness, Direction, and Motivation—and attempt to illustrate how these dimensions are linked to key investigative questions as a potential attacker proceeds on a pathway from idea to action.

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1. Introduction

In recent years, world leaders in intelligence and security, echoed by terrorism experts, have become increasingly concerned about lone offender terrorism. After the attack at Fort Hood in Texas, noted expert Bruce Hoffman, warned that an emerging strategy for Al Qa'ida "is to empower and motivate individuals to commit acts of violence completely outside any terrorist chain of command" (Gibbs, 2009). In February, 2010, U.S. CIA Director Leon Panetta said in testimony before Congress: "It's the lone-wolf strategy that I think we have to pay attention to as the main threat to this country." On July 22, 2011, when a 32-year-old Norwegian man who had just bombed government buildings in Oslo, then began shooting at youth camp teenagers, killing 69 of them, discussions of the "lone offender" once again dominated international headlines.

Despite the surge of recent concern, the phenomenon of solo or lone offender terrorism is certainly not new. In the latter part of the nineteenth century, Russian (and some European) anarchists were inciting individual attacks and direct actions as a way to bring attention to their cause (Ivianisky, 1977). Paul Brousse, in his 1877 article in *Bulletin of the Jura Federation*, called it "propaganda by the deed".

Attacks by unaffiliated individuals have been a feature of terrorism in the United States for many decades, comprising about 6.5% of known terrorist attacks between 1970 and 2007 (National Consortium for the Study of Terrorism and Responses to Terrorism, 2010). In fact, an analysis from the (START) (2010) suggests that the 1995 Oklahoma City Bombing marked a shift in American terrorism toward more individual attackers. Their report notes that:

> ".. since 1995, a much higher percentage of terrorist attacks in the United States have been conducted by unaffiliated individuals,

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rather than by organized groups. In the period 1995 (post-Oklahoma City) through 2007, 43 out of 131 incidents with attributed perpetrators were committed by individuals—**33% of all attacks** in the United States in this period" (emphasis in original), p. 2.

Very little systematic research has been conducted on the lone offender phenomenon. Most of what has been written in the trade and professional literature is based on journalistic descriptions and experience. Apart from a handful of case studies, we identified only two open source analyses of lone offender terrorism. The first comes from the COT Institute for Safety, Security, and Conflict Management in The Netherlands. The study results are reported separately in two documents (though both are based, essentially, on the same analysis); the 2007 COT report, *Lone Wolf Terrorism* (COT, 2007) and a 2010 article by Ramón Spaaij (2010), *The Enigma of Lone Wolf Terrorism: An Assessment*. The second comes from an unpublished Master's thesis, by Liesbeth van der Heide (2011). She conducted a more anecdotal analysis of lone offender terrorism, comparing cases across David Rapoport's (2004) "Four Waves of Modern Terrorism." Taken together, these analyses suggest that lone offender terrorism is relatively rare, and that the perpetrators are primarily males under 50 years old who use firearms or explosives and often choose civilian targets. Neither of the two analyses includes much detail about the offender's pre-attack behaviors.

1.1. Terminology

Lone offender terrorism is a complicated problem for law enforcement and security services, and the lack of consensus about terminology and definitions sometimes adds to the confusion. Those who engage in lone offender terrorism have been called lone wolves, individual terrorists, solo terrorists, lone operator terrorists and freelancers.

Popular use of the term "*lone wolf*" as it applies to terrorist-type attacks appears to have its origins in American white supremacist movements in the 1990s. At that time, Louis Beam, one of the movement's ideological leaders, was promoting the notion of "leaderless resistance." The leaderless concept was tactically extended by Tom Metzger, a leader of the now-defunct White Aryan Resistance (WAR) and Alex Curtis, one of the movement's early Internet celebrities. Curtis envisioned a revolutionary movement that combined overt propaganda with covert violent attacks. "The underground would consist of "lone wolves"—racist warriors acting alone or in small groups who attacked the government or other targets in 'daily, anonymous acts'." (ADL, n.d.). He reasoned that this approach would permit violent action without incriminating a group or others in the movement. The U.S. Federal Bureau of Investigation's (FBI) 1998 investigation of Curtis was named "Operation Lone Wolf" (FBI, n.d.).

A variety of related terms also have been used to describe lone offender terrorism. van der Heide uses "*lone operator terrorist*" which, for her, subsumes not only "the traditional individual 'lone wolf', but also the smallest networks (e.g., two persons, autonomous cells, leaderless jihadism) almost undetectable by intelligence agencies; individuals part of a larger network but who solely decide, plan and perform their act, inspired rather than instructed" (van der Heide, 2011, p. 7). She also notes that the moniker of "*individual terrorists*" is one commonly applied to these offenders by security services in the Netherlands.

Hewitt refers to them as "*freelancers*," which he defines as characterizing "individuals who are not members of a terrorist group, or members of an extremist organization under the orders of an official of the organization" (Hewitt, 2003, p. 79).

The Danish Security and Intelligence Service (Politiets Efterretningstjeneste — PET, 2011) uses the term "*solo terrorism*", a phenomenon they say is characterized "by the perpetrator, as indicated by the term, carrying out the act alone, {though} the planning and possibly training to a small or great extent has been made together with other persons". They posit two types of solo terrorists; those who act alone, but under instruction from another person or terror group and those who have had prior contact with extremists, but attack on their own initiative. In PET's conceptualization, "solo terrorism differs from so-called lone wolf terrorism… {because} a lone wolf terrorist has no contact to terror groups (not even historically) or any other radicalised individuals and consequently the individual acts completely isolated and without instruction from any other militant individual" (PET, 2011).

It may be that no terminology can accurately capture the range of behaviors that are often lumped under its canopy, however, for consistency and ease of communication, we will use the general term: "*lone offender*". (Despite its popular use, we suggest avoiding the term "lone wolf" because it carries the potential to glorify or to imbue an image of power to attackers who are otherwise powerless and often ineffectual.) We will try to limit the scope somewhat by concentrating on those whose attacks are regarded as acts of terrorism. As we will see, however, even adding that qualifier does not make the pool of cases much more coherent or easier to define.

1.2. Definitions

In the following section, we will review some of the attempts to define—or even categorize—lone offender terrorism, then conclude with a proposal for using a dimensional rather than a categorical approach to analyzing and describing these attacks. We propose that the degree of loneness, direction, and motivation may vary in ways that make cases appear different, but that those differences do not necessarily reflect distinct types of offenders.

By 1990, there were more than 100 different published definitions of terrorism (Schmid & Jongman, 1988). So perhaps it should not be surprising that definitions and exemplars of lone offender terrorism are rather diverse. Some say the attacker must act alone, others allow for the involvement of one or two others. Some completely exclude cases in which there is any evidence of outside (group) support or direction, others allow for some contact or even operating under a formal command and control structure (if acting alone). Some would apply the label only to cases in which there was clear evidence the attack was intended to achieve ideological, political or religious objectives, others allow for a fuzzy blend of personal and ideological motivations. A case that one researcher or analyst might classify as a lone offender terrorist, might not be regarded that way by others.

Unlike terrorism itself, the "lone offender" does not leave an endless trail of definitions in its wake. As a practical matter, however, the definition is important. As examples of lone offender terrorism, various analysts have drawn upon a rather wide range of cases. Consider just two of those commonly included:

- First, the "Unabomber" (Ted Kaczynski) who is not believed to have had any exchanges with other known militant extremists, who did not participate in any extremist group training or indoctrination, who chose targets, created and deployed his explosive devices with no outside assistance (Chase, 2000).
- Second, the so-called "Underwear Bomber" (Umar Farouk Abdulmutallab) who had extensive contact with known militants over several years, was trained in an al-Qa'ida training camp, whose explosive device was built by others, and who reportedly claimed — upon arrest — to have been directed by al-Qa'ida (Siegel & Lee, 2009).

The challenges and opportunities for investigators or security professionals seeking to identify, disrupt, and prevent each of those cases may be quite different. If we are seeking to refine our understanding of the "lone offender" problem and to generate new—and hopefully useful—knowledge, we should begin by looking carefully at how we define those cases. That does not mean there is necessarily one "right" answer. In the process of examining the similarities and differences in

what is or is not included, however, we can learn something about the nature of the problem and—potentially—how to approach it.

Before approaching the specifics of the definitions, we might first consider the more general nature of "lone offender" violence. Lone offender attacks might be usefully conceptualized as a type of "targeted violence"—a term coined by Fein and Vossekuil (1998) to describe attacks such as assassinations "in which there is an identified (or identifiable) target and an identified (or identifiable) perpetrator" (p. 32).

One of the first — and still one of the few — serious attempts to define the phenomenon of lone offender attacks came from the *Instituut voor Veiligheids-en Crisismanagement* (COT) (2007) in the Netherlands. Drawing on the European Union's definition of terrorism,[1] COT regards acts of lone operator terrorism as "intentional acts committed by persons:

- who operate individually;
- who do not belong to an organized terrorist group or network;
- who act without the direct influence of a leader or hierarchy;
- whose tactics and methods are conceived and directed by the individual without any direct outside command or direction" (COT, 2007).

Analysts from STRATFOR, a non-governmental global intelligence firm, attempt a more concise definition, labeling a lone (wolf) offender as "a person who acts on his or her own without orders from—or even connections to—an organization" (Stewart & Burton, 2009).

Again, this covers individual action and excludes control, direction or even connections to an organization—but in the current age of diffuse ideologies, one might wonder what kinds of collectives—short of an "organization"—might exert influence, support or direction.

Following up on this question, Edwin Bakker and Beatrice de Graaf, from The Hague's *International Centre for Counter-Terrorism*, offer their own interpretation of the STRATFOR definition, suggesting that it would include "individuals that are inspired by a certain group but who are not under the command of any other person, group or network." They even allow for the possibility that the actor might be a "member(s) of a network, but this network is not a hierarchical organization in the classical sense of the word." They are also clear that their view of the definition includes only violent attacks against people, not lesser forms of aggression (such as pie-throwing) or acts solely against property.

Bakker and de Graaf (2010), importantly, also draw some boundaries concerning the attacker's motivation. They argue that "lone wolf" labeled attacks should only include acts that are "politically or religiously motivated and aim to influence public opinion or political decision-making. This excludes violent acts by standalone individuals that are motivated for other reasons" {such as school shootings or workplace violence}.

From an intelligence perspective, the Canadian security service's Integrated Threat Assessment Centre defines a "lone wolf" as "an individual who is inspired by a terrorist ideology or organization to conduct attacks, but acts independently, without established ties or accountability" (Integrated Threat Assessment Center, 2007). This defining framework accommodates the existence of "support" from friends or network associates, while delineating that all planning, preparation, and execution is done by a single individual. This definition is less concerned with the attacker's group affiliation but more focused on the individual's responsibility for all facets of the attack itself.

[1] According to the Council of the European Union, terrorism refers to "intentional acts that are committed with the aim of seriously intimidating a population, or unduly compelling a government or international organization to perform or abstain from performing any act, or seriously destabilizing or destroying the fundamental political, constitutional, economic or social structures of a country or an international organization." Council of the European Union (2002) Council Framework Decision of 13 June 2002 on Combating Terrorism (2002/475/JHA), Brussels.

The U.S. FBI's Behavioral Analysis Unit (BAU) 1, for their own study of lone offender attacks, proposed the following criteria to identify and limit their sample of cases:

- The terrorist act was conceived and executed by one or a few individuals not operating under the direction or influence of an organized group;
- The subject consciously accepts the use of lethal violence as a means to achieving an ideological, political or religious goal; and
- Homicide resulted from the act, or would have resulted had law enforcement or other circumstances not intervened.

These parameters harmonize with other definitions in some ways, and diverge in others. Like Bakker and de Graaf's (2010) interpretation of the STRATFOR definition, it focuses only on violence against persons — in his case only lethal or potentially lethal violence. Unlike the COT and STRATFOR definitions that focus on a single attacker, this one allows for "one or a few individuals." It excludes persons "operating under the direction or influence of an organized group," but does not further specify the nature of that influence, or what constitutes an "organized group." It addresses the motivational element — ideological, political or religious, but does not require evidence that the index attack specifically was motivated by those objectives. Instead, it focuses more generally on whether the attacker justified in his/her own mind the use of violence to achieve those goals. It does not require, however, that one of the goals or the motivation includes influencing a broader population or political entity. In each of the definitions, presumably, the inclusion of "noncombatant" targets is subsumed in the deferent definition of terrorism itself.

Sophia Moskalenko and Clark McCauley in their article titled: The psychology of lone-wolf terrorism, point out that the definition of terrorism in the U.S. Criminal Code refers specifically to politically motivated violence perpetrated against noncombatants "by subnational groups or clandestine agents" (US Code, Title 22, Section 2656f(d)). Moskalenko and McCauley (2011) do not attempt to construct an operational definitional of "lone-wolf terrorism", but work from the reasonable assumption that "an individual actor is capable of politically motivated violence against noncombatants" (p. 115). They view and explain the lone offender phenomenon, however, as they do with all forms of terrorism, as being rooted in group-related dynamics.

Among the definitions proposed to date, COTs seem to be among the most useful. It covers the main elements—individual action, lack of affiliation, influence or direction—but leaves room for discussion about how less "direct" forms of influence or operational direction might or might not apply. As we will discuss more below, operational direction may exist on a continuum rather than as an either/or phenomenon.

2. Types of lone offenders

One way to manage the diversity of lone offender terrorism is to create a typology. Typologies can provide a framework to help us think about multiple dimensions of a problem and how those dimensions might interact. Typologies may be a useful aid to organize our thinking about lone offender terrorists; however, they do not necessarily reflect reality or have any practical use. It can be helpful to analyze typologies or categories by asking whether they are accurate and whether they are useful. The two qualities do not always co-exist.

Ultimately, the accuracy of any lone offender terrorist typologies will need to be judged empirically, and time and experience will determine whether they are useful. We will outline here, however, one of the early attempts by Raffaello Pantucci, a self-described "think tank researcher" and Associate Fellow at the International Centre for the Study of Radicalisation, to parse the problem.

Before proceeding to Pantucci's formal typology, we should note that forensic psychiatrist Marc Sageman has, at least casually, attempted

to make a motivational (and perhaps a taxonomic) distinction among violent lone offenders suggesting "there are two kinds of Lone Wolves: real lone wolves and mass murderers" (Sageman quoted in Pantucci, 2011). The first, he believes, are typically connected to a "virtual community" of like-minded thinkers, while the latter tend to subscribe to more idiosyncratic ideologies. Sageman mentions the potentially prominent role of the Internet in creating spaces in which violent "virtual communities" can be sustained.

Sageman and Pantucci both highlight the importance of addressing the (sometimes) difficult distinction between violent attackers driven by a personal grievance or revenge and those who possess and act upon some political, religious, or social ideology. Pantucci describes this as the "boundary between individuals who get involved in ideological terrorism alone and lone individuals who for their own reasons seek to express rage through the mass murder of fellow citizens" (Pantucci, 2011, p. 8).

Pantucci's proposed typology of "Lone Wolf terrorists" is not intended to cover the entire ideological spectrum, but rather to focus on individuals who "used an extremist Islamist ideology as their justification… {and} … appeared to carry out (or plot) their operation alone" (Pantucci, 2011, p. 13). He describes four possible types:

> The Loner The first type Pantucci (2011) calls *The Loner*. He describes these offenders as "isolated individuals who seek to carry out an act of terrorism using some form of extremist Islamist ideology as their justification." (p. 14). They appear not to have contact with, nor connections to known extremists or their organizations, and their attacks plans are not influenced by any external system of "command and control." He offers Roshonara Choudhry[2] who attacked a British MP in 2010, as an example of *The Loner*.
>
> Lone Wolf The second type carries the classic *Lone Wolf* designation. Pantucci characterizes these individuals as "appearing to carry out their actions alone", but having support, kindling, and possibly even "command and control"-type direction from other militant extremists. He offers Nidal Hassan Malik,[3] the US Army psychiatrist responsible for the 2009 shooting attack at Ft. Hood, as an example of the *Lone Wolf* (Pantucci, 2011, p. 20–24).
>
> Lone Wolf Pack In Pantucci's (2011) typology, the *Lone Wolf Pack* is "similar to the Lone Wolves, except rather than there being a single individual who becomes ideologically motivated; it is a group of individuals who self-radicalise using the Al Qaeda narrative" (Pantucci, 2011, p. 24). This notion of self-radicalization is meant to suggest a degree of insularity to the collective. They may not have had face-to-face contact with known militant extremists or representatives of an extremist group, and most likely have not received any operational support or direction from them. He offers Mohammed Game,[4] Abdelaziz Mahmoud Kol and Imbaeya Israfel, who conspired to attack a Milan military base, as an example of a *Lone Wolf Pack*.
>
> Lone Attackers The fourth group is designated as *Lone Attackers*. These individuals operate with direct support and operational control from Al-Qa'ida (or its affiliated movements), but execute their attack alone (Pantucci, 2011, p. 29–30). *Lone attackers* are mostly clearly distinguished from the other types by their active contact with, and direct ties to, militant extremists, their organizations, and networks. Those network contacts often have a significant role in operational planning, to include the acquisition and preparation of weapons for the attack. Pantucci offers Richard Reid[5] and Umar Farouk Abdulmutallab[6] as *Lone Attacker* examples.

Pantucci's proposed classification scheme for "Lone Wolf terrorists" comprises four types: Loners; Lone Wolves; Lone Wolf Packs; and Lone Attackers. How these types were discerned, however, is not clear. They apparently were not derived from any systematic analysis of case features among any defined sample lone offender terrorists. Though Pantucci acknowledges he limited his scope only to individuals who "used an extremist Islamist ideology as their justification… {and} … appeared to carry out (or plot) their operation alone", his inclusion of "Lone Wolf *Packs*" as a form of lone offender terrorism could confuse, rather than clarify, the definitional boundaries. Small, loosely affiliated networks are not uncommon among terrorist plots in the UK and Europe. Therefore, conceptually grouping them together with isolated actors may not improve investigators' ability to think more clearly about lone offender terrorism.

3. A different approach to thinking about types of lone offender terrorism

In this section, we look beyond specific typologies to explore whether analyzing cases by their features, rather than their types, might better aid the investigative process. We acknowledge that the dimensions of loneness, direction and motivation may be fuzzy and may vary within and between cases—and over time. We believe, however, attending to those dimensions—even as they evolve—can illuminate clues about a potential attacker's pathway from idea to action.

Typologies, such as Pantucci's, offer a way to "lump" cases into discrete categories. Categorizing something can help a person to integrate its various facets, to identify patterns, and to see similarities as well as differences across cases. Setting aside any analysis of specific categories for lone offenders, here is the fundamental challenge: We are, after the fact, artificially imposing discrete categories on naturally occurring phenomena that may not be categorically different. If so, that could certainly throw off the accuracy of a typology. But it also raises a question of whether and how such a typology may be useful—at least from an operational perspective.

We propose that a somewhat different approach to the problem might better fit the requirements of criminal and intelligence investigations. Instead of discrete categories or types, we suggest considering the several dimensions of lone offender behavior along a continuum, and linking each dimension to a key facet of the attack (Fig. 1).

Looking at a somewhat analogous situation, for at least the past decade, there has been an ongoing debate among mental health

[2] On 14 May 2010, Roshonara Choudhry, a 21-year-old university student attacked East Ham MP, Stephen Timms, in his office with a knife she had concealed in her clothing. She reportedly had developed most of her extremist ideas via the Internet. When she was arrested, she told police "I wanted to kill him. I was hoping to get revenge for the people in Iraq."

[3] On 15 November 2009, Nidal Hasan, a Palestinian American psychiatrist who held the rank of Major in the U.S. Army, launched a mass shooting attack with a laser-sighted, semi-automatic pistol at the Fort Hood (Texas) US Army Base. Before the attack could be stopped, Hasan had killed 13 people and wounded more than two dozen others.

[4] On the morning of 12 October 2009, Mohamed Game (of Lybia) gained unauthorized access to an (Italian) Army barracks area in Milan with an improvised explosive device (reportedly similar to the devices used in the London attacks on 7/7 2005). When confronted by an armed soldier outside the building, Game attempted to detonate the device, which ignited but malfunctioned, primarily causing harm to Game himself. Abdelaziz Mahmoud Kol and Imbaeya Israfel were subsequently arrested as accomplices.

[5] On 22 December 2001 Richard Reid, a British citizen, boarded American Airlines Flight 63 from Paris to Miami. While in the air, Reid lit a fuse connected to plastic explosive material (PETN and TAPN) he had compartmented in his shoe. The explosive did not properly detonate. Because Reid had attempted to board the flight the previous day (but was turned away because of suspicious behavior), he continued to wear the shoe around for an extra day. The material apparently became wet, causing the detonation to fail.

[6] On 25 December 2009, Umar Farouk Abdulmutallab, a Nigerian citizen, boarded Northwest Airlines Flight 253 from Amsterdam to Detroit, Michigan. As the plane descended to land, Abdulmutallab attempted detonate a device with plastic explosive material (PETN and TAPN) that he had secreted in his underwear. The device did not explode, but passengers heard popping noises and smelled a suspicious odor. He was subdued by passengers and flight crew and arrested upon landing.

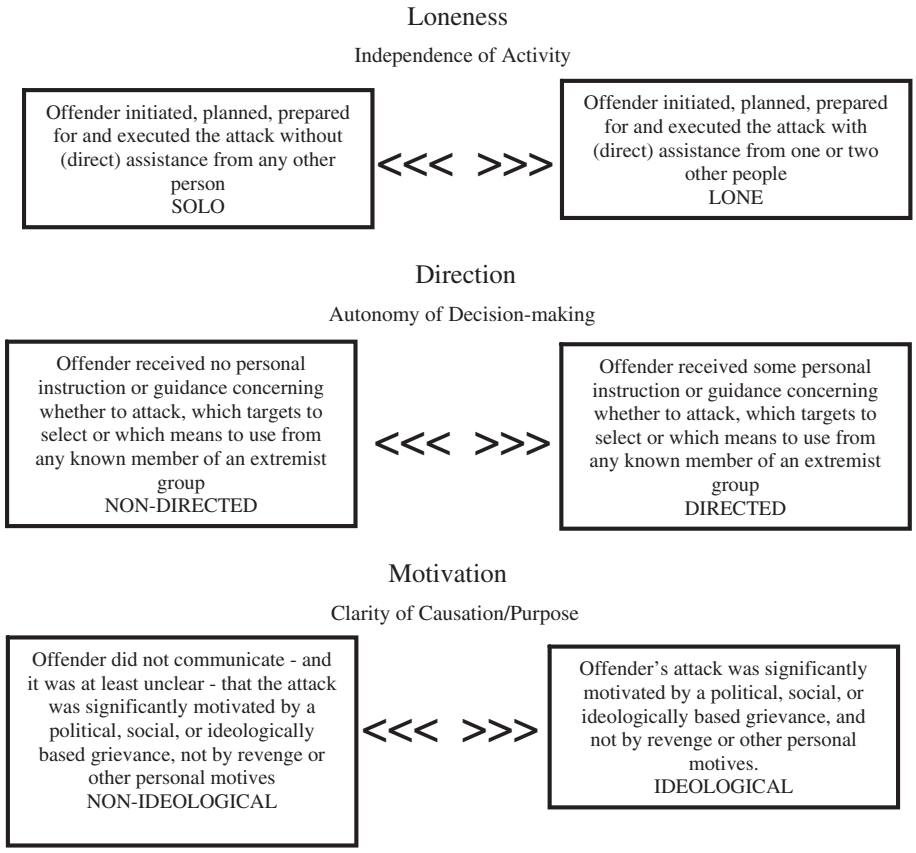

Fig. 1. Dimensions of lone offender terrorism.

professionals and researchers (Trull & Durrett, 2005) about the best (most accurate and useful) ways to describe and understand psychological/psychiatric syndromes and disorders, especially the so-called "personality disorders[7]". Mental health professions have traditionally used a categorical approach to assigning diagnoses. This assumes the existence of discrete and distinct syndromes. A substantial body of research, however, has called that assumption into question (Widiger & Trull, 2007). In addition, as a practical matter, many studies suggest that evaluators can more easily reach agreement and describe a person's problems with more consistency when they rely on *dimensions* rather than *categories* of behavior. We suggest that a similar dimensional approach could be applied to lone offender terrorism attacks.

Analyzing the array of existing definitions of lone offender terrorism, a few prominent distinctions emerge: whether only one person can be involved; whether cases with any degree of outside support would qualify; and how purely political or ideological the offender's motive must be. Rather than taking sides in debating these distinctions, we suggest that it might be more useful to view these issues along a continuum instead of forcing unnecessary either-or choices. The more closely some of the known lone offender attacks are examined, the clearer it becomes that "hybrid" characteristics are probably the norm rather than the exception. Besides, from an operational perspective, a typology or classification scheme is only useful if it helps investigators and analysts think and make decisions about the case. For that reason, we think that using a dimensional approach to classify or analyze lone offender attacks has more promise.

[7] Personality disorders are clinical syndromes of maladaptive, inflexible, and pervasive personality/behavioral characteristics that either cause significant distress for the individual or that severely disrupt interpersonal functioning.

3.1. Three dimensions of lone offender terrorism

In the section below, we will outline three dimensions—loneness, direction, and motivation—that weave a common thread through a range of lone offender definitions and attempt to illustrate how these dimensions are linked to key investigative questions as a potential attacker proceeds on a pathway from idea to action. Each dimension can be viewed across the spectrum of attack related activity from idea to action, allowing the dimension to be examined across time or at different attack-related phases. By connecting the lone offender dimensions to operationally relevant concepts, the dimensions potentially become more useful and drawing distinctions between cases becomes more than an academic exercise.

3.2. Loneness

We refer to this first dimension as *loneness*. In essence, it describes the extent to which the offender/attacker initiated, planned, prepared for and executed the attack without assistance from any other person. It is the dimension of planning and acting alone. In the mid-1990s, Bruce Hoffman suggested that "to qualify as terrorism, violence must be perpetrated by some organizational entity with at least some conspiratorial structure and identifiable chain of command beyond a single individual acting on his or her own" (Hoffman, 1998, pp. 42–43).

The degree of loneness can affect an offender's planning efforts and pre-attack activities. At one end of the continuum is the attacker who:

- has "self-radicalized"
- has no contact with any other militants or belligerents
- conceives of the idea for an attack with no influence, encouragement, or inspiration from any other person or organization

- conducts all planning and preparation for the attack — including acquiring materials — without influence, encouragement, or inspiration from any other person or organization
- receives no direct or indirect assistance nor any material support from any other person or organization
- executes all phases of the attack with no direct or indirect assistance from any other person or organization.

Contact: These cases would be very rare, although certainly possible. But applying the dimensional lens, at least two facets emerge that could be applied across the timeline of attack-related behaviors.

This facet reflects the nature and degree of the suspect's contacts with other extremists or accomplices. A suspect might have extensive and frequent contact with one other co-actor or broad contact with other many other extremists, though none of them is involved in or even aware of the attack itself. The contact may occur in person, through correspondence, or virtually. It might occur in collective/group settings or individually. It may be more overt, such as in a religious center, or more clandestine.

One of the main investigative challenges posed by lone offender attacks is that the absence of contact with others reduces the opportunities and mechanisms by which pre-attack behaviors may be detected. More often than not, however, there is some kind of contact with others—either virtually (via Internet) or in-person—at some point between idea and action. In the vast spaces of the Internet, there exists a range of potential contact points, each with her or his own set of motivations. Some may feed—or discourage—ideas. Some may fuel moral emotions. Some may feed information. Those with whom the subject makes contact, in whatever form, may not be co-conspirators, supporters or at all nefarious. They may be acquaintances, associates, neighbors, or persons providing goods or services. Some may, in a sense, be regarded as "bystanders;" others perhaps as observers or incidental witnesses. That range of contacts, however, might reveal probative details about the subject's communications or behaviors — details that may form pieces of the intent puzzle.

Support: This facet reflects the "roles" that others may play or the nature and degree of their involvement with the suspect or with the attack. Some of the lone offender definitions make a distinction between direct and indirect support, though the boundaries between them typically are not addressed. Introduction of the Internet as both a vehicle and a medium for support widens the aperture inquiry and potentially raises a host of other difficult questions about the lines between direct and indirect support and intent.

A different way of conceptualizing support might be to distinguish between material and expressive types. As with contacts, an offender may receive either type of support virtually (via Internet) or in-person. *Material* support typically involves goods or services. This includes activity to develop capacity or capability for an attack. Operationally, it can affect the sophistication of the attack plan as well as the modes and amount of communication. In U.S. federal law, for example, the term "material support or resources" is defined to mean "any property, tangible or intangible, or service, including currency or monetary instruments or financial securities, financial services, lodging, training, expert advice or assistance, safehouses, false documentation or identification, communications equipment, facilities, weapons, lethal substances, explosives, personnel (1 or more individuals who may be or include oneself), and transportation, except medicine or religious materials" (USC, U.S. Code, Title 18, Part I, Chapter 113b, § 2339a). Similar definitions are applied in the UK and EU.

Expressive support typically involves social or emotional transactions that facilitate or amplify a permissive environment for the suspect. That might include agreement with justifications or mandates for violence or glorifying of violent acts done to further a cause. Those who provide expressive support may be instrumental in the attacker's process for developing or maintaining extremist beliefs that justify violence against civilian targets. On the Internet, anyone looking for a "cause" to justify their desire for violence can readily find it. White supremacist Louis Beam foresaw this state of affairs 20 years ago when he was sowing the seeds for leaderless resistance. As Beam predicted, the Internet has indeed extended the reach of extremists' messaging and transformed their ability to inspire others to action without the burden of interpersonal exchanges that might run afoul of conspiracy laws or implicate them as accomplices.

3.3. Direction

The second dimension, *direction*, refers to nature and extent of the attacker's independence and autonomy in all decisions across the spectrum of attack related activity from idea to action.

On the autonomous or non-directed end of the continuum is the offender who neither seeks nor receives any personal instruction or guidance concerning whether to attack, which targets to select, or which means to use from any known member of an extremist group

With less autonomy and more direction is the offender who receives personal instruction or guidance concerning whether to attack, which targets to select or which means to use from an extremist group or a representative of some collective.

The degree of autonomy may vary—or remain constant—along the pathway of attack-related activity. An offender, for example, may be directed or "selected" or encouraged to act, but given no orders or guidance about specific targets or plans. The Internet, of course, makes the scope and analysis of external influence—much less, direction—substantially broader. There are numerous messages, postings, and videos from known extremist leaders that encourage or potentially incite violent action, but they are not directed at a specified individual and involve no human (virtual or face-to-face) interaction. They exist as static, publically available content for anyone who wishes to view them. Whether, and the extent to which, these kinds of messages *direct* the actions of another varies widely among cases, among individuals, and sometimes, over time.

Conversely, there is also likely to be significant variation in the nature and extent to which a lone offender might *seek* direction. In past cases of lone offender terrorism—thwarted and completed—in the U.S. and Europe it has not been uncommon for offenders to proactively reach out to known extremists, either seeking direction on what to do, or seeking 'permission' (from a scholar or ideologue) to carry out a particular act.

Given the complexity of human motivation, there is an unknown question about the directive nature of Internet influence. Do people (who, but for the Internet, would not) develop an initial idea to mount a terrorist attack, select a target, or develop an attack plan (including capacity)? Or do people who have considered a violent attack—for whatever reasons—seek out the content that would provide them a justification or "cause" for their actions? Both are likely to be true. If they are distinct, there is not necessarily any easy to distinguish between them. The main point here from an operational perspective is that in either case—whether as spark or fuel for the fire—that inflammatory content can be a source of influence. Accordingly, Internet influences are relevant to assessing the dimension of *direction*. Investigative inquiry may be best served by exploring and considering a wide range of possible influences (or influencers) at various stages in the process.

Moskalenko and McCauley (2011) believe that even "Lone Wolf" terrorist attacks are a group-related phenomenon. They conceptualize the attacks as a form of "self-sacrifice." They suggest that "the two biggest puzzles of lone-wolf terrorism.. {are} how an individual can sacrifice herself to revenge wrong done to a particular stranger, and how an individual can sacrifice for the welfare of a group of anonymous strangers" (p. 123). If an individual is engaging in self-sacrifice to revenge wrong done to others or to benefit a group of anonymous strangers, then investigators should note the influence of that constituency of strangers may be pertinent to the subject's actions. We

would suggest, however, that not all lone offender terrorists, even those who claim to be acting for a cause, are driven (consciously or unconsciously) by self-sacrifice.

Conversely, some attackers who act individually and out of self-sacrifice may not really be "lone" in their modus operandi. People like Umar Farouk Abdulmutallab are arguably no more "lone offenders" than a typical suicide bomber. They may be compartmented by the organization and directed to act alone (typically for tactical reasons), but they are instruments of a larger process. Considering the dimension of "direction" more as a matter of autonomy than simply whether the attacker executed the act alone can often put those cases in better perspective.

The issue of direction can be fuzzy and complicated, but not only for lone offenders. Contemporary extremist movements of all kinds are increasingly embracing the idea of leaderless resistance. The terrorist groups and organizations of today, in most cases, would be unrecognizable to those accustomed to traditional hierarchies or paramilitary command structures. They are structurally decentralized and operationally compartmented. Some organizations or movements command small cells to engage in direct action, but others seek primarily to inspire others to take action on their own while maintaining organizational deniability.

Extremist leaders or collectives with an agenda may influence attackers without formally "directing" them. The influence may be broad and inspirational, but it can also be specific and tactical. If an investigator is trying to understand an attacker and his mindset and assess what he is likely to do, looking also at the sources of influence (and the extent to which the offender feels beholden or to or constrained by them) will provide a more complete and coherent picture. As Moskalenko and McCauley (2011) point out, a more comprehensive view of people, situations, settings, and contexts is "consistent with psychological research showing that individual behavior depends, not separately on person or situation, but on their interaction" (p. 125).

3.4. Motivation

Motivation is the third proposed dimension. At the non-ideological end of the continuum lies the offender who does not communicate—and it is at least unclear—that the attack is significantly motivated by a political, social, or ideologically based grievance, not solely by revenge or some other personal motive. Conversely, at the other (ideological) end is the offender for whom the attack is motivated solely by a political, social, or ideologically based grievance, with neither revenge nor any other personal motive being a significant factor.

Operationally, the motivation dimension is of interest, in part because a subject's motives for an attack are usually related to target selection. In the past, lone assailants have described how they came to choose a particular target, not necessarily because they harbored deep animosity, but because of the target's accessibility, because of the potential to enhance the attacker's own personal notoriety, or even because the target was protected and the attacker himself expected to be killed in the process. Some lone attackers consider multiple targets during the course of their planning; that is their "directions of interest" may shift over time.

Motivation is possibly the most difficult of the three dimensions to discern (Artiga, n.d.). As COT notes: "Assigning purposes and motivations to individual acts of terror is inherently subjective and open to considerable interpretation" (COT, 2007, p. 8). Yet, the motivational dimension is arguably what separates lone offender terrorism from the much wider span of mass murders, spree killings, and assassinations.

The fundamental reason motivational analysis is so vexing is that humans are complicated. Their motivations—especially for horrific acts—are rarely pure and singular. As Jessica Stern observes, lone offender terrorists "often come up with their own ideologies that combine personal vendettas with religious or political grievances" (Stern, 2003, p. 172). That is, their actions typically result from a complex mix of personal and principled ideas tangled in web of emotions and beliefs.

Illustrating this point, Fein and Vossekuil (1999) led an operational study (Exceptional Case Study Project—ECSP) of the thinking and behavior of all 83 individuals known to have attacked, or approached to attack, a prominent public official or public figure in the United States since 1949. The subjects' motives were often complex and multifaceted, including desires for notoriety and fame, to bring national attention to a perceived problem, and to make money.

With lone offenders, at least two factors make motivational analysis especially challenging. The first is that the offender, publically, may only make testament to a "cause" or principle (and the degree of autonomy and volition in public declarations is often questionable)—so some pieces of the puzzle are more readily identifiable than others. In reality, actual motivations and stated motivations may or may not correspond to each other.

Testifying publically to the cause or principle and linking it to the attack may serve several purposes. One of those might be to intimidate or coerce a broader civilian population or to influence or disrupt a government. Those, of course, are core elements in traditional definitions of terrorism (e.g., 50 U.S.C. § 1801(c)). They may or may not be core elements in the motivational complex of any given terrorist actor.

The second complicating factor is that lone offenders, at least relative to other terrorists, appear (from the limited evidence available) more commonly to have psychological problems. It is easy to attribute the cause of the attack to the psychological problems when they co-occur, but this may be inaccurate. In addition, knowledge that the subject has a psychological problem or mental illness, by itself, does not necessarily change the level of threat. Mental illness is not necessarily a "master motivation", nor does it automatically suggest a greater or lesser hazard.

We have learned from studying other forms of targeted violence that even subjects known to have mental illnesses are sometimes capable of rather sophisticated attack planning. The operational questions pertain more to the subject's degree of personal organization than to whether he (or she) has a specific disorder or diagnosis. Mental illness and a high degree of personal organization should not be seen as mutually exclusive.

In Anders Breivik's case, for example, his lawyer Geir Lippestad (a representative of the political party against whom Breivik's attacks were directed) suggested that Breivik may be "insane" (BBC, 2011). The director of the Norwegian Police Security Service, responded to that assertion by saying: "His lawyer is not a psychologist and neither am I. But I have previously been a defense attorney and I perceive him as a sane person because he has been so focused over such a long time" (Haugli, 2011).

3.5. Conclusion

The challenge of "lone offender" terrorism is a serious one for law enforcement and security services around the world. Although the tactic has been used for hundreds of years, the rising number (in some countries) and diversity of "lone" attacks is increasingly troublesome. A variety of terms and definitions have been used within the past decade to characterize the phenomenon of lone offender terrorism. Some analysts have addressed the disparate definitions of lone offender terrorism by creating a typology. Typologies may help us think about multiple dimensions of a problem and how those dimensions might interact, but they may or may not be accurate or useful.

In this article, we raised the possibility that it might be more useful to view the dimensions and constructs in these definitions along a continuum, instead of creating false dichotomies. We believe that

classification schemes will be most helpful if they support investigators and analysts to think and make decisions about the case. We think that using a dimensional approach to classify or analyze lone offender attacks offers a more promising approach. We introduced three dimensions as a starting point for discussion—Loneness, Direction, and Motivation—and attempted to illustrate how these dimensions are linked to key investigative questions as a potential attacker proceeds on a pathway from idea to action. Our hope and rationale is to connect the lone offender dimensions to operationally relevant concepts, so that drawing distinctions between cases becomes more than an academic exercise. Future studies might consider the continuum of loneness, direction, and motivation and the varieties of observable behavior associated with those dimensions. The objective would be to discern the behaviors or actions that lone offenders engage in before their offenses and what implications those behaviors might have in thwarting or preventing future attacks.

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