

# Understanding the Motivations of “Lone Wolf” Terrorists: The “Bathtub” Model

by Boaz Ganor

## Abstract

*The phenomenon of “lone wolf” terrorism, which has increasingly attracted the attention of scholars, consists of terror attacks perpetrated without the operational involvement of terrorist organizations in initiating, planning, or executing the attack. This phenomenon lacks a clear center of gravity directing the actions of “lone wolf” terrorists; and as such, it is crucial to understand the system of motivations influencing independent assailants to perpetrate attacks. This article is based on extensive studies conducted on the motivations of “lone wolf” terrorists by the International Institute for Counter-Terrorism (ICT) at the Interdisciplinary Center (IDC), Herzliya. It seeks to contribute to the literature on the topic by proposing a new model. The “Bathtub Model” suggests that the process of the formation of the “lone wolf’s” decision to perpetrate an attack can be akin to a container of water (such as a bath), which would be filled up by various sources of water, each representing groups and subgroups of motivations. The upper threshold of the “bathtub” model represents therefore the maximal level of the “lone wolf’s” ability to contain his motivations, frustrations, and emotions.*

**Keywords:** lone wolf; motive; motivations; terrorism; Israel; bathtub

## Introduction

Modern terrorism is a dynamic and evolving phenomenon that keeps morphing. Over the years, terrorists and terrorist organizations around the world have been using a wide range of attacks, sometimes mimicking successful attacks perpetrated by other terrorists in different arenas. In this way, waves of terror attacks (such as suicide bombings, hijackings, and ‘cold’ weapons attacks[1]) may develop and spread from country to country all over the world. The ebb and flow of a terrorism wave may have multiple reasons and explanations, stemming, inter alia, from a change in the terrorists’ set of beliefs, cost-benefit analysis of the perpetrators or their dispatchers, from the level of their communities’ social approval for their attacks, and the availability of operational means at their disposal.[2]

The “lone wolf” phenomenon is not new; throughout history, individual independent terrorists perpetrated attacks without any guidance, operational involvement, or organizational support of terrorist organizations.[3] However, it would appear that the expanding use of the Internet has significantly contributed to the growth of this phenomenon.[4] The Internet has enabled terrorists around the world to be part of virtual communities of like-minded people, contributing to the radicalization of their members, educating one another on planning and executing attacks—all without ever physically meeting one another.[5] It has also enabled terrorist organizations to post and disseminate propaganda, and to offer instructions on how to produce weapons, ammunition, and explosives.[6] Members of such virtual communities and other potential “lone wolves” who are exposed to this material might be inspired to perpetrate terrorist attacks. The ability of the terrorist propagators (organizations and other entities) to directly communicate (locally and internationally) with radical youngsters all over the world enables them to further radicalize and also motivates these individuals to execute “lone wolf” attacks in different countries.[7]

Mark Sageman argues that the Internet has created a new generation of terrorists who carry out a “leaderless jihad”.[8] However, it seems that the prevalence of recent years’ “lone wolf” attacks stems, inter alia, from the objective difficulties faced by terrorist organizations in their attempt to execute “organized attacks” (i.e., attacks that are the culmination of initiative, preparation, and involvement of terrorist organizations). For example, ISIS’s loss of territories in Syria and Iraq, al-Qaeda’s weakness in various theaters around the world, and Hamas’s operational limitations outside the Gaza Strip drove these organizations to call upon independent

lone actors to perpetrate attacks inspired by, or even on behalf of, the above organizations. These organizations seek to create an atmosphere that supports “lone wolf” attacks via incitement and propaganda disseminated online, and encourage their supporters worldwide to attack locally.[9] Within this framework, Bruce Hoffman explains that “this new strategy of al-Qaeda is to empower and motivate individuals to commit acts of violence completely outside any terrorist chain of command.”[10] Ramon Spaaij reinforces Hoffman’s claim, noting that the number of attacks perpetrated by independent individuals inspired by radical Islam has been on the rise, inter alia due to the terrorist organizations’ call to carry out such attacks.[11]

However, the “lone wolf” threat is not limited to global jihadi terrorism. Jeffrey Simon notes that “it would be wrong to assume that lone wolf terrorism is the exclusive domain of Islamic extremists.”[12] As Daniel Byman argues, right-wing supremacists, anti-abortionists, and separatist movements have all used this strategy in various ways and with different levels of success.[13] Most notably, as Bakker and de Graaf suggest, there has been a growing fear of “lone wolf” attacks by right-wing extremists.[14] In a study conducted in 2011, Raffaello Pantucci examined Anders Behring Breivik’s murder of 77 people in Oslo and Utøya (Norway) on 22 July 2011. He argues that Breivik fits the “lone wolf” profile, while having connections to far-right communities around the world.[15] His findings on Breivik reveal the powerful role of the Internet in disseminating extremist ideologies that motivate like-minded individuals to perpetrate terrorist attacks.[16] In addition, a study conducted by Paul Gill and his colleagues on the use of the Internet by lone actors reveals that “extreme-right-wing offenders” are “more likely than Jihadist-inspired offenders in the United Kingdom to learn and communicate online.”[17] Similarly, Florian Hartleb argues that existing typologies of “lone wolf” terrorism should be reconsidered with greater attention given to the new phenomenon of “right-wing single actors.”[18]

Terror attacks are the product of two main variables: (i) motivation to perpetrate an attack and (ii) the operational capability to execute it.[19] Foiling terrorism may therefore be the outcome of limiting the motivations that drive the attackers or, alternatively, curbing their capability to execute these attacks. Terrorism capabilities are usually assembled in a long process of preparations (e.g., procuring weapons, assembling explosive devices, and more) but these preparations have in many cases a clear “radar signature” available for intelligence detection. Therefore, many intelligence agencies focus on locating and identifying the operational preparations for a terror attack, then attempting to foil it. This “signature” is absent in many “lone wolf” attacks which are often perpetrated with a cold weapon.[20] This kind of weapons can be found in every household (e.g., sharp object, knives, screwdrivers, axes, vehicles). Therefore, the importance of understanding the motivation of the “lone wolves” is essential for the prevention of this type of attacks. However, the motivations of “lone wolves” are difficult to locate and to neutralize.

This article examines the motivations that drive lone wolves to perpetrate their attacks. This analysis is generic in nature and it addresses terrorists driven by radical Islamist motives (either global or local), as well as nationalist terrorists, or terrorists acting in the name of other extreme ideologies such as those found on the far right. The article proposes classifying the various motives at the core of these attacks into several categories as well as offering a model to analyze the cross influence of said categories on the decision to perpetrate a “lone wolf” attack. The generic model proposed in the article might serve therefore as a baseline for the formation of new counterterrorism and Counter-Violent Extremism (CVE) strategies in order to prevent or foil this kind of attack.

### ***Defining the Phenomenon***

Various scholars, such as Levitt, Byman, and Weimann, argue that the term “lone wolf” is a misnomer, as the “wolf” is not really “lone”. [21] The attacker is influenced by, and operates within, a certain social atmosphere; he or she is in contact with others and shares his or her intentions with them; and s/he is even assisted by them. The “lone wolves” might be inspired by a certain terrorist organization and see themselves as its operatives even if they were never recruited, nor received training, payments, or assistance from that organization. Therefore, upon his or her arrest and interrogation, the “lone wolf” may claim that s/he was an activist of ISIS, al-Qaeda, or other organization s/he identifies with.[22] Moreover, after a “lone wolf” attack, some organizations might

claim responsibility for the attack to boost their position and gain free 'glory'.

Brian M. Jenkins reviewed the 2004 FBI definition which states that a "lone wolf" is an individual who has no nexus to a foreign power or entity.[23] Jenkins argued that the term "lone wolf" does not accurately describe the phenomenon of terrorism, as the concept used to refer to a "hero operating outside the law, doing whatever is necessary to get the job done." [24] He therefore proposed to use the term "stray dog" instead of "lone wolf," noting that it better describes individuals involved in this type of terrorism.[25] According to Jenkins, "...the jihadists' behavior seems to more closely resemble that of stray dogs, who may be found alone or in packs, estranged from but dependent on society, streetwise but lacking social skills, barking defiantly, and potentially dangerous but at the same time, suspicious, fearful, skittish." [26]

Daveed Gartenstein-Ross and Nathaniel Barr criticized the quick and sometimes wrongful labeling of perpetrators as "lone wolves" in the aftermath of attacks. They suggested that only a small number of attackers designated as "lone wolf" truly meet that definition.[27] According to Gartenstein-Ross and Barr, "true" lone wolves are "individuals who strike without ever communicating with jihadist networks, either online or in person." On the other hand, Gabriel Weimann suggested that "lone wolf" terrorists are not completely out of contact," as they communicate through the "Dark Web".[28] He argued that similar to "lone wolves" in the animal kingdom, individual terrorists also have their "virtual pack". Online platforms provide them with many opportunities, such as finding instructions on building homemade bombs or mapping potential targets.[29]

Daniel Byman added that the term "lone wolf" does not effectively describe the phenomenon, since most of the time one cannot ascertain how lonely and isolated from other terroristic elements the individual terrorist really was. He therefore suggested "lone-ish wolves," i.e., wolves that sometimes operate independently and sometimes within a very small "pack".[30] Clare Ellis and Raffaello Pantucci used the following definition of the term "lone-actor terrorist":

"The threat or use of violence by a single perpetrator (or small cell), not acting out of purely personal-material reasons, with the aim of influencing a wider audience, and who acts without any direct support in the planning, preparation and execution of the attack, and whose decision to act is not directed by any group or other individuals (although possibly inspired by others)."[31]

In a study conducted in 2020, Clemmow, Bouhana, and Gill concluded that such "cyclical" definitional debates are not necessarily productive, arguing that "lone-actor terrorists do not have to be defined wholly as lone or connected." [32]

In this article, the term "lone wolf" is used to define the phenomenon wherein an individual terrorist perpetrates an attack on his/her own or with the assistance or involvement of others (acquaintances, family) but without any operational connection to any specific terrorist organization.[33] In other words, even if the terrorist was in contact with others (online or in person) and was inspired by a specific terrorist organization, or even if s/he saw himself/herself as its operative, still, as long as no terrorist organization was involved in any of the stages of the attack perpetrated—the initiation, planning, preparation, or logistics of the attack—it will be considered under the suggested definition as a "lone wolf" attack.[34]

The proposed working definition points to the fact that the differential classification between this type of attack and many other attacks is the lack of operational involvement of a terrorist organization in any of the stages of the attack. In that, this definition does not contradict other definitions according to which many lone wolves interact with others, or even with terrorist organizations.

Since a terrorist organization is not involved in the preparatory stage of the attack, the "lone wolf" must independently procure all the required means and equipment to execute the attack. Therefore, the "lone wolf" mostly uses accessible and unsophisticated means and equipment. These include various cold weapons (such as knives, axes, or other sharp objects) for stabbing attacks; vehicles (such as passenger cars, trucks, or other heavy-duty vehicles) for car-ramming attacks; improvised explosives the attacker constructs on his/her own; or any other accessible firearms (such as purchased, stolen, or self-manufactured guns and rifles). In light of the

above, attaining operational capability to execute the attack is usually a rather low hurdle to jump over and not an obstacle in the way of the attack.

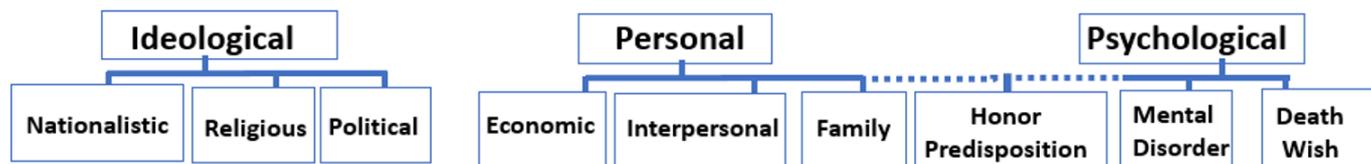
### ***The “Bathtub” Model***

The range of motivations affecting the decision of the “lone wolf” to perpetrate an attack is wide and varied. In his early typology of “lone wolf” terrorism, Raffaello Pantucci examined terrorists with religious (Islamist) motivations.[35] Other scholars such as Hamm and Spaaij included a wider range of political, religious, and ideological factors in their analysis.[36] In a study conducted in 2019, Jude McCulloch examined the “lone wolf” phenomenon through a gendered lens. Her research revealed that the criminal records and known biographies of numerous “lone wolf” terrorists include significant histories of violence against women.[37] It is therefore hard to isolate a single motive of that entire spectrum as the one that drove the “lone wolf” to attack. In the case of organized attacks, the perpetrating organization usually announces the reasons for the attack, which are practically always associated with the organization’s ideology. Even so, however, it is usually unclear what motivated the individuals who actually executed the attack to join the organization in the first place and then to carry out the particular attack in question. The uncertainty about the motivation for the attack is much greater in the case of “lone wolf” assailants. In any case, a complete and valid assessment of the perpetrator’s motives can only be obtained through a psychological and background investigation, preferably by direct interviews with him/her after arrest.[38]

In a research project conducted by Ariel Merari and Boaz Ganor, the motivations that drove Palestinian terrorists to perpetrate more than 550 “lone wolf” attacks in Israel between 2015–2017 were examined. It was found that the terrorists perpetrated the attacks as a result of widely varied motives, including: revenge for national, religious, or personal humiliation, desire to die or to get to paradise, national struggle, defense of the al Aqsa Mosque, to prove himself/herself, or to gain social esteem.[39] In light of these findings and the motivations’ typologies offered by the above researchers, the “lone wolves” motives may be classified into three groups: (i) ideological[40], (ii) psychopathological[41], and (iii) other personal circumstances.[42] The “lone wolf’s” decision to perpetrate an attack is therefore a unique personal combination of the above which may differ from one attacker to another. Each group of motivations may include several subgroups. For example, the ideological motives group may include, inter alia, devotion to radical ideologies such as nationalist-separatist, communist, anarchist, fascist, or other political motives. The personal motivations group may include economic motives (such as poverty, low socioeconomic status, and acute economic crises); inter-personal motives (such as crises in the “lone wolf’s” relationship with his or her partner or another central figure in his/her life); and familial motives (including hardship within the family, problematic or complex relationship between family members or particular figures such as father, mother, older siblings, as well as the level of appreciation or disrespect the “lone wolf” gets from his or her family) or other personal motives (such as the desire for adventure, self image, or status improvement). The psychological motives group includes the terrorist’s desire to commit suicide, which may be caused by mental instability, harsh experience, despair, or belief in an afterlife. As argued by Ramón Spaaij, lone wolves “tend to have a greater propensity to suffer mental health issues” in comparison to individuals who belong to a terrorist group.[43] Spaaij’s findings on mental disorder seem to be in parallel with Emily Corner’s and Paul Gill’s research[44] on mental illness and lone-actor terrorism.[45]

Another psychological motive that the terrorist suffers from may be a psychological instability.[46] In addition, within the above variables, one should include the motives that stem from the terrorist’s predisposition to the value of honor. These may include, among others, the terrorist’s or his/her family’s honor; women’s or a specific female family member’s honor; national, tribal or community honor; as well as the honor of the terrorist’s religion or its religious symbols.

Figure 1: “The Bathtub” Model – Typology of “Lone Wolf” Motives

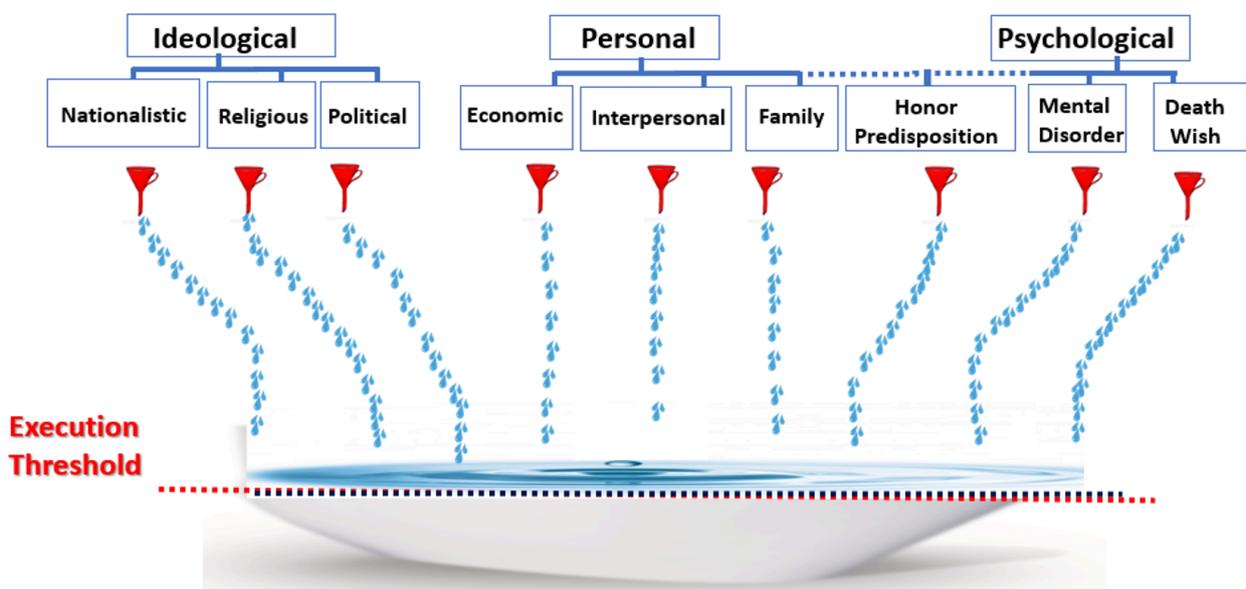


As depicted in Figure 1, the “lone wolf’s” decision to attack is seldom driven by one sole motive; it is rather the outcome of an aggregate combination of ideological, personal, or psychological motives. Scholars have adopted different methods of classification and there are various ways to group each motive. For example, James Khalil argues that sociopsychological factors (such as the desire for adventure, a higher status, and vengeance) play a role in the individual’s decision to perpetrate an attack.[47] The weight of each motive varies on the merits of every case and the personal circumstances of the terrorist, his/her mental structure, his/her exposure to incitement, and more.

In fact, one may visualize the “lone wolf’s” decision-making process vis-a-vis the attack to a vessel (e.g., a bathtub) being filled up by various sources of water/faucets which are the aforementioned various groups and subgroups of motivations (hereinafter: “The Bathtub Model”). Each of the various motives contributes its part to fill up the “motivation bath” at its own velocity and intensity. When the bathtub is full and cannot contain any more motivations, it overflows, and an attack occurs. This overflow reflects the maturation of the terrorist’s decision to attack. Filling up the bathtub may be a slow process and the decision to attack may take many days; or, the bathtub may quickly be filled, in which case the decision to attack will be made within a very short time.

A decision to attack may be the outcome of one major motive (be it personal, psychological, or ideological) or a combination of motives. In the “Bathtub Model” this is akin to a situation where one faucet fills the tub while others are closed or just dripping. Thus, the different motives and their effects on the terrorist change from one person to another, but each contributes its relative portion to fill up the bathtub (i.e., arrive at a decision to attack).

Figure 2: The “Bathtub Model” – “Lone Wolf” Attack Execution Threshold



The upper threshold of the “bathtub” is therefore the critical variable in the proposed model, as it determines that maximal level of the “lone wolf’s” ability to contain his/her motives, frustrations, emotions, and urges. When this threshold is higher, the terrorist is able to contain more reasons and motives before s/he attacks. When the threshold is lower, the effect of the various “faucets”/motives carry more weight in the decision to attack and arriving at such a decision may be faster. Furthermore, the upper threshold therefore reflects the mental strength of the “lone wolf,” his/her psychological stability, and ability to contain external influences and internal emotions.

It is important to note that the “Bathtub Threshold” is not only unique to each person, but also dynamic and may change, depending on the circumstances, for the very same person, in accordance with his/her level of exposure to “concrete triggers” that might intensify his/her emotions and drive him/her to perpetrate the attack immediately or within a very short time. Those triggers include: (i) an exposure of the terrorist to an earlier attack perpetrated by another “lone wolf” and the desire to follow in that terrorist’s footsteps and mimic him/her; (ii) an exposure to a traumatic event that generated extremely subjective feelings of anger, humiliation, and a desire for revenge. Such traumatic events may be the product of the personal circumstances or experiences of the attacker (such as a family or interpersonal crisis), or an incident which happened to another person that the attacker was exposed to through acquaintance with the individual, or through news or social media; (iii) an exposure to incitement messages from those calling for these types of attacks.

The trigger for action, whether a traumatic event or an exposure to certain information, can actually speed up the filling of the bathtub, release inhibitions, and overcome hesitations; and the extreme emotions that flood the terrorist’s mind as a result of such release may instantly lower the Bathtub Threshold, creating an overflow, that is, a decision to attack sooner rather than later. In psychology, an “inhibition” is defined as the “conscious or unconscious constraint or curtailment of a process or behavior, especially of impulses or desires.”[48] In this study, the “lone wolf’s” inhibitions are the product of his/her mental stability and his/her ability to contain crises, plus his/her value and belief system constrains, as well as his/her cost/benefit analysis. The basic premise in this context is that, apart from mentally ill people, the deliberate infliction of harm on others requires overcoming moral inhibitions stemming from the attacker’s set of values and overcoming possible utilitarian considerations that may curb the desire to perpetrate an attack (such as the risk to the attacker himself/herself and the price s/he may pay if arrested after the attack).

The “lone wolf’s” decision-making process to perpetrate an attack and the effect of the various triggers may therefore be presented in the following formula:

$$TA = (M + T) > I$$

**TA**) Terror Attack (= **Motivation** (Ideological + Personal + Psychological) + **Triggers** (Imitation + Trauma + Concrete Incitement, etc. (> **Inhibitions** (Psychological Stability + Value and Belief System + Cost/Benefit Analysis)

In other words, the “lone wolf’s” decision to perpetrate the attack is the product of balancing the sum of the various motives (ideological, psychological, personal) and the sum of the various triggers s/he was exposed to (role model, traumatic event, incitement) against the terrorist’s inhibitions (which are the product of his/her mental stability and his/her ability to contain crises, plus his/her value and belief system constrains as well as his/her cost/benefit analysis). When the sum of the triggers and motivations is greater than the inhibitions, then an attack will be perpetrated. If one can collect the relevant data, the above formula enables, prima facie, CT-professionals to calculate the total motivations, triggers, and inhibitions that affect “lone wolves”, prospectively or retrospectively (i.e., before or after the attack). It also enables the analyst to simultaneously examine the “lone wolf’s” basic personality traits, the ideological set of beliefs, the societal effects that are at the core of his/her decision to attack, as well as to evaluate the role of triggers, personal events, and external circumstances that influenced the “lone wolf’s” decision to attack. In that sense, the formula expresses the intensity of the drive to perpetrate the “lone wolf” attack.

The “Bathtub Model” also enables researchers to explore the central role that two other factors may have on

the “lone wolf’s” attack decision-making process: the terrorism incitement factor and government efforts and initiatives to prevent violent extremism.

It should be noted that terrorist organizations, Da’wa organizations, and radical lay leaders might have an important contribution to the “lone wolf’s” decision to attack. Their incitement “fertilizes” over time the volatile atmosphere in the “lone wolves” community and the explicit calls for attacks register in the “lone wolf’s” mind, contributing to the filling of the “motivation bathtub”. Incitement and propaganda have a direct influence on all of the ideological motivations, as well as on motivations based on honor, and also on some of the suicidal motivations (for example, there are cases in which attackers decided that they want to die in an attack in order to receive the heavenly rewards promised posthumously). As noted above, incitement might have a direct impact on the decision to attack, as it intensifies trigger events by praising prior attacks and attackers, or by deepening the attackers’ sense of humiliation. Within this framework, the terrorist organizations may incite “lone wolves” to perpetrate attacks on certain dates (for example, during holidays or anniversaries of past terrorist attacks), under a certain modus operandi (including, for example, cold-weapon attacks, car-ramming attacks, shootings, and acts of railway sabotage), or against specific targets (such as “infidels”, Western states, immigrant communities, or ethnic minorities).

On the other hand, one may infer from the “Bathtub Model” that a country dealing with terrorism and violent extremism has an ability to reduce the impact of some of the motivations of the “lone wolves” (these include, for example, ideological motivations, as well as motivations stemming from loss of honor and humiliation). In that sense, every “bathtub” has a “drain”. The “drain” is to a large extent controlled by the government. The government and security forces can open the drain and thus lower the level of “liquid” in the “motivation bathtub”. The “drain” manifests the concrete actions taken by states as part of their Countering Violent Extremism (CVE) efforts and activities. It may include, among others, communication channels with leaders of the “lone wolves” ideological, political, or ethnic communities; political reforms aimed at reducing tensions and appeasing these communities; as well as economic and educational reforms. All of these may be translated into an influence on the array of considerations of potential “lone wolves” and delay or even thwart their decision to attack.

### ***Summary and Conclusions***

In summation, understanding the characteristics, scope, and intensity of the “lone wolves” motivations are essential for any attempt to prevent or thwart this kind of attack, even more than with other forms of attacks. The proposed “Bathtub Model” enables one to map out the various motives, motivations, and triggers at the core of the attacks, and to identify the synergy between them.

The Bathtub Model is conceptual; however, it may carry many operational ramifications. As a theoretical model, it can serve as a basis for future research that will contribute to the understanding of the “lone wolves” terrorism phenomenon. Additional research may examine intersections between groups of motivations, such as: personal vs. ideological motives, honor, and humiliation vs. other groups of motivations. Interdisciplinary and multidisciplinary research that combine psychological, sociological, and political science approaches may use the model to examine a synergetic effect and influence that various types of motivations may have on “lone wolves” decision to perpetrate attacks. The model may also assist with identifying potential triggers that may “lower bathtub walls” significantly and rapidly, (i.e., quick and dangerous reduction of the inhibitions that prevent potential “lone wolves” from perpetrating their attacks). However, this conceptual model may also have operative applications. The model may point out cross-linkages between different types of incitement and certain groups of motivations that generate “lone wolf” attacks and by doing so assist with counteracting and preventing such incitement. Furthermore, the model may point to an elevated likelihood for the occurrence of “lone wolf” attacks in certain time periods when there is an increase in incitement that may trigger an increase in the above motivations, or when statements made by political leaders are perceived by potential attackers as an affront to their culture, ideology, or religion. Another operational insight stemming from the proposed model is the need to put an effort into “lowering the water level in the tub”, (i.e., enable potential lone wolves to contain

harsh sentiments and motivations without acting on them), or alternatively find a way to neutralize some of these sentiments and motivations (“enlarging the drain of the bathtub”). These efforts to prevent the decision of the “lone wolf” to perpetrate an attack might be made via CVE activities within high-risk communities, via educational reforms, during counter-incitement campaigns, by means of social and economic reforms, combined with free psychological services and treatments offered to potential “lone wolves”.

### *Acknowledgment*

The author is thankful to the editors and anonymous reviewers, to Dr. Michael Barak, Lorena Atiyas-Lvovsky, Stevie Weinberg & Dafne Beri for their research and editing, and to Ofer Vilenko for his translation into English.

**About the Author: Boaz Ganor** (PhD) is a professor and the Ronald S. Lauder Chair for Counter-Terrorism at the Interdisciplinary Center (IDC) Herzliya, Israel. He is the founder and executive director of the International Institute for Counter-Terrorism (ICT) and former dean of the Lauder School of Government, Diplomacy, and Strategy at the IDC Herzliya. Prof. Ganor serves as the founding president of the International Academic Counter-Terrorism Community, an international association of academic institutions, experts, and researchers in fields related to the study of terrorism and counterterrorism. He has also served as a consultant to the Israeli government on counterterrorism.

### **Notes**

- [1] ‘Cold weapon’ attacks refer to attacks carried out using knives, axes, and other ‘cold’ means, including vehicles.
- [2] Alex S. Schmid, “Root Causes of Terrorism: Some Conceptual Notes, a Set of Indicators, and a Model,” *Democracy & Security*, Vol. 1, Issue 2, 2005.
- [3] Daniel L. Byman, “Can Lone Wolves Be Stopped?,” Brookings (Brookings, March 15, 2017); URL: <https://www.brookings.edu/blog/markaz/2017/03/15/can-lone-wolves-be-stopped/>.
- [4] Gabriel Weimann, “Virtual Packs of Lone Wolves: How the Internet Made ‘Lone Wolf’ Terrorism a Misnomer”. Wilson Center, February 28, 2014, <https://medium.com/its-a-medium-world/virtual-packs-of-lone-wolves-17b12f8c455a>.
- [5] Tomáš Zeman, Jan Břeň, and Rudolf Urban, “Role of Internet in Lone Wolf Terrorism”, *Journal of Security and Sustainability Issues* 7, no. 2 (December 2017).
- [6] Gabriel Weimann, “Lone Wolves in Cyberspace”, *The Centre for the Study of Terrorism and Political Violence: Journal of Terrorism Research* 3, no. 2 (2012): pp. 75–90; URL: <https://research-repository.st-andrews.ac.uk/bitstream/handle/10023/3981/405-950-1-PB.pdf?sequence=1&isAllowed=y>.
- [7] Gabriel Weimann, “Chapter 3: Lone Wolves in Cyberspace”; in: *Terrorism in Cyberspace: The Next Generation* (NY: Woodrow Wilson Center Press, 2015).
- [8] Marc Sageman, *Leaderless Jihad: Terror Networks in the Twenty-First Century* (Philadelphia: University of Pennsylvania Press, 2008).
- [9] Miron Lakomy, “Recruitment and Incitement to Violence in the Islamic State’s Online Propaganda: Comparative Analysis of Dabiq and Rumiyah”, *Studies in Conflict & Terrorism*, February 2019; URL: <https://doi.org/10.1080/1057610X.2019.1568008>.
- [10] Bruce Hoffman, *Inside Terrorism* (New York, NY: Columbia University Press, 1999).
- [11] Mark S. Hamm and R. F. J. Spaaij, *The Age of Lone Wolf Terrorism* (New York: Columbia University Press, 2017).
- [12] Jeffrey D. Simon, *Lone Wolf Terrorism: Understanding the Growing Threat* (Amherst, N.Y.: Prometheus Books, 2016).
- [13] Daniel L. Byman, “Can Lone Wolves Be Stopped?,” Brookings (Brookings, March 15, 2017); URL: <https://www.brookings.edu/>

[blog/markaz/2017/03/15/can-lone-wolves-be-stopped/](https://www.brookings.edu/blog/markaz/2017/03/15/can-lone-wolves-be-stopped/).

[14] Edwin Bakker and Beatrice de Graaf, “Preventing Lone Wolf Terrorism: Some CT Approaches Addressed”, *Perspectives on Terrorism*, 5, no. 6 (December 2011): pp. 43–50. See also Florian Hartleb, *Lone Wolves: The New Terrorism of Right-Wing Single Actors* (Cham: Springer, 2020).

[15] See Raffaello Pantucci, “A Typology of Lone Wolves: Preliminary Analysis of Lone Islamist Terrorists,” *The International Centre for the Study of Radicalisation and Political Violence* (ICSR), March 2011, pp. 1–39; URL: [https://icsr.info/wp-content/uploads/2011/04/1302002992ICSRPaper\\_ATypologyofLoneWolves\\_Pantucci.pdf](https://icsr.info/wp-content/uploads/2011/04/1302002992ICSRPaper_ATypologyofLoneWolves_Pantucci.pdf).

[16] Raffaello Pantucci, “What Have We Learned about Lone Wolves from Anders Behring Breivik?”, *Perspectives on Terrorism*, 5, no. 5 (December 2011): pp. 27–42.

[17] Paul Gill et al., “Terrorist Use of the Internet by the Numbers”, *Criminology and Public Policy* 16, no. 1 (February 2017): pp. 99–117; URL: <https://doi.org/10.1111/1745-9133.12249>.

[18] Florian Hartleb, *Lone Wolves: The New Terrorism of Right-Wing Single Actors* (Cham: Springer, 2020).

[19] Boaz Ganor, *The Counter-Terrorism Puzzle: A Guide for Decision Makers* (New Brunswick, USA: Transaction Publishers, 2008), pp. 51–53.

[20] Ariel Merari & Boaz Ganor (2020): *Interviews With, and Tests of, Palestinian Independent Assailants, Terrorism and Political Violence*, DOI: 10.1080/09546553.2020.1821668.

[21] See Matthew Levitt, “The Lone-Wolf Terrorist is a Misnomer”, mcall.com (The Morning Call, September 22, 2016); URL <https://www.mcall.com/opinion/mc-new-york-bombing-terrorist-0923-20160922-story.html>. See also: Gabriel Weimann, “Virtual Packs of Lone Wolves: How the internet made ‘lone wolf’ terrorism a misnomer”. Wilson Center, February 28, 2014; URL: <https://medium.com/its-a-medium-world/virtual-packs-of-lone-wolves-17b12f8c455a>. See as well: Daniel L. Byman, “Can Lone Wolves Be Stopped?”, Brookings (Brookings, March 15, 2017), <https://www.brookings.edu/blog/markaz/2017/03/15/can-lone-wolves-be-stopped/>.

[22] Bart Schuurman et al., “End of the Lone Wolf: The Typology That Should Not Have Been”, *Studies in Conflict & Terrorism* 42, no. 8 (September 2018): pp. 771–778; URL: <https://doi.org/10.1080/1057610x.2017.1419554>.

[23] Brian Michael Jenkins. “Stray Dogs and Virtual Armies: Radicalization and Recruitment to Jihadist Terrorism in the United States Since 9/11”. Santa Monica, CA: RAND Corporation, 2011, 21. Accessed August 28, 2020; URL: <http://www.jstor.org/stable/10.7249/op343rc>.

[24] Jenkins, B. M., *Stray Dogs*, op. cit., p. 21.

[25] The term “stray dog” was coined by the Italian police in the 1970s and attributed in reference to the Red Brigades.

[26] Jenkins, B. M., *Stray Dogs*, op. cit., p. 21.

[27] Daveed Gartenstein-Ross and Nathaniel Barr, “The Myth of Lone-Wolf Terrorism: The Attacks in Europe and Digital Extremism”, *Foreign Affairs*, July 26, 2016; URL: <https://www.foreignaffairs.com/articles/western-europe/2016-07-26/myth-lone-wolf-terrorism>.

[28] Gabriel Weimann, “Virtual Packs of Lone Wolves: How the internet made ‘lone wolf’ terrorism a misnomer”. Wilson Center, February 28, 2014; URL: <https://medium.com/its-a-medium-world/virtual-packs-of-lone-wolves-17b12f8c455a>.

[29] Gabriel Weimann, “Chapter 3: Lone Wolves in Cyberspace”, in *Terrorism in Cyberspace: The Next Generation* (NY: Woodrow Wilson Center Press, 2015).

[30] Daniel L. Byman, “Can Lone Wolves Be Stopped?”, Brookings (Brookings, March 15, 2017); URL: <https://www.brookings.edu/blog/markaz/2017/03/15/can-lone-wolves-be-stopped/>.

[31] Clare Ellis et al., “Lone-Actor Terrorism: Final Report”, *Royal United Services Institutes for Defence and Security Studies* (RUSI, 2016); URL: [https://rusi.org/sites/default/files/201604\\_clat\\_final\\_report.pdf](https://rusi.org/sites/default/files/201604_clat_final_report.pdf).

[32] Caitlin Clemmow, Noémie Bouhana, and Paul Gill, “Analyzing Person-Exposure Patterns in Lone-Actor Terrorism: Implications for Threat Assessment and Intelligence Gathering”, *Criminology & Public Policy* 19, no. 2 (2020): pp. 451–482; URL: <https://doi.org/10.1111/1745-9133.12466>.

[33] Ariel Merari and Boaz Ganor, *Interviews With...*, op. cit., p. 2.

[34] Ibid.

[35] R. Pantucci, *A Typology of Lone Wolves*

- [36] Ramón Spaaij, *Understanding Lone Wolf Terrorism: Global Patterns, Motivations and Prevention*, vol. 3 (New York City, NY: Springer, 2012).
- [37] Jude McCulloch et al., “Lone Wolf Terrorism Through a Gendered Lens: Men Turning Violent or Violent Men Behaving Violently?”, *Critical Criminology* 27 (July 2019): pp. 437–450; URL: <https://doi.org/10.1007/s10612-019-09457-5>.
- [38] See Merari and Ganor, *Interviews With...*, *op. cit.*
- [39] *Idem.*, p. 9.
- [40] For a study on the ideological motives, see: Ramón Spaaij, *Understanding Lone Wolf Terrorism: Global Patterns*.
- [41] For a study on the role of psychopathology in terrorist behavior, see: Emily Corner, Noémie Bouhana, and Paul Gill, “The Multifinality of Vulnerability Indicators in Lone-Actor Terrorism”, *Psychology, Crime & Law* 25, no. 2 (2019): pp. 111–132; URL: <https://doi.org/10.1080/1068316x.2018.1503664>.
- [42] For a study on personal (economic) circumstances, see: Peter J. Phillips and Gabriela Pohl, “Economic Profiling of the Lone Wolf Terrorist: Can Economics Provide Behavioral Investigative Advice?”, *Journal of Applied Security Research* 7, no. 2 (March 2012): pp. 151–177; URL: <https://doi.org/10.1080/19361610.2012.656250>.
- [43] R. Spaaij, *op. cit.*
- [44] Emily Corner and Paul Gill, “A False Dichotomy? Mental Illness and Lone-Actor Terrorism”. *Law and Human Behavior* 39, no. 1 (February 2015): pp. 23–34; URL: <https://doi.org/10.1037/lhb0000102>.
- [45] Daveed Gartenstein Ross, “What Does the Recent Spate of Lone Wolf Terrorist Attacks Mean?”, *War on the Rocks* (Texas National Security Review, October 2014); URL: <https://warontherocks.com/2014/10/what-does-the-recent-spate-of-lone-wolf-terrorist-attacks-mean/>, accessed December 21, 2020.
- [46] For a study on psychology and lone wolf terrorism, see: Manon Prats, Sophie Raymond, and Ivan Gasman, “Religious Radicalization and Lone-Actor Terrorism: A Matter for Psychiatry?”, *Journal of Forensic Sciences* 64, no. 4 (July 2019): pp. 1–6; URL: <https://doi.org/10.1111/1556-4029.13992>.
- [47] James Khalil, “Radical Beliefs and Violent Actions Are Not Synonymous: How to Place the Key Disjuncture Between Attitudes and Behaviors at the Heart of Our Research into Political Violence”, *Studies in Conflict & Terrorism* 37, no. 2 (January 2014): pp. 198–211; URL: <https://doi.org/10.1080/1057610X.2014.862902>.
- [48] Encyclopaedia Britannica, accessed December 21, 2020; URL: <https://www.britannica.com/science/inhibition-psychology>.