

October 2019

A Threat Assessment Framework for Lone-Actor Terrorists

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A THREAT ASSESSMENT FRAMEWORK FOR LONE-ACTOR TERRORISTS

*Melissa Hamilton**

Abstract

Lone-actor terrorist attacks are on the rise in the Western world in terms of numbers and severity. Public officials are eager for an evidence-based tool to assess the risk that individuals pose for terroristic involvement. Yet actuarial models of risk validated for ordinary criminal violence are unsuitable to terrorism. Lone-actor terrorists vary dramatically in their socio-psychological profiles and the base rate of terrorism is too low for actuarial modeling to achieve statistical significance. This Article proposes a new conceptual model for the terroristic threat assessment of individuals. Unlike risk assessment that is founded upon numerical probabilities, this threat assessment considers possibilistic thinking and considers the often idiosyncratic ideologies and strategies of lone-actor terrorists.

The conceptual threat assessment model connects three overlapping foundations: (a) structured professional judgment concerning an individual's goals, capabilities, and susceptibility to extremist thought, plus the imminence of a potential terroristic attack; (b) a multidisciplinary intelligence team engaging collective imaginaries of an otherwise unknown future of terrorism events; and (c) coordination between counterintelligence officials and academic communities to share data and conduct more research on lone-actor terrorists utilizing a systematic case study approach and engaging theoretical methodologies to inform about potential new ideological motivations and terroristic strategies which may be emerging due to cultural, environmental, and political drivers.

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INTRODUCTION

News headlines, policy center papers, and academic literature have been expounding upon the benefits generated by the government’s use of big data to predict the future risk posed by individuals.¹ Proponents claim that risk assessment tools developed on large datasets offer a transparent, consistent, and logical method of differentiating high risk offenders from low risk offenders and managing them accordingly.² But one area of crime where big data provides virtually no assistance is risk assessment of the so-called lone actor terrorists.

For the purposes of this Article, terrorism is defined as the unlawful use of violence to instill fear or to intimidate in furtherance of an ideological goal.³ Here, lone-actor terrorists refers to those acting outside of a group’s direct influence.

1. E.g., Andrew Guthrie Ferguson, *Big Data and Predictive Reasonable Suspicion*, 163 U. PENN. L. REV. 327, 394 (2015); Julia Angwin et al., *Machine Bias*, PROPUBLICA (May 23, 2016, 1:45 PM), <https://www.propublica.org/article/machine-bias-risk-assessments-in-criminal-sentencing> [https://perma.cc/YT92-8TJ3]; Crysta Jentile & Michelle Lawrence, *How Government Use of Big Data can Harm Communities*, FORD FOUND.: EQUALS CHANGE BLOG (Aug. 30, 2016), <https://www.fordfoundation.org/ideas/equals-change-blog/posts/how-government-use-of-big-data-can-harm-communities/> [https://perma.cc/TJM7-GCME]; Sony Kassam, *Legality of Using Predictive Data to Determine Sentences Challenged in Wisconsin Supreme Court Case*, A.B.A J. (June 27, 2016, 1:07 PM), http://www.abajournal.com/news/article/legality_of_using_predictive_data_to_determine_sentences_challenged_in_wisc [https://perma.cc/3K5D-AKHF].

2. Jordan M. Hyatt et al., *Reform in Motion: The Promise and Perils of Incorporating Risk Assessments and Cost-Benefit Analysis into Pennsylvania Sentencing*, 49 DUQ. L. REV. 707, 725 (2011).

3. 28 C.F.R. § 0.85(l) (2017).

Terrorism is unlike any other crime in that terrorist attacks on lives, property, and infrastructure have consequences of unparalleled magnitude. As a result, terrorism takes an extraordinary toll on civil societies through the heightened level of fear it generates.⁴ Countries have responded to a recent uptake in terroristic violence by enhancing their abilities to detect and capture terrorists or would-be terrorists. This has resulted in an increase in the number of terrorists processed through criminal justice systems.⁵ Hence, officials press for tools that will permit more accurate assessments to predict which individuals are likely to engage in future acts of terrorism. Assessments would be useful across criminal justice decisions, including pretrial detention,⁶ security classification,⁷ sentencing, parole release, supervision conditions upon release,⁸ and reintegration plans.⁹ Government agencies and private employers may wish to assess potential employees to the extent that greater consequences may result when terroristic attacks are orchestrated from inside.¹⁰ Risk assessment protocols are therefore of interest to many constituencies, primarily to law enforcement, national security, correctional institutions, and other governmental and private agencies.¹¹

Despite the call for a terrorist risk assessment tool, the contemporary model of risk assessment in the criminal justice system is unhelpful. One reason behind this is that the relatively small number of terrorist attackers challenge the statistical strength of any potential model. This also means that the same array of “big data” that typically informs risk models simply

4. See *infra* Part II.

5. Hannah Fairfield & Tim Wallace, *The Terrorists in U.S. Prisons*, N.Y. TIMES (Apr. 7, 2016), <https://www.nytimes.com/interactive/2016/04/07/us/terrorists-in-us-prisons.html> [<https://perma.cc/LS6Z-PA37>]; Bethany Minelle, *Record Number of Terror-Related Arrests*, SKY NEWS (Sept. 14, 2017, 12:10 PM), <https://news.sky.com/story/record-number-of-terror-related-arrests-11034789> [<https://perma.cc/LB2Q-SMTZ>].

6. John Monahan, *The Individual Risk Assessment of Terrorism: Recent Developments*, in THE HANDBOOK OF THE CRIMINOLOGY OF TERRORISM 520, 521 (Gary LaFree & Joshua D. Freilich eds., 2017).

7. U.N. OFFICE ON DRUGS AND CRIME, HANDBOOK ON THE MANAGEMENT OF VIOLENT EXTREMIST PRISONERS AND THE PREVENTION OF RADICALIZATION TO VIOLENCE IN PRISONS 61 (2016), https://www.unodc.org/pdf/criminal_justice/Handbook_on_VEPs.pdf [<https://perma.cc/XDD6-Q8GQ>].

8. Monica Lloyd & Christopher Dean, *The Development of Structured Guidelines for Assessing Risk in Extremist Offenders*, 2 J. THREAT ASSESSMENT & MGMT. 40, 49 (2015), <http://psycnet.apa.org/fulltext/2015-56730-005.pdf> [<https://perma.cc/ZQD2-S25W>].

9. TINKA M. VELDHIJS, REINTEGRATING VIOLENT EXTREMIST OFFENDERS: POLICY QUESTIONS AND LESSONS LEARNED 7 (2015), [https://cchs.gwu.edu/sites/g/files/zaxdzs2371/f/downloads/VeldhuisPaper-Final%20\(2\).pdf](https://cchs.gwu.edu/sites/g/files/zaxdzs2371/f/downloads/VeldhuisPaper-Final%20(2).pdf) [<https://perma.cc/7YUQ-DKJ8>].

10. David BaMaung et al., *The Enemy Within? The Connection Between Insider Threat and Terrorism*, 41 STUD. CONFLICT & TERRORISM 133, 134 (2018).

11. D. Elaine Pressman & John Flockton, *Calibrating Risk for Violent Political Extremists and Terrorists: The VERA 2 Structured Assessment*, 14 BRIT. J. FORENSIC PRAC. 237, 238 (2012).

does not exist with respect to terrorism. Plus, empirical research on terrorists is a relatively nascent academic field, though more studies are materializing as of late, albeit of varying degrees of quality and scientific rigor.¹²

Nonetheless, this situation does not mean that science-informed practices for the detection and management of terrorists are impossible. Indeed, counterterrorism work should inherently be an evidence-based activity.¹³ The framework and the modeling must simply be reassessed. The use of the word “simply” here is for colloquial purposes, as the reformulation of a framework for terrorists requires significant efforts, innovative methods, and novel theoretical approaches on the parts of multiple government agencies and disciplinary fields. This Article offers an integrated platform as a foundation for assessments of the future dangerousness of individual terrorists. The significance of this Article is to integrate discrete elements into a broader, more concrete framework; to articulate how the parts relate to each other; to encourage professionals with different counterterrorism-related roles to identify and better understand each other and their skillsets; and to emphasize the importance of drawing on theoretical and empirical knowledge from academic research.

Part I of this Article highlights emerging issues with lone-actor terrorists and why they specifically deserve analytical focus apart from group-based extremists. Part II briefly reviews the landscape of risk assessment practices in the criminal justice context and explains why risk assessment tools designed to address ordinary criminal violence are unsuitable for evaluating terrorists.

Part III then offers a fresh conceptual framework for assessing individuals’ potential to carry out lone-actor terroristic attacks. The framework conceptualizes overlapping agendas. The first agenda depicts a forensic analysis that forms a threat assessment model. Threat replaces the notion of risk. Unlike risk assessment, threat assessment does not operate as a mathematical tool that computes probability estimates. Instead, the concept of threat assessment accepts that for terrorists, quantitative judgements are unfeasible, and that the goal is prevention over predictive precision. In this threat assessment model, the evaluator focuses on intention, capability, vulnerability to radicalization, and potential consequences of an attack.

The second agenda bolsters security intelligence with a multidisciplinary team of behavioural scientists, forensic evaluators,

12. See J. Reid Meloy & Jacqueline Genzman, *The Clinical Threat Assessment of the Lone-Actor Terrorist*, 39 PSYCHIATRIC CLINICS N. AM. 649, 650 (2016).

13. José María Blanco & Jéssica Cohen, *Evidence-Based Counterterrorism Policy: Evaluating the ‘Big Picture,’* 13 EUR. POLICE SCI. & RES. BULL. 26, 26 (2015), <https://www.cepol.europa.eu/sites/default/files/science-research-bulletin-13.pdf> [<https://perma.cc/7J7G-3FBJJ>].

intelligence analysts, and law enforcement personnel. Counterterrorism evaluations of individuals as potential terrorists cannot rely upon standard investigatory techniques. The unpredictability of terrorists requires a human imagination, even collective imaginaries, to conjure a hypothetical future in which a determined ideologue may launch an extremist attack.

Scientific-ly-led research forms the third agenda. The focus sketches a systematic case study of terrorists, their pathways to extremism, and their trajectories toward carrying out extremist violence. As this information is often sequestered by governments for security purposes, requisite confidentiality agreements should be negotiated so that counterterrorism agencies can provide researchers with sufficient data to analyze. In addition, intelligence officials should call for more dynamically-oriented research to inform about potential new forms of extremist ideologies, lone actor strategies, and modes of attack.

I. LONE-ACTOR TERRORISM

Terrorism is not new.¹⁴ Now, though, it is of paramount political and security concern in Western countries.¹⁵ The contemporary threat of terror has quantitatively and qualitatively metamorphosed. Quantitatively, the threat of terrorism in the West has increased exponentially.¹⁶ The Global Terrorism Index of 2017 confirms that the spread of terrorism has expanded over the last decade in Organisation for Economic Co-operation and Development (OECD) countries.¹⁷ Many of the latest terrorist attacks are of higher magnitude.¹⁸ From a qualitative perspective, terrorism is taking an exorbitant toll on feelings of peace and

14. Anthony Fainberg, *Terrorist Threats: Technical and Policy Approaches to Countering Them*, 1898 AIP CONF. PROC. 050003, 050003-3 (2017), <http://aip.scitation.org/doi/pdf/10.1063/1.5009232> [<https://perma.cc/K7QX-L8RV>].

15. Gabe Mythen, *Thinking with Ulrich Beck: Security, Terrorism, and Transformation*, 21 J. RISK RES. 17, 19 (2017); Yael Litmanovitz et al., *What are the Social, Economic, Psychological and Environmental Risk Factors that Lead to Radicalization and Recruitment to Terrorism?: A Systematic Review*, CAMPBELL COLLABORATION 1 (Sept. 27, 2017), https://www.campbellcollaboration.org/library/download/1003_78895d4f2e0a8caa3046941fc65c9117.html [<https://perma.cc/KEH2-ZQLJ>] (opining that terrorism is “[p]erhaps one of the most pressing issues facing the world today”).

16. Litmanovitz et al., *supra* note 15.

17. INST. FOR ECON. & PEACE, GLOBAL TERRORISM INDEX 2017: MEASURING AND UNDERSTANDING THE IMPACT OF TERRORISM 53 (2017), <http://visionofhumanity.org/app/uploads/2017/11/Global-Terrorism-Index-2017.pdf> [<https://perma.cc/B8HH-MENX>].

18. *Id.* at 54 (reporting a notable increase in the number of attacks and deaths by terrorists in OECD countries since 2014); Mythen, *supra* note 15, at 20.

security for citizens and communities.¹⁹ Terroristic attacks, and the threat of them, have altered social values, changed individual and collective behaviors, and degraded confidence in governments.²⁰

Violent extremism has disproportionately impacted societal stability and has driven significant changes in Western nations' domestic and foreign policies.²¹ For instance, countries anguished by terroristic threats have tended, in the last two decades, to react by bolstering and focusing homeland and foreign security forces on such threats, even though these actions strain financial, personnel, and institutional resources.²² The ill effects of these diversions are then felt across health, social, political, and economic institutions and structures.²³

A. *Escalation of Lone-Actor Terrorism*

As of late, some of the more significant terrorist groups in the Western world, Al-Qaeda and the Islamic State of Iraq and the Levant (ISIL), for instance, have lost much of their power, wealth, and resources such that there are signs of their decline.²⁴ Yet terrorism remains a priority: The spectre of lone-actor attacks is alarming security officials across the West.²⁵ A variety of definitions of lone-actor terrorism abound across the literature. We need not parse them here. For the purposes of this article, lone-actor terrorists are reasonably defined as those that operate chiefly outside of organizational structures, without institutional support and resources, and independent of larger group dynamics.²⁶

19. Wael Haddara, *A Policy-Oriented Framework for Understanding Violent Extremism*, 29 NEW ENG. J. PUB. POL'Y 1 (Mar. 20, 2017), <https://scholarworks.umb.edu/nejpp/vol29/iss1/4/> [<https://perma.cc/RC2J-GZQX>].

20. Blanco & Cohen, *supra* note 13, at 31.

21. Haddara, *supra* note 19.

22. Orlandrew E. Danzell & Lisandra M. Maisonet Montañez, *Understanding the Lone Wolf Terror Phenomena: Assessing Current Profiles*, 8 BEHAV. SCI. TERRORISM & POL. AGGRESSION 135, 136 (2016); Janice Gross Stein & Ron Levi, *The Social Psychology of Denial: Detering Terrorism*, 47 N.Y.U. J. INT'L L. & POL. 409, 411 (2015).

23. Litmanovitz et al., *supra* note 15.

24. See Daniel Byman, *Explaining Al Qaeda's Decline*, 79 J. POL. 1106, 1107 (2017); Syed Huzaifah Bin Othman Alkaff & Remy Mahzam, *Islamic State after the Fall of Mosul and Raqqa: Impact on Organisation and Propaganda*, 10 COUNTER TERRORIST TRENDS & ANALYSES 57, 57 (2018).

25. Monahan, *Recent Developments*, *supra* note 6, at 527; Michele T. Pathé et al., *Establishing a Joint Agency Response to the Threat of Lone-Actor Grievance-Fueled Violence*, 29 J. FORENSIC PSYCHIATRY & PSYCHOL. 37, 39 (2018).

26. KATHLEEN DELOUGHERY ET AL., NAT'L CONSORTIUM FOR THE STUDY OF TERRORISM & RESPONSES TO TERRORISM, UNDERSTANDING LONE-ACTOR TERRORISM: A COMPARATIVE ANALYSIS WITH VIOLENT HATE CRIMES AND GROUP-BASED TERRORISM, FINAL REPORT TO THE RESILIENT SYSTEMS DIVISION, U.S. DEP'T OF HOMELAND SECURITY 3 (2013),

The growing number and magnitude of attacks by lone-actor extremists is an important reason for the fresh apprehension amongst security forces.²⁷ Lone-actor terrorist attacks have been acutely consequential in recent years in the United States and certain European countries, such as the United Kingdom and Germany.²⁸ And lone-actor terrorism creates certain ancillary costs.²⁹ Lone-actor attacks often come without warning and appear random; they are coined “pop-up terror” as a result.³⁰ Consequently, civilians may feel more vulnerable and less able to defend themselves from lone actors.³¹

https://www.start.umd.edu/sites/default/files/publications/local_attachments/START_IUSSD_UnderstandingLoneactorTerrorism_Sept2013.pdf [<https://perma.cc/AJ5J-VJU2>].

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).

Wes Mountain & Raffaello Pantucci, *Comic Explainer: What is Lone-Actor Terrorism?*, THE CONVERSATION (Nov. 28, 2017, 2:09 PM), <http://theconversation.com/comic-explainer-what-is-lone-actor-terrorism-86774> [<https://perma.cc/W3UW-7G7R>].

While some might describe lone-actor terrorists as those acting entirely independently, perhaps a better vision understands lone-actors as not exclusively insular in their ideologies, preparations, and access to instrumentalities of attack. Instead, many lone terrorists at some point receive indirect assistance from others, wittingly or not, in their preparations. See Danzell & Montañez, *supra* note 22, at 139. “[I]t is not always clear that lone actors are truly alone, and usually investigation uncovers contacts, leakage and evidence of connection with others that casts doubt on the degree of isolation that can be attributed to an individual.” Raffaello Pantucci et al., Royal United Servs. Inst. for Def. & Sec. Studies, *Lone-Actor Terrorism: Literature Review*, COUNTERING LONE-ACTOR TERRORISM: LIT. REV. 2015, 1, 1 (Countering Lone-Actor Terrorism Ser. No. 1, 2015), https://rusi.org/sites/default/files/201512_clat_literature_review_0.pdf [<https://perma.cc/6TAE-2NKD>]. There is evidence across countries that at least some lone-actor attacks may actually be known terrorist groups’ tactical response to governmental security forces foiling group-based or network-connected terrorist activities with increasing effectiveness. *Id.* at 3. Thus, terrorist groups appear to be setting up individuals to act without the group’s formal institutional support, but in furtherance of terrorist group ideologies and aimed at their preferred targets. *Id.* This type of scheme now appears to be easily facilitated by the internet and social media outlets and targeted at individuals interested in self-radicalizing. *Id.* The point, though, is that lone actors act relatively autonomously regarding extremist infrastructures.

27. See EUROPOL, CHANGES IN MODUS OPERANDI OF ISLAMIC STATE (IS) REVISITED § 3 (2016), <https://www.europol.europa.eu/publications-documents/changes-in-modus-operandi-of-islamic-state-revisited> [<https://perma.cc/WW8G-TU74>]. The Global Terrorism Index of 2017 confirms that lone-actor terrorism increased over the last ten years in Organisation for Economic Cooperation and Development (OECD) countries. INST. FOR ECON. & PEACE, *supra* note 17, at 69.

28. Danzell & Montañez, *supra* note 22, at 135–36.

29. *Id.* at 136.

30. Roy Williams, *Fractured Narratives and Pop-Up Diaspora: Re-Theorizing the Capillaries of Power, Terror and Intimacy*, 8 DYNAMICS ASYMMETRIC CONFLICT 134, 135 (2015).

31. Haddara, *supra* note 19.

The European Commission on Terrorism, in reporting a rise in the number of lone-actor terrorists since 2008, notes that these lone actors draw on a greater variety of ideologies and appear more unconstrained than traditional terrorist groups.³² Moreover, the European Union warns that lone actors who are European citizens cause further damage by creating social divisions between European communities, instigating a ripple effect of more extremism in other parts of civil society as a result.³³

The spike in lone-actor terrorists is due in part to the increasing ability to self-radicalize via extremist materials on the internet and digital technology communications.³⁴ This suggests that lone actors are not entirely detached from social forces, but that they distinguish themselves from group-based terrorists in eschewing face-to-face contact in favor of interactions that can be anonymously plied behind computer or cell phone screens.

B. *Preventing Lone-Actor Attacks*

The heightened concern regarding lone-actor terrorist attacks is justified for additional reasons. The European Counter Terrorism Centre recently conceded that lone actors are more difficult to thwart, in large part due to their lack of organizational ties.³⁵ A research report submitted to the United States Department of Homeland Security references the lack of usual avenues for detection used by counterterrorism agents.³⁶ Regarding “a lone actor[,] there is no hierarchical organization to disrupt, no large network to infiltrate, no group literature to monitor, and few public statements to interpret or background chatter to analyze for patterns.”³⁷ Lone actors enjoy greater freedom in their activities by being unrestrained by actions or words which may alienate supporters or trigger

32. *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, on Preventing Radicalisation to Terrorism and Violent Extremism: Strengthening the EU’s Response*, at 2, COM (2013) 941 Final 10 (Jan. 15, 2014) [hereinafter *Preventing Radicalisation*], https://ec.europa.eu/home-affairs/sites/homeaffairs/files/e-library/documents/policies/crisis-and-terrorism/radicalisation/docs/communication_on_preventing_radicalisation_and_violence_promoting_extremism_201301_en.pdf [<https://perma.cc/Q2DT-U3LN>].

33. *Id.*

34. Matthew Feldman, *Comparative Lone Wolf Terrorism: Toward a Heuristic Definition*, 9 DEMOCRACY & SECURITY 270, 270, 274, 280 (2013).

35. EUROPEAN COUNTER TERRORISM CTR., EUROPOL, LONE ACTOR ATTACKS—RECENT DEVELOPMENTS 1 (2016), https://www.europol.europa.eu/sites/default/files/documents/lone_actor_attacks_-_recent_developments_1.pdf [<https://perma.cc/V2W4-8X9H>].

36. DELOUGHERY ET AL., *supra* note 26, at 2.

37. *Id.*

governmental crackdowns on a group.³⁸ Also, lone-actor extremists need not seek advance approval from a collective or its leaders.³⁹ The “solitary nature of lone wolf terrorism is its most pernicious aspect” in frustrating early identification.⁴⁰ This may explain one study’s finding that counterterrorism forces in the United States took longer to detect lone-actor terrorists than group-based terrorists.⁴¹ Nonetheless, social isolation does not render lone actors as one-off threats, especially considering that lone actor “successes” appear to attract copycats.⁴²

Failure to affiliate with an organization allows lone actors to be more idiosyncratic in their ideological drivers.⁴³ Lone actors often show great innovation in tactical strategies:⁴⁴ Not requiring the approval of others may offer lone actors the freedom to think outside the box.⁴⁵ Yet lone-actor terrorists are not necessarily more sophisticated than group actors. Lone actors favor using attack tools that are readily obtained or created, or that are modified to become instrumentalities of mass death, such as high-powered firearms, improvised explosive devices,⁴⁶ and, lately, vehicles to plow into crowds.⁴⁷ Lone actors purportedly view their own actions as constituting “asymmetrical, propagandistic warfare.”⁴⁸

In sum, the idiosyncratic nature, the seemingly haphazard choice of targets, and the unpredictability of lone-actor bogeymen differentiate this type of terrorist.⁴⁹ These realities only increase the appetite of security and criminal justice officials for a risk assessment tool that can offer a systematic and unbiased ability to differentiate individuals who are at

38. Jeffrey D. Simon, *Lone Wolf Terrorism: Understanding the Growing Threat*, in LONE ACTORS—AN EMERGING SECURITY THREAT 3, 4 (Aaron Richman & Yair Sharan eds., 2015).

39. Pantucci et al., *supra* note 26, at 14.

40. DELOUGHERY ET AL., *supra* note 26, at 2 (citing Peter J. Phillips, *Lone Wolf Terrorism*, 1 PEACE ECON. PEACE SCI. & PUB. POL’Y 1, 1 (2011)).

41. Brent L. Smith et al., *The Emergence of Lone Wolf Terrorism: Patterns of Behavior and Implications for Intervention*, 20 SOC. CRIME L. & DEVIANCE 91, 107 tbl.7 (2015).

42. PAUL GILL, LONE-ACTOR TERRORISTS: A BEHAVIOURAL ANALYSIS 9 (2015).

43. Paul Gill, *Bringing Terrorists into Sharper Focus*, N.Y. DAILY NEWS (Jan. 18, 2015, 5:00 AM), <http://www.nydailynews.com/opinion/paul-gill-bringing-terrorists-sharper-focus-article-1.2081837> [<https://perma.cc/HYK9-FX5T>].

44. *See id.*

45. Pantucci et al., *supra* note 26, at 1, 14.

46. Gabriel Koehler-Derrick & Daniel James Milton, *Choose Your Weapon: The Impact of Strategic Considerations and Resource Constraints on Terrorist Group Weapon Selection*, TERRORISM & POL. VIOLENCE 4–5, 6 (Mar. 9, 2017), <https://www.tandfonline.com/doi/full/10.1080/09546553.2017.1293533>.

47. *See* János Besenyő, *Low-Cost Attacks, Unnoticeable Plots? Overview on the Economical Character of Current Terrorism*, 62 STRATEGIC IMPACT 83, 84, 93 (2017).

48. Feldman, *supra* note 34, at 282.

49. *See* Daniel Peddell et al., *Influences and Vulnerabilities in Radicalised Lone-Actor Terrorists: UK Practitioner Perspectives*, 18 INT’L J. POLICE SCI. & MGMT. 63, 65 (2016).

higher risk of extremist violence and manage that risk to prevent attacks.⁵⁰

It is important to note that despite not enjoying the potential advantages of an existing infrastructure and the resources of organized terrorist groups, lone actors are not necessarily less dangerous. To illustrate, a recent study comparing terrorism cases found that, at least in the United States, lone-actor terrorists were more lethal than group-based attackers.⁵¹ That study's author suggests that the strength of counterterrorism infrastructures in the United States may inhibit the success of group attacks.⁵² At the same time, lone actors may find solace in the "country's history of Right-Wing lone wolf activity, high gun ownership, and relatively violent culture."⁵³ Concerning this last reflection on a violent culture, one may question why statistically-modelled risk assessment tools for violence, available and used across criminal justice decision points, are not equally applicable to terroristic violence. This query is considered next.

II. VIOLENCE RISK ASSESSMENT

The evidence-oriented model for risk assessment utilizes findings from scientific studies to identify and classify individuals based on the risk that they will reoffend.⁵⁴ Evidence-based models for criminal justice practices are popular—even considered best practices—for predicting an individual's likelihood of future dangerousness.⁵⁵ Informed also by theoretical approaches, evidence-based practices offer a welcome displacement of raw human presumptions about an individual's risk of criminal offending.⁵⁶

More specifically, actuarial risk assessment tools are a prominent fixture in the evidence-based practices movement.⁵⁷ The "risk" in risk assessment is meant as a predictive measure for the potential future

50. See Jytte Klausen et al., *Toward a Behavioral Model of "Homegrown" Radicalization Trajectories*, 39 *STUD. CONFLICT & TERRORISM* 67, 67 (2015) ("The rapid rise in domestic violent extremism has created an urgent need for metrics that can help law enforcement assess the danger represented by radicalizing individuals.").

51. Brian J. Phillips, *Deadlier in the U.S.? On Lone Wolves, Terrorist Groups, and Attack Lethality*, 29 *TERRORISM & POL. VIOLENCE* 533, 545 (2017).

52. *See id.*

53. *See id.*

54. See Faye S. Taxman, *The Partially Clothed Emperor: Evidence-Based Practices*, 34 *J. CONTEMP. CRIM. JUST.* 97, 97–98 (2018).

55. See Jessica M. Eaglin, *Constructing Recidivism Risk*, 67 *EMORY L.J.* 59, 61–62 (2017).

56. See Alfred Blumstein, *Some Perspectives on Quantitative Criminology Pre-JQC: and Then Some*, 26 *J. QUANTITATIVE CRIMINOLOGY* 549, 554 (2010).

57. See Eaglin, *supra* note 55, at 79.

outcome of interest.⁵⁸ In criminal justice, the relevant outcome is typically related to recidivism; for violent offenders, the goal is often to predict the likelihood of violent reoffending.⁵⁹

A. Risk Assessment Models

Two classes of risk assessment models are of interest here. The first is intrinsically quantitative in nature.⁶⁰ Actuarial risk methodologies derive statistical data from the systematic study of historical group samples.⁶¹ The general idea of actuarial risk leads scientific researchers to run models in order to identify factors which correlate with the future event at issue.⁶² Then researchers choose appropriate correlative factors and assign appropriate weights as some factors achieve greater predictive ability than others.⁶³ This type of modeling presents as “risk factorology” in providing a basis for officials to differentiate between individuals at a higher risk of future dangerousness and those posing a lower risk than others.⁶⁴ For criminal justice officials, the risk assessment framework generally promotes a “future-oriented logic of risk,”⁶⁵ and embraces a philosophy of risk aversion.⁶⁶

Risk assessment tools contain static or dynamic factors, or, more suitably, a combination thereof. Static risk factors normally are historical, unchangeable, and generally not amenable to interventions.⁶⁷ Dynamic factors reflect criminogenic needs that are mutable in nature and thus appropriate targets for reducing risk through appropriate interventions.⁶⁸

58. *See id.* at 75.

59. *See, e.g.*, Stephen D. Gottfredson & Laura J. Moriarty, *Statistical Risk Assessment: Old Problems and New Applications*, 52 CRIME & DELINQ. 178, 182 (2006).

60. *See id.* at 180.

61. *See id.* at 181.

62. *See* Chelsea Barabas et al., *Interventions over Predictions: Reframing the Ethical Debate for Actuarial Risk Assessment*, PROC. MACHINE LEARNING RES. (forthcoming), <https://ssrn.com/abstract=3091849> [<https://perma.cc/YBK3-XTZR>].

63. *See* JOHN MONAHAN ET AL., RETHINKING RISK ASSESSMENT: THE MACARTHUR STUDY OF MENTAL DISORDER AND VIOLENCE 142 (2001).

64. *See* Hazel Kemshall, *Crime and Risk*, in RISK IN SOCIAL SCIENCE 76, 81–82 (Peter Taylor-Gooby & Jens O. Zinn eds., 2006).

65. *See* Mariana Valverde et al., *Legal Knowledge of Risk*, in LAW AND RISK 86, 116 (Law Comm’n of Canada ed., 2005).

66. *See* Min Yang et al., *The Efficacy of Violence Prediction: A Meta-Analytic Comparison of Nine Risk Assessment Tools*, 136 PSYCHOL. BULL. 740, 740 (2010).

67. Tracy L. Fass et al., *The LSI-R and the COMPAS: Validation Data on Two Risk-Needs Tools*, 35 CRIM. JUST. & BEHAV. 1095, 1096 (2008).

68. Paul Gendreau et al., *A Meta-Analysis of the Predictors of Adult Offender Recidivism: What Works!*, 34 CRIMINOLOGY 575, 575 (1996).

The most popular actuarial risk tool for violence is the Violence Risk Appraisal Guide (VRAG).⁶⁹ The VRAG provides a weighted point scoring system on each of twelve static factors, including criminal history, age, marital status, history of alcohol problems, and presence of a personality disorder.⁷⁰ The assessor scores each factor and then derives a final sum. The higher the resulting sum, the greater the predicted likelihood of violent recidivism. For example, the assessor may conclude that based on the individual's total score of six, the VRAG would judge the individual's likelihood of violent reoffending at forty-four percent.⁷¹

An alternative to a pure actuarial model is the structured professional judgement (SPJ) model consisting of "an analytical method used to understand and mitigate the risk for interpersonal violence posed by individual people that is discretionary in essence but relies on evidence-based guidelines to systematize the exercise of discretion."⁷² An SPJ-based instrument incorporates an actuarial-led factorology, yet also provides latitude for the evaluator to consider any idiosyncratic factors that, in her clinical judgement, are risk-relevant to the individual assessed.⁷³

An example of an SPJ tool may be of interest. A well-known SPJ tool for violence risk assessment and management is the HCR-20, so named for the twenty risk factors in the domains of Historical, Clinical, and Risk Scales.⁷⁴ The Historical Scale items generally include past antisocial or violent behavior, the presence of mental or personality disorder, and certain sociodemographic characteristics.⁷⁵ The Clinical Scale is meant to score dynamic factors and includes such items as insight, violent ideation, signs of instability, and treatment response.⁷⁶ The Risk Management scale is also dynamic, though more future-oriented in

69. Jennifer L. Skeem & John Monahan, *Current Directions in Violence Risk Assessment*, 20 CURRENT DIRECTIONS PSYCHOL. SCI. 38, 39 (2011).

70. See VERNON L. QUINSEY ET AL., *VIOLENT OFFENDERS: APPRAISING AND MANAGING RISK* 147 (1998).

71. This type of judgement is not empirically accurate as these tools provide group-based statistics, not individualized predictions. However, it is common practice among forensic evaluators to conflate the two. See Melissa Hamilton, *Adventures in Risk: Predicting Violent and Sexual Recidivism in Sentencing Law*, 47 ARIZ. ST. L.J. 1, 44 (2015).

72. Stephen D. Hart et al., *The Structured Professional Judgment Approach to Violence Risk Assessment: Origins, Nature, and Advances*, in II THE WILEY HANDBOOK ON THE THEORIES, ASSESSMENT, TREATMENT OF SEXUAL OFFENDING 643, 643 (Leam A. Craig & Martin Rettenberger eds., 2016).

73. Anthony Costa Constantinou et al., *Risk Assessment and Risk Management of Violent Reoffending Among Prisoners*, 42 EXPERT SYS. APPLICATIONS 7511, 7512 (2015).

74. Kevin S. Douglas et al., *Historical-Clinical-Risk Management-20, Version 3 (HCR-20V3): Development and Overview*, 13 INT'L J. FORENSIC MENTAL HEALTH 93, 98 tbl.1 (2014).

75. *Id.*

76. *Id.*

assessing such things as potential problems with professional services, living situation, treatment responsiveness, and coping skills.⁷⁷ HCR-20 requires an ordinal ranking as to each factor in terms of being not present, possibly or partially present, or present.⁷⁸ The clinical evaluator is then given the freedom to consider any additional matter that, in her clinical analysis, appears relevant to the individual's risk for violent recidivism.⁷⁹ In the end, the assessor considers the various ratings across factors and renders a discretionary judgement as to whether the individual presents a low, moderate, or high risk of violence.⁸⁰

Dozens of actuarial tools and SPJ tools for violence risk assessment are available and in use by various agencies throughout the world,⁸¹ with VRAG and HCR-20 mentioned for illustration purposes. However, for various real-world and empirical reasons, none of these pre-existing instruments for assessing violent reoffending are appropriate to assess a population consisting of terrorists or would-be terrorists.

B. *Terrorists as Anomalies*

At the outset, it is important to recognize significant distinctions between ordinary criminal violence—for which various actuarial-based risk tools (such as VRAG and HCR-20) have shown a generally acceptable level of predictive validity on certain populations—and terroristic violence, for which no tool has established sufficient predictive ability.⁸² The contention herein is that terrorist attacks do not constitute ordinary criminal violence. Terrorists are anomalies. The contrasts that will be cited are, notably, relevant to risk.

77. *Id.*

78. Diane S. Strub et al., *The Validity of Version 3 of the HCR-20 Violence Risk Assessment Scheme Amongst Offenders and Civil Psychiatric Patients*, 13 INT'L J. FORENSIC MENTAL HEALTH 148, 150 (2014). HCR-20 is currently at version 3. Versions 1 and 2 of HCR-20 had assigned 0, 1, or 2 points to each of the twenty items, with higher totals indicating greater risk. *Id.* Guidance is provided for rating the presence of each factor in order to provide some structure. *Id.* The instrument instructs assessors to additionally consider the relevance of each of the twenty factors in terms of being of low relevance to violence, moderately relevant, or highly relevant to the individual assessed. *Id.*

79. *Id.*

80. *Id.*

81. Thomas Douglas et al., *Risk Assessment Tools in Criminal Justice and Forensic Psychiatry: The Need for Better Data*, 42 EUR. PSYCHIATRY 134, 134 (2017).

82. Jay P. Singh et al., *A Comparative Study of Violence Risk Assessment Tools: A Systematic Review and Meta-regression Analysis of 68 Studies Involving 25,980 Participants*, 31 CLINICAL PSYCHOL. REV. 499, 509–10 (2011).

1. Drivers to Violence

Ordinary criminal violence is typically *affective* violence in that it is reactive, defensive, emotional, and/or impulsive; terroristic attacks are *predatory* in nature, begetting proactive, instrumental, and targeted acts of violence.⁸³ Ordinary criminal violence tends to be more temporally discrete in its reactionary style and situationally limited; terroristic violence typically requires forethought and planning, and is aimed at long-term impact projected at a wider audience.⁸⁴

Unlike ordinary criminals, terrorists often believe their violence is altruistic in the sense of achieving ideologically-driven ends for a higher moral cause.⁸⁵ Conventional criminal sanctions are therefore less likely to deter terrorists.⁸⁶ Thus, while individuals who commit ordinary violence generally attempt to avoid detection, terrorists are attention-grabbers seeking high-impact consequences from their attacks, which requires that their actions be shocking and gain public recognition, and also that the underlying causes be comprehended.⁸⁷ For these various reasons, the drivers and motivations behind ordinary violence and terrorism differ in risk relevant ways that are simply not captured in the preexisting risk tools for ordinary criminal violence.⁸⁸

2. Pathways to Terrorism

Certain correlates of terrorism are largely inapplicable to ordinary criminal violence. Terrorists' high-impact goals require intangible and tangible resources that go far beyond motive and intent. Terrorists typically must navigate two long-term processes, albeit presenting some overlap, to advance to the stage of executing a terrorist attack. The first

83. J. Reid Meloy, *Threat Assessment: Scholars, Operators, Our Past, Our Future*, 2 J. THREAT ASSESSMENT & MGMT. 231, 232 (2015).

84. Meloy & Genzman, *supra* note 12, at 649.

85. See generally Rick O'Gorman & Andrew Silke, *Terrorism as Altruism: An Evolutionary Model for Understanding Terrorist Psychology*, in EVOLUTIONARY PSYCHOLOGY AND TERRORISM 149 (Max Taylor et al. eds., 2015) (discussing the psychology of terrorism and especially focusing on altruism).

86. Jennifer Varriale Carson & Brad Bartholomew, *Terrorism Outside the Proverbial Vacuum: Implications for the Moral Context*, 37 DEVIANT BEHAV. 557, 557 (2016); see also Robert A. Fein et al., *Threat Assessment: An Approach to Prevent Targeted Violence*, NAT'L INST. JUST.: RES. ACTION, July 1995, at 1, 2, <http://www.ncjrs.gov/pdffiles/threat.pdf> ("The threat of sanctions, such as a long prison sentence, may not deter a person who desperately desires revenge or is prepared to die to achieve his objective.").

87. John Monahan, *The Individual Risk Assessment of Terrorism*, 18 PSYCHOL. PUBLIC POL'Y & L. 167, 175 (2011).

88. Pressman & Flockton, *supra* note 11, at 241.

is a radicalization process for extremist thought.⁸⁹ The radicalization process is nonlinear, often involving some combination of push and pull factors which either draw the individual toward an extremist mindset or are disinhibiting.⁹⁰ Research shows that circumstances such as social isolation, a perception of discrimination, a search for identity, or feelings of injustice in the world may push an individual toward radicalization.⁹¹ Examples of common factors that pull a person into radicalization include the consumption of extremist material, family or friends who are members of an extremist group, and desire for status and adventure.⁹²

Push and pull factors go the other direction, too, by disinhibiting the actual adoption of an extremist mindset or deradicalization after embracing radical ideologies.⁹³ These are considered protective factors that reduce the potential of extremist thought.⁹⁴ Some push factors which may precipitate disengagement include disillusionment, lost faith in the ideology, or burnout.⁹⁵ Protective pull factors, such as desire for an intimate relationship, a traditional family, or conventional employment, draw people toward a more mainstream and prosocial life.⁹⁶ Hence, consideration of both risk factors and protective factors that disincentivize radicalization to an extremist ideology is substantively essential for terrorism assessments.⁹⁷

Part of the radicalization trajectory toward endorsing extremist actions entails developing a mindset in which terroristic activities and the killing of “innocents” is acceptable and even exalted.⁹⁸ This often involves

89. See generally Clark McCauley & Sophia Moskalenko, *Understanding Political Radicalization: The Two-Pyramids Model*, 72 AM. PSYCHOL. 205, 206 (2017) (discussing radicalization to extremist opinion and describing an initial step as a “cognitive opening” that could make one susceptible to new, extremist thoughts and ideals).

90. Randy Borum, *Assessing Risk for Terrorism Involvement*, 2 J. THREAT ASSESSMENT & MGMT. 63, 68 (2015).

91. Stijn Sieckelink et al., *Transitional Journeys Into and Out of Extremism: A Biographical Approach*, STUD. CONFLICT & TERRORISM 2 (Dec. 14, 2017), <https://www.tandfonline.com/doi/full/10.1080/1057610X.2017.1407075>.

92. See *id.*

93. John Horgan et al., *Walking Away: The Disengagement and De-Radicalization of a Violent Right-Wing Extremist*, 9 BEHAV. SCI. TERRORISM & POL. AGGRESSION 63, 63–64 (2017).

94. Paul Gill, *Toward a Scientific Approach to Identifying and Understanding Indicators of Radicalization and Terrorist Intent: Eight Key Problems*, 2 J. THREAT ASSESSMENT & MGMT. 187, 188 (2015).

95. Horgan et al., *supra* note 93.

96. *Id.* at 94.

97. Borum, *supra* note 90, at 66.

98. Arie W. Kruglanski et al., *To the Fringe and Back: Violent Extremism and the Psychology of Deviance*, 72 AM. PSYCHOL. 217, 222–23 (2017).

individuals dehumanizing the “others” they blame for their grievances.⁹⁹ Dehumanization is a cognitive ploy to psychologically and morally justify using violent methods against beings conceptualized in more animalistic terms.¹⁰⁰

In addition to the radicalization process, the long path toward a terrorist attack generally requires planning, preparing, and eventually executing it.¹⁰¹ A study of lone-actor terrorist attacks found that lone actors committed on average two to three precursor acts, the majority of which were at least three months preceding the attack; one-third of the precursor acts occurred more than a year beforehand.¹⁰² Researchers explain that successful terrorist attacks demand capability in that motivated extremists must attain the opportunity, capacity, and the tangible means to carry them out.¹⁰³ Because of the prerequisite of capability, there is often a learning process whereby would-be terrorists seek to attain the requisite knowledge and skills in terms of honing their approaches, strategies, and identification of vulnerable targets in order to improve their chances of success.¹⁰⁴

These dual pathways of radicalization and preparation are rather unique to terrorism and thus also distinguish terroristic violence from ordinary criminal violence.¹⁰⁵ The radicalization process preceding violent extremism has no real corollary in other types of violence, which more often erupt without any antecedent, grievance, or strategy.¹⁰⁶ Currently available actuarial tools for violence prediction ignore these distinctions by failing to address the aforementioned situational and capacity-oriented characteristics specific to committing terroristic

99. Manuela Caiani, *Radical Right-Wing Movements: Who, When, How and Why?*, SOCIOPIEDIA.ISA 8 (Jan. 1, 2017), www.sagepub.net/isa/resources/pdf/RadicalRightMovements.pdf.

100. *Id.*

101. See generally Lasse Lindekilde et al., *Radicalization Patterns and Modes of Attack Planning and Preparation Among Lone-Actor Terrorists: An Exploratory Analysis*, BEHAV. SCI. TERRORISM & POL. AGGRESSION 8 (Nov. 22, 2017), <https://www.tandfonline.com/doi/full/10.1080/19434472.2017.1407814> (explaining that some of the deadliest lone-acting terrorists invested considerable time and effort into preparing for their attacks).

102. Smith et al., *supra* note 41, at 104 tbls.3 & 4.

103. Lindekilde et al., *supra* note 101.

104. See generally Louise Kettle & Andrew Mumford, *Terrorist Learning: A New Analytical Framework*, 40 STUD. CONFLICT & TERRORISM 523, 534 (2017) (concluding that terrorists are attempting to improve their chance of success through learning processes).

105. See Eric Shuman et al., *Explaining Normative Versus Nonnormative Action: The Role of Implicit Theories*, 37 POL. PSYCHOL. 835, 835–36 (2016) (finding dual pathways to be a unique antecedent of collective action, including radical terrorism).

106. See Alex S. Wilner & Claire-Jehanne Dubouloz, *Transformative Radicalization: Applying Learning Theory to Islamist Radicalization*, 34 STUD. CONFLICT & TERRORISM 418, 433 (2011) (explaining that the radicalization process occurs gradually rather than impulsively).

violence.¹⁰⁷ It is not surprising, then, that one study found that many risk predictors of ordinary criminal violence (including major mental illness, substance abuse, relationship instability, impulsivity, and lack of insight) were not relevant for a sample of terrorists.¹⁰⁸

3. Terrorism as Low-Likelihood, High-Impact Events

The next critical issue relates to the duality of frequencies and consequences. Fundamentally, in reference to the frequency of outcomes observed in a discrete time frame for a specific population, ordinary criminal violence and lone-actor terrorism have substantially disparate base rates.¹⁰⁹ Ordinary criminal violence is commonplace, whereas lone-actor terroristic violence is a relative rarity.¹¹⁰ Notwithstanding, the scale of the severity of the attack for terroristic violence is inordinately higher in terms of emotional, economic, and structural consequences to persons, communities, and nations.¹¹¹

On the whole, acts of ordinary criminal violence are, comparatively, high-likelihood, low-impact incidents.¹¹² In stark contrast, terrorist acts present as low-likelihood, high-impact events.¹¹³

The low base rate problem leads to an empirical juggernaut with respect to crafting a risk assessment tool for individual terrorists. The sheer infrequency of terroristic attacks explains the near impossibility of crafting a heavily actuarial tool for individual terrorists that can achieve the results on predictive validity measures delivered by modern risk assessment tools for ordinary violence.¹¹⁴ Validity generally refers to how well a tool measures what it is designed to measure. Accordingly, predictive validity refers to how well the tool predicts the outcome of interest in the real world.¹¹⁵

107. Meloy, *supra* note 83.

108. D. ELAINE PRESSMAN, RISK ASSESSMENT DECISIONS FOR VIOLENT POLITICAL EXTREMISM 18 tbl.4 (2009).

109. MOLLY AMMAN ET AL, FED. BUREAU OF INVESTIGATION, MAKING PREVENTION A REALITY: IDENTIFYING, ASSESSING, AND MANAGING THE THREAT OF TARGETED ATTACKS 11 (2017), http://nccpsafety.org/assets/files/library/Making_Prevention_A_Reality.pdf [<https://perma.cc/GD8A-NRVD>].

110. Paul Gill et al., *Indicators of Lone Actor Violent Events: The Problems of Low Base Rates and Long Observational Periods*, 3 J. THREAT ASSESSMENT & MGMT. 165, 165 (2016).

111. Peter Clarke, *Investigating Terrorism in the First Decade of the Twenty-First Century: A Different Sort of Crime*, in INVESTIGATING TERRORISM: CURRENT POLITICAL, LEGAL AND PSYCHOLOGICAL ISSUES 31, 39 (John Pearse ed., 2015).

112. Gill et al., *supra* note 110.

113. *Id.*

114. *Id.* at 187–88.

115. Jay P. Singh, *Predictive Validity Performance Indicators in Violence Risk Assessment: A Methodological Primer*, 31 BEHAV. SCI. & L. 8, 8 (2013).

Risk assessment focuses on predictive ability as the most important measure of validity.¹¹⁶ Yet meeting the gold standard for empirically testing predictive validity, a prospective study, is an almost insurmountable barrier for terrorism risk assessment.¹¹⁷ While this presents as an empirical matter, the reasons for it are simple and practical. At least with respect to performing a study to test predictive validity of a terrorism recidivism risk instrument, the study would entail (1) scoring the particularly terrorist risk tool on a sample of the population of interest which includes terrorists and nonterrorists, (2) releasing a large number of known terrorists into the community for a long follow-up period, (3) observing which of them committed new acts of terrorism, and (4) testing how well the tool predicted terroristic recidivism.¹¹⁸ This presents a methodological feat for which there is likely little political or public support.¹¹⁹ Besides, because of the low base rate, there is unlikely to be a sufficiently large, heterogeneous sample of would-be or known terrorists to study in the first place.

Nevertheless, there is a split in risk aversion strategies between the scientific and the political. The low base rate for terrorism means that the safest actuarially-based estimate, in terms of statistically reducing the likelihood of false positives, would be to predict that each individual will *not* commit a terrorist act.¹²⁰ Yet, such a conservative approach may not be considered politically appealing considering the high consequence of catastrophic results if the individual is successful in carrying out a terroristic attack.¹²¹

In light of the foregoing empirical and practical barriers, John Monahan has suggested that empirical methods may yield a bit—a postdictive validation on a group of known terrorists might be considered minimally sufficient.¹²² This approach would entail studying the presence of the factors tested on known terrorists and a matched group of non-terrorists and then comparing the results.¹²³ However, such a

116. James Bonta, *Offender Risk Assessment: Guidelines for Selection and Use*, 29 CRIM. JUST. & BEHAV. 355, 358 (2002).

117. Mark R. Kebbell & Louise Porter, *An Intelligence Assessment Framework for Identifying Individuals at Risk of Committing Acts of Violent Extremism Against the West*, 25 SECURITY J. 212, 224–25 (2012) (entailing “norming a test, item analysis and selection, and testing validity in an *a-priori* fashion”). The relevant statistical measures for a prospective analysis are positive predictive value and negative predictive value. Singh, *supra* note 115, at 12.

118. Monahan, *supra* note 87, at 193.

119. *Id.*

120. Rick Malone, *Protective Intelligence: Applying the Intelligence Cycle Model to Threat Assessment*, 2 J. THREAT ASSESSMENT & MGMT. 53, 58 (2015).

121. *Id.* at 58–59.

122. Monahan, *supra* note 6, at 528.

123. Monahan, *supra* note 87, at 194.

retrospective inspection on an historical sample is a far less accurate measure of performance.¹²⁴ Still, a select few terrorism researchers have crafted potential assessment tools for terrorists along these lines of postdictive research methods.

4. First Attempts at Terrorism Risk Assessment

Researchers in the last few years have introduced the Violent Extremism Risk Assessment-2 (VERA-2),¹²⁵ the Extremist Risk Guidance (ERG 22+),¹²⁶ and the Terrorist Radicalization Assessment Protocol (TRAP-18)¹²⁷ as SPJ terrorism risk assessment tools for individuals. It is beyond the scope of this Article to analyze them in great detail. But for now, it should suffice to respect these as first attempts at systematic assessment approaches, albeit also acknowledging their significant limitations. For starters, none of the three tools were developed as actuarial models based on statistical analyses. Instead, the instruments were theoretically informed by literature reviews, input from experts, and selected case histories of convicted terrorists.¹²⁸ Items included therein actually do not constitute risk factors in any event. Fundamentally, risk factors require statistical evidence that they are correlated to the outcome and precede it in time.¹²⁹ These developers have shown evidence of neither. The factors utilized in their instruments are descriptive, not prescriptive.

Not too surprisingly—considering the base rate problem mentioned before—there has been no prospective validation of these instruments and hence no predictive validity test confirmation.¹³⁰ This void significantly undermines claims regarding empirical quality. Indeed, all three have been criticized for lacking transparency in their datasets and

124. Mark. A Ruiz et al., *Co-Occurring Mental Health and Substance Use Problems in Offenders*, 24 *PSYCHOL. ASSESSMENT* 77, 84 (2011). This method is also known as ex-post forecasting. Jacek A. Kopec et al., *Validation of Population-Based Disease Simulation Models*, 10 *BMC PUB. HEALTH* 5 (Nov. 18, 2010), <https://bmcpubhealth.biomedcentral.com/track/pdf/10.1186/1471-2458-10-710> [<https://perma.cc/U2XH-KC6X>].

125. Pressman & Flockton, *supra* note 11, at 237.

126. Lloyd & Dean, *supra* note 8, at 40.

127. *Id.* at 48, 50; Meloy & Genzman, *supra* note 12; D. Elaine Pressman, *The Complex Dynamic Causality of Violent Extremism: Applications of the VERA-2 Risk Assessment Method to CVE Initiatives*, in *DISASTER FORENSICS: UNDERSTANDING ROOT CAUSE AND COMPLEX CAUSALITY* 249, 251 (Anthony J. Masys ed., 2016).

128. Pressman, *supra* note 127; Lloyd & Dean, *supra* note 8, at 48, 50; Meloy & Genzman, *supra* note 12.

129. Monahan, *supra* note 87, at 172.

130. Allard R. Feddes, *Risk Assessment in Integral Security Policy*, in *DE-RADICALISATION: SCIENTIFIC INSIGHTS FOR POLICY* 47, 55 (Lore Colaert ed., 2017). A predictive validation should include an external validation of the instrument on a different dataset. Kopec et al., *supra* note 124, at 8.

methods and for failing to discuss many commonly reported methodological quality markers, such as predictive validity, representativeness of sample, and internal consistency.¹³¹

Further limitations prevent current tests from reliably predicting terrorism risks. Each of the tools is plagued by redundancy across factors.¹³² More unfortunately, all three contain various predictor factors that overlap with the dependent variable of terrorism.¹³³ For example, each includes items regarding ideological motivation.¹³⁴ Yet ideology is a critical component that differentiates terrorism from ordinary violence in the first place.¹³⁵ For assessment purposes, the problem is that some type of ideological driver is by definition present in terroristic acts, thus rendering it tautological. Further, testing for ideological motivation among terrorists cannot separate the test subjects into high and low-risk groups, which is a fundamental requirement of risk assessment.¹³⁶

131. Akimi Scarcella et al., *Terrorism, Radicalisation, Extremism, Authoritarianism and Fundamentalism: A Systematic Review of the Quality and Psychometric Properties of Assessments*, 11 PLOS ONE 15 (Dec. 21, 2016), <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0166947&type=printable> [<https://perma.cc/E8X8-XT9Q>].

132. See Lloyd & Dean, *supra* note 8, at 46 fig.2 (listing factors of ERG 22+ test that, upon review, appear redundant, such as: “[n]eed for status” and “[n]eed for dominance,” “[d]ehumanization of the enemy” and “[a]ttitudes that justify offending,” “[g]roup influence and control,” and “[a]ccess to networks”); Meloy & Genzman, *supra* note 127, at 143–44 (listing factors such as pathological fixation on a cause, framed by an ideology, and identification with a particular cause); Pressman & Flockton, *supra* note 11, at 245 tbl.1 (containing several duplicative factors such as: “[r]ejection of democratic society and values” and “[h]ostility to national collective identity,” “[d]ehumanization . . . of identified targets of injustice” and “[l]ack of empathy . . . outside own group,” “expressed intent to act violently” and “[e]xpressed intent to . . . prepare violent action”).

133. See Lloyd & Dean, *supra* note 8, at 46 fig.2 (containing several factors necessarily present in terrorism: “[p]olitical/moral motivation,” “[n]eed to redress injustice and express grievance,” “[o]ver-identification with a . . . cause,” “[h]armful end objectives,” “[a]ttitudes that justify offending”); Meloy & Genzman, *supra* note 127, at 143–44 (2015) (e.g., “[p]redatory violence,” “[f]ramed by an ideology”); Pressman & Flockton, *supra* note 11, at 245 tbl.1 (e.g., “[c]ommitment to ideology justifying violence,” “[d]riven by moral imperative,” “[i]dentification of target . . . in response to perceived injustice”).

134. See Lloyd & Dean, *supra* note 8, at 46 fig.2 (e.g., “[p]olitical/moral motivation”); Meloy & Genzman, *supra* note 127, at 143–44 (2015) (e.g., “[f]ramed by an ideology”); Pressman & Flockton, *supra* note 11, at 245 tbl.1 (e.g., “[c]ommitment to ideology justifying violence”).

135. See Pressman & Flockton, *supra* note 11, at 241 (describing terrorism as “[i]deological violence . . . motivated by commitment to a cause or belief system,” as opposed to “common violence such as rape, murder, robbery and assault”).

136. Borum, *supra* note 90, at 65. To be an acceptable predictor, the factor must show some amount of variation in order to “correctly identify an acceptable proportion of those who go on to offend (sensitivity) and those who do not go on to offend[] (specificity).” Kiran M. Sarma, *Risk Assessment and the Prevention of Radicalization from Nonviolence into Terrorism*, 72 AM. PSYCHOL. 278, 281 (2017).

VERA-2 and ERG 22+ were designed to assist correctional officials in making decisions about “sentencing, rehabilitation, and reintegration of [terrorist] offenders.”¹³⁷ Both tests strongly emphasize group-based Islamist terrorists.¹³⁸ The generalizability to other types of terrorist ideologies and to any lone actors is thus dubious at best.¹³⁹ It is curious that VERA-2 and ERG 22+ are expressly designed for correctional use on known terrorists¹⁴⁰ as the instruments rely upon factors that theoretically relate to first-time offending. The developers fortunately do not purport that their guidelines are relevant to *recidivist* terrorism.¹⁴¹ This situation further limits the use of these tools as acceptable risk measures. Previously identified terrorists notably appear to have relatively small recidivism rates, precluding any presumption that past terrorist acts are strongly predictive of future terrorist attacks.¹⁴² Based on the evidence of convicted or suspected terrorists released from custody, Andrew Silke estimates that less than five percent will commit another violent or nonviolent terroristic act.¹⁴³

As for the third tool, the TRAP-18 is designed for lone actors, though it included small cells in the developmental samples and merely measures the presence of listed behaviors in known terrorists. Therefore, this tool

137. Sarma, *supra* note 136, at 280.

138. Stephen D. Hart et al., *A Concurrent Evaluation of Threat Assessment Tools for the Individual Assessment of Terrorism* 9, 15 (TSAS Working Paper No. 17-1, 2017), <http://www.tsas.ca/wp-content/uploads/2018/03/2017-01-Hart-WP-1.pdf> [<https://perma.cc/YL6P-XDZE>].

139. Monahan, *supra* note 87, at 181–82.

140. See Hart et al., *supra* note 138, at 10, 15.

141. E.g., Pressman, *supra* note 128, at 259 (“The outcome of assessments for radicalization to violence is not prediction of recidivism . . .”).

142. Andrew Silke, *Risk Assessment of Terrorist and Extremist Prisoners*, in PRISONS, TERRORISM, AND EXTREMISM: CRITICAL ISSUES IN MANAGEMENT, RADICALISATION AND REFORM 108, 111 (Andrew Silke ed., 2014).

143. See *id.* Of 453 terrorist prisoners released in Northern Ireland in 1998, over two percent were recalled after being accused of further involvement in terrorism. *Id.* at 112. Terrorist reentry programs in Saudi Arabia, Germany, and Sweden reported terrorism recidivism rates of less than two, five, and six percent, respectively. Kristen Bell, *Looking Outward: Enhancing Australia’s Deradicalisation and Disengagement Programs*, 11 SECURITY CHALLENGES 1, 10 n.64, 11–12 (2015). A German document reports a recidivism rate of approximately three percent for over 500 persons who successfully completed a deradicalization program. *EXIT-Germany: We Provide Ways Out of Extremism*, EXIT-DEUTSCHLAND, <http://www.exit-deutschland.de/english/> (last visited Sept. 21, 2018) [<https://perma.cc/9LNB-EX5A>]. At least one report found a higher recidivism rate, though it is not based on convicted terrorists. U.S. officials report that as of July 2015, over seventeen percent of detainees released from Guantanamo Bay, Cuba were confirmed to have reengaged in terrorist activity. DIR. OF NAT’L INTELLIGENCE, SUMMARY OF THE REENGAGEMENT OF DETAINEES FORMERLY HELD AT GUANTANAMO BAY, CUBA 1 (2017), http://www.dni.gov/files/documents/GTMO%20Sept_2015.pdf [<https://perma.cc/NRY6-XY85>].

is retroactively descriptive rather than predictive.¹⁴⁴ The developer admits that it could best be described as a work in progress.¹⁴⁵

In sum, these three instruments are best conceived as developmental exercises which make some contributions to scientific knowledge about already identified terrorists. The next Part, though, sketches a conceptual framework for a threat assessment approach as a more proper alternative to risk assessment with respect to individual terrorists.

III. EVIDENCE-BASED THREAT ASSESSMENT FOR LONE-ACTOR TERRORISTS

The previously enumerated issues explaining why common actuarial-based methods for developing risk assessment tools are unsupportable do not dictate that assessing individuals for the potential of committing terrorism can never constitute an evidence-based practice. Rather, the framework itself, along with certain methodologies, must be re-specified, considering the unique challenges presented by terrorists and terrorism. The initial recasting in this new framework is replacing the concept of risk assessment with threat assessment. Overall, the threat assessment framework for terrorism (a) requires a far more holistic attempt at gathering a wider variety of data than any single instrument could list, (b) must draw on, as well as feed, national security intelligence, (c) requires more intense analytical skill, nuance, and imagination, (d) should comprise a multidisciplinary team effort charged with detecting and preventing terrorism, and (e) should draw upon theoretical and empirical insights from relevant academic fields. A visual rendering of the framework that will be fleshed out next is provided in Figure 1.

A. *Threat versus Risk*

Threat assessment concerning terroristic violence diverges substantively from traditional *risk* assessment practices for ordinary criminal violence for important reasons.¹⁴⁶ To begin, risk assessment is inherently quantitative in its expected conclusion concerning an individual's probability of reoffending.¹⁴⁷ In the U.S. Department of Homeland Security's lexicon, for example, risk is defined as the likelihood of an unwanted outcome, such that risk assessment "assigns values to risks."¹⁴⁸ The agency views a threat as anything that "indicates

144. See Meloy & Genzman, *supra* note 127, at 140–41.

145. *Id.* at 149.

146. See Randy Borum, *Operationally Relevant Research and Practice in Terrorism Threat Assessments*, 2 J. THREAT ASSESSMENT & MGMT. 192, 192 (2015).

147. *Id.* at 192–93.

148. U.S. DEP'T OF HOMELAND SEC., DHS RISK LEXICON: 2010 EDITION 27–28 (2010).

the potential to harm.”¹⁴⁹ Threat assessment is thereby distinct in not relying upon quantitative values or metrics of prediction. Indeed, with the low base rate of terroristic attacks, it fundamentally cannot do so.¹⁵⁰

There is likewise a differentiation between probabilistic versus *possibilistic* thinking. As a general rule, actuarial-based risk assessment fixates on estimating the statistical probability of an individual engaging in the outcome of interest.¹⁵¹ Risk assessment, even from a clinical judgment perspective, is fundamentally about the likelihood of violence.¹⁵² Again, because of the low base rate for terrorism, probabilistic

149. *Id.* at 36.

150. Benjamin A. Perman et al., *Basic Principles of Threat Assessment*, in *BIOSECURITY: UNDERSTANDING, ASSESSING, AND PREVENTING THE THREAT* 89, 91 (Ryan Burnette ed., 2013).

151. See Borum, *supra* note 146, at 192–93; Seth J. Prins & Adam Reich, *Can We Avoid Reductionism in Risk Reduction?*, 22 *THEORETICAL CRIMINOLOGY* 258, 261–62 (2017), <http://journals.sagepub.com/doi/pdf/10.1177/1362480617707948> [<https://perma.cc/67SM-QFDY>].

152. Kevin S. Douglas et al., *Violence Risk Assessment: Science and Practice*, 4 *LEGAL & CRIMINOLOGICAL PSYCHOL.* 149, 153–54 (1999).

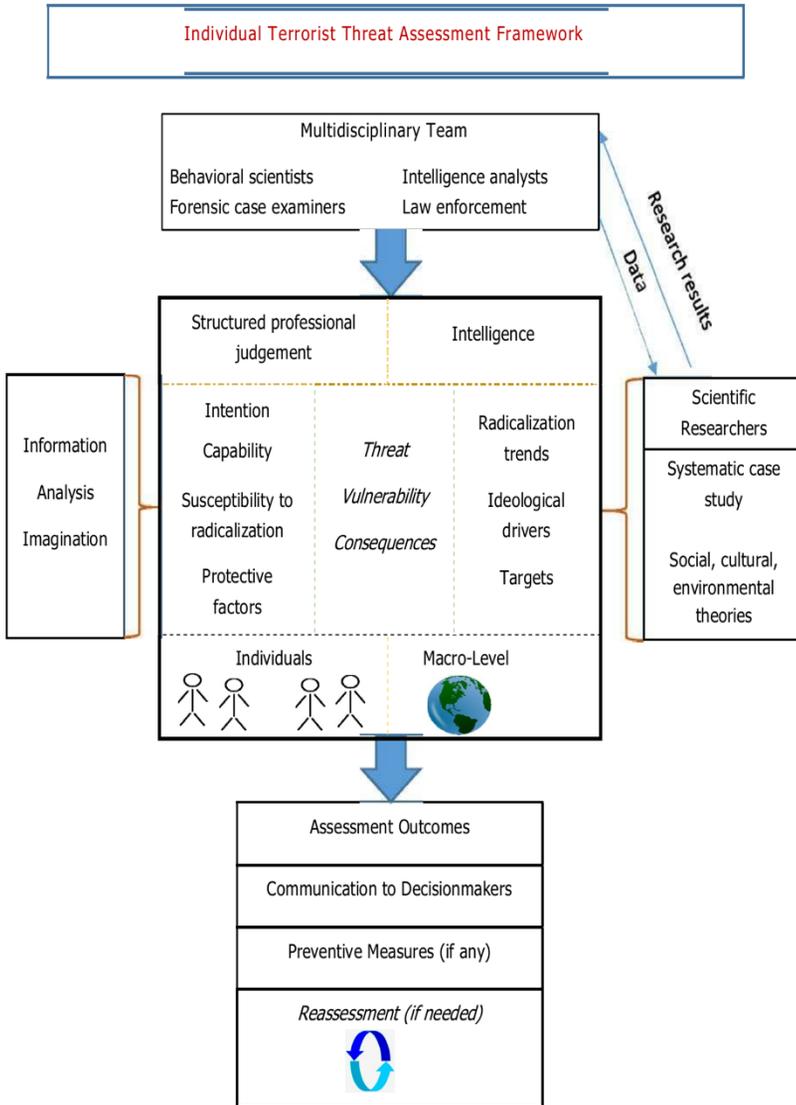


Figure 1

reasoning concerning individual offenders has little to offer terrorism analysis.¹⁵³ The reality of this can be illustrated in other ways.

People often make two types of errors when thinking about probabilities.¹⁵⁴ One error is failing to understand that the probability of an outcome is base rate dependent.¹⁵⁵ The accuracy of predicting the probability of an event that is a common occurrence in the population of interest will likely be significant. On the other hand, tests that are otherwise highly accurate cannot predict low base rate outcomes at even minimally sufficient levels.¹⁵⁶ Indeed, the inaccuracy of predictive tools only increases as the base rate of an event falls below fifty percent.¹⁵⁷ The extreme low base rate of terroristic violence thus renders mathematical, probabilistic assertions required in risk assessment practices untenable.

The second common error is confounding a conditional probability with its inverse. This error would equate the probability (p) of A given B with the probability of B given A as represented in the equation: $p(A/B) = p(B/A)$.¹⁵⁸ As a quick illustration, a finding that most of those who carried out terrorist attacks in a particular region were Muslim does not mean that most Muslims in that area will, in the future, commit terrorist acts. These are not reciprocal probabilities. This raises another caution about the first structured tools for predicting terroristic actions, including VERA-2, ERG 22+, and TRAP-18. The existence of descriptive, not prognostic, factors may confuse assessors into erroneously assuming those factors are predictive.

In any event, threat assessment is more about possibilistic thinking.¹⁵⁹ An evaluator thereby considers the potentiality of a terroristic attack.¹⁶⁰ This is consistent with the U.S. Department of Homeland Security's formal lexicon defining threat assessment as a "product or process of identifying or evaluating entities, actions, or occurrences, whether natural or man-made, that have or indicate the potential to harm life, information,

153. See Jytte Klausen et al., *The Terrorist Age-Crime Curve: An Analysis of American Islamist Terrorist Offenders and Age-Specific Propensity for Participation in Violent and Nonviolent Incidents*, 97 SOC. SCI. Q. 19, 20 (2016).

154. These are corollaries of Bayes Theorem. Richard W. Elwood, *Calculating Probability in Sex Offender Risk Assessment*, INT'L J. OFFENDER THERAPY & COMP. CRIMINOLOGY 1262, 1266 (2016).

155. *Id.*

156. *Id.*

157. Gottfredson & Moriarty, *supra* note 59, at 184.

158. Elwood, *supra* note 154.

159. Frank Furedi, *Precautionary Culture and the Rise of Possibilistic Risk Assessment*, 2 ERASMUS L. REV. 197, 206 (2009); Gabe Mythen & Sandra Walklate, *Counterterrorism and the Reconstruction of (In)Security: Divisions, Dualisms, Duplicities*, 56 BRIT. J. CRIMINOLOGY 1107, 1112 (2016).

160. Marieke de Goede & Beatrice de Graaf, *Sentencing Risk: Temporality and Precaution in Terrorism Trials*, 7 INT'L POL. SOC. 313, 317 (2013).

operations, and/or property.”¹⁶¹ Notice that this definition contains no probabilistic language like that included in the department’s formulation of risk assessment.

B. *Prediction versus Prevention*

The inability to assess statistical probabilities also means that threat assessment is not reliant upon numerically predictive terms.¹⁶² Security agencies have generally grown to accept this quandary.¹⁶³ As Britain’s National Security Council avers, the focus is instead on preventing and mitigating terrorist threats.¹⁶⁴ Indeed, the roots of threat assessment derive from the United States Secret Service of twenty years ago, with respect to managing persons who targeted high profile victims, such as politicians.¹⁶⁵ The agency then described threat assessment in terms of its goal of identifying, assessing, and managing potential perpetrators of targeted violence.¹⁶⁶ A recent FBI statement on prevention of targeted attacks is consistent therewith:

A threat assessment is not a final product, but the beginning of the management process. It guides a course of action to mitigate a threat of potential violence; merely identifying that someone is of moderate or higher concern, without developing a management strategy, does not complete this process and is not recommended.¹⁶⁷

Threat assessment is assuredly not as reactive as prevention might suggest if the context were typical domestic policing in terms of intervening during the commission of a crime. Threat assessment for counterterrorism constitutes a more proactive mission of front-end threat management—ideally long before an individual begins to execute a terroristic attack.¹⁶⁸ Because of the extraordinary impact of terrorist attacks, threat assessment operates in another dimension in the form of

161. U.S. DEP’T OF HOMELAND SEC., *supra* note 148, at 37.

162. *See* Borum, *supra* note 146, at 192–93.

163. *See* Council of Europe Convention on the Prevention of Terrorism, May 16, 2005, 2488 U.N.T.S. 129, 134 (showing that European countries are working together to exchange information to prevent terrorism).

164. NAT’L SEC. COUNCIL, A STRONG BRITAIN IN AN AGE OF UNCERTAINTY: THE NATIONAL STRATEGY 11 (2010).

165. Brian Vossekul et al., *Threat Assessment: Assessing the Risk of Targeted Violence*, 2 J. THREAT ASSESSMENT & MGMT. 243, 243–44 (2015).

166. Fein et al., *supra* note 86.

167. AMMAN ET AL., *supra* note 109, at 4.

168. Meloy, *supra* note 83, at 233.

“premeditation,” meaning the attempt to mediate an act before it occurs.¹⁶⁹

C. Triplet of Threat Assessment

Threat assessment is a far more robust exercise than risk assessment for ordinary criminal violence. Threat assessment is not restricted to simply evaluating whether an individual will attempt to carry out an attack in a binary manner. Threat assessment aspires to broader ambitions in determining the nature, imminence, contextual prerequisites, situational characteristics, and frequency of potential terrorist outcomes.¹⁷⁰

Thus, the Department of Homeland Security refers to threat assessment for terroristic attacks as involving the triplet of threat, vulnerability, and consequences, with overlapping interests.¹⁷¹ The relevant diagram is visually represented in Figure 2.¹⁷²

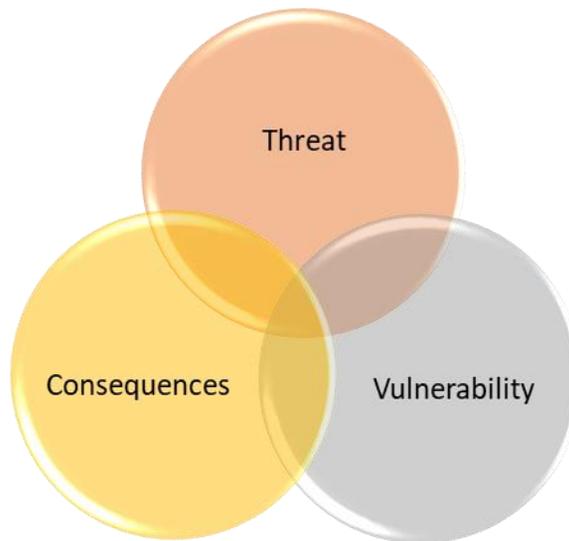


Figure 2

169. Thomas Martin, *Governing an Unknowable Future: The Politics of Britain's Prevent Policy*, 7 CRITICAL STUD. TERRORISM 62, 65 (2014).

170. Borum, *supra* note 146, at 193.

171. *See generally* U.S. DEP'T OF HOMELAND SEC., *supra* note 148, at 32 (defining a risk core as a “numerical representation that gauges the combination of threat, vulnerability, and consequence at a specific moment”).

172. Terje Aven & Seth Guikema, *On the Concept and Definition of Terrorism Risk*, 35 RISK ANALYSIS 2162, 2162 (2015).

Each of the three domains encompasses multiple dimensions. The model could well form the basis of a forensic analysis as part of the overall framework.

The threat segment concerns the intention, that is, goals and motives, and capabilities of the potential terrorist.¹⁷³ Terrorists are predatory in nature, such that their conscious actions preceding a potential attack provide important data.¹⁷⁴ An individual's intent, for instance, can yield useful information for prevention purposes regarding the likely choice of a future target.¹⁷⁵ Rather than considering static traits commonly used in risk assessment models, a threat assessment focuses on analyzing personal facts.¹⁷⁶ *Facts* here refers to the "individual's patterns of thinking and behavior" which indicate whether the person is becoming radicalized, or if already radicalized, is moving toward carrying out an attack.¹⁷⁷

Recall that one of the differentiating features of terrorism is the prerequisite of having the capability to carry out a high-consequence attack.¹⁷⁸ An evaluator thus gauges capacity by the extent to which the individual has attained the requisite knowledge, skills, means, instrumentalities, and access to an intended target to launch a terrorist offensive.¹⁷⁹ Experts observe that capability also typically requires an exceptional amount of human energy to prepare and mount a herculean task and to put oneself in such peril.¹⁸⁰ Researchers have suggested certain behaviors for an assessor to look for in judging whether the individual's energy level has risen to the task.¹⁸¹

The interaction between intent and capability is critical. An adversary is one with the terroristic intent but without the capability to carry out an attack, whereas a threat has both, which raises the stakes and urgency of counterterrorist management and prevention.¹⁸²

173. Melissa R. Haynes & Matthew J. Giblin, *Homeland Security Risk and Preparedness in Police Agencies: The Insignificance of Actual Risk Factors*, 17 *POLICE Q.* 30, 37 (2014).

174. Perman et al., *supra* note 150, at 89.

175. Aven & Guikema, *supra* note 172, at 2164.

176. Vossekui et al., *supra* note 165, at 249.

177. AMMAN ET AL., *supra* note 109, at 4.

178. Lindekilde et al., *supra* note 101, at 8.

179. U.S. DEP'T OF HOMELAND SEC., *supra* note 148, at 9.

180. Kruglanski et al., *supra* note 98, at 224.

181. See AMMAN ET AL., *supra* note 109, at 34 (noting that energy burst warning behavior is manifested through "an increased pace, duration, or range of any noted activities related to a potential target").

182. U.S. DEP'T OF HOMELAND SEC., *supra* note 148, at 7.

The vulnerability segment is often considered on a macro level for counterterrorism purposes.¹⁸³ For instance, vulnerability considers redundancy within infrastructures and the resilience of targeted institutions.¹⁸⁴ Still, vulnerability carries additional constructs that are more relevant to the threat assessment of individuals. These include factors, such as “us-versus-them” thinking style and the dehumanization of others, that may increase the person’s susceptibility to ideological influences and to adopting cognitive and emotional states that make others acceptable targets of attack.¹⁸⁵

Vulnerability also addresses the personal, social, and environmental situations which may render push and pull factors toward extremism more enticing to the individual.¹⁸⁶ Threat assessment is thereby highly engaged with the relevance of social, situational, and environmental characteristics that foster and enable extremism.¹⁸⁷ Hence, better threat assessment methods also consider those protective factors that are threat reducing.¹⁸⁸ Further, vulnerability considers the likelihood of success of the person’s potential attack.¹⁸⁹

To briefly address the third domain, consequences refers to the possible ramifications of an attack with respect to loss of human life, economic losses,¹⁹⁰ psychological damages,¹⁹¹ physical vulnerability of structures,¹⁹² and the target’s ability to perform a function or meet its objectives after sustaining an attack.¹⁹³

The attributes of capability and vulnerability mean that threat assessment must be operational in terms of gathering information in real time to mitigate an attack and must be urgently accomplished if the individual’s attack appears imminent.¹⁹⁴ At the same time, threat assessment is dynamic and contextual in having to keep up and/or

183. *Id.* at 38 (defining vulnerability in terms of “an entity, asset, system, network, or geographic area”).

184. *Id.* at 26. An example of redundancy would be the existence of “additional or alternative systems, sub-systems, assets, or processes that maintain a degree of overall functionality in case of loss or failure of another system, sub-system, asset, or processes,” while resilience may regard the “ability to adapt to changing conditions and prepare for, withstand, and rapidly recover from disruption.” *Id.*

185. Sarma, *supra* note 136, at 280.

186. Borum, *supra* note 90, at 76, 77.

187. Vossekui et al., *supra* note 165, at 249.

188. See AMMAN ET AL., *supra* note 109, at 29 (explaining that both threat-enhancing and threat-mitigating factors are identified by experts).

189. Haynes & Giblin, *supra* note 173, at 33.

190. U.S. DEP’T OF HOMELAND SEC., DHS RISK LEXICON: 2008 EDITION, 14 chart III (2008).

191. U.S. DEP’T OF HOMELAND SEC., *supra* note 148, at 25.

192. Haynes & Giblin, *supra* note 173, at 34.

193. U.S. DEP’T OF HOMELAND SEC., *supra* note 148, at 21.

194. Meloy, *supra* note 83, at 233.

reassess as the individual, the situation, and the environmental contexts evolve and shift.¹⁹⁵ Indeed, counterterrorism experts acknowledge that their laborious efforts may end up for naught.¹⁹⁶ Because of the evolving nature of terrorists as they engage in predatory maneuvering, “it means that the actual [threat assessment] results may be useless because terrorism is an ever-changing phenomenon that, by the time we have analyzed it in one way, has morphed into something else”¹⁹⁷

Notwithstanding these sentiments, an SPJ-light model can have a significant role in the broader threat assessment scheme that is being suggested here. As addressed earlier, the model cannot include an actuarially-based component. Yet, it can have some structure. For example, a suggested foundation that captures at least some of the essence of the threat and vulnerability segments of the triplet of threat assessment theorizes a four-stage analysis of relevant static and dynamic factors: (1) behavioral history analysis, (2) motivational analysis, (3) vulnerability to persuasion analysis, and (4) a formulation analysis that hypothesizes about the relationships between the observations noted in the prior three.¹⁹⁸ The hypotheses in part (4) would best attempt to explain a potential causal link to terrorist attacks for the individual, in other words, forming an historical narrative about why the perceived risk factors are relevant to the threat the individual is judged to pose.¹⁹⁹

Some authorities conceptualize threat assessment as a subspecialty of risk assessment.²⁰⁰ The contention here, however, is that it is preferable to conceptualize threat assessment as its own genre to avoid confusing the two. Indeed, the framework for threat assessment for individual terrorists offered to this point has attempted to substantively distinguish itself from contemporary risk assessment practices for ordinary criminal violence. Besides, the next significant addition moves the threat assessment schema into another knowledge dimension entirely—one which is clearly particularized to counterterrorism.

195. Malone, *supra* note 120, at 54.

196. Robert Danisch, *Risk Assessment as Rhetorical Practice: The Ironic Mathematics behind Terrorism, Banking, and Public Policy*, 22 PUB. UNDERSTANDING SCI. 236, 241 (2011).

197. *Id.*

198. See Borum, *supra* note 90, at 76–78.

199. Sarma, *supra* note 136, at 284. These factors are premises in which inductive reasoning is used: if the premises are true there is strong evidence that the conclusion is true. It is noted that the TRAP-18 tool might in some future form be useful in the first of such a four step process regarding a behavioural analysis regarding lone-actor terrorists. Though at this point without further evidence of predictive validity—or at least some proxy for it—some caution in relying upon it is recommended. Borum, *supra* note 146, at 194.

200. Meloy & Genzman, *supra* note 12, at 233 (conceptualizing threat assessment as a “young tributary from an older and wider river we refer to as violence risk assessment”).

D. *National Security Intelligence*

Any forensic assessment model for the potential of terrorist attacks must merge with security agencies' intelligence expertise.²⁰¹ In this way, knowledge-informed decisions should not rely only upon the professional judgement (structured or not) of individual assessors in terrorism assessment cases, no matter how experienced and skilled they may be. This is because national security intelligence presents its own skillset and often requires the input of multiple professionals.²⁰² According to the United States Federal Bureau of Intelligence, national security intelligence requires "the application of individual and collective cognitive methods to weigh data and test hypotheses within a sociocultural context."²⁰³ Further, intelligence analysts have access to information and data that the forensic assessor will not, usually due to national security concerns.²⁰⁴

One of the exceptional challenges in preventing terrorism pertains to the "conundrum of knowing/not knowing" the future.²⁰⁵ This means that officials try to prevent terrorism before it happens despite being uncertain about whether the individual actually will commit a criminal act in the future.²⁰⁶ In a similar vein, national security analysts in the United Kingdom note that policymakers understand that the job is to take precautions against future risks that are unknown, imprecise, and ultimately incalculable.²⁰⁷ The following sentiment sums up the situation

201. See generally Malone, *supra* note 120 (discussing the application of the intelligence cycle model to threat assessment).

202. Loch K. Johnson, *National Security Intelligence*, in *THE OXFORD HANDBOOK OF NATIONAL SECURITY INTELLIGENCE* 3, 6 (Loch K. Johnson ed., 2010); Blanco & Cohen, *supra* note 13, at 28.

203. Malone, *supra* note 120, at 54.

204. Blanco & Cohen, *supra* note 13, at 27.

205. Philip Doty, *U.S. Homeland Security and Risk Assessment*, 32 *GOV'T INFO. Q.* 342, 348 (2015) (quoting Claudia Aradau & Rens van Munster, *Taming the Future: The dispositive of Risk in the War on Terror*, in *RISK AND THE WAR ON TERROR* 23, 40 (Louise Amoore & Marieke de Goede eds., 2008)). The idea of knowns—and more importantly the unknowns—when attempting to predict rare events has been nicknamed the Black Swan problem: "First, it is an outlier, as it lies outside the realm of regular expectations, because nothing in the past can convincingly point to its possibility. Second, it carries an extreme impact (unlike the bird). Third, in spite of its outlier status, human nature makes us concoct explanations for its occurrence after the fact, making it explainable and predictable." NASSIM NICHOLAS TALEB, *THE BLACK SWAN: THE IMPACT OF THE HIGHLY IMPROBABLE* xxii (2007) (emphasis omitted).

206. Doty, *supra* note 205.

207. Anne Hammerstad & Ingrid Boas, *National Security Risks? Uncertainty, Austerity and Other Logics of Risk in the UK Government's National Security Strategy*, 50 *COOPERATION & CONFLICT* 475, 476 (2015); see also Kamaldeep Bhui, *Flash, the Emperor and Polices Without Evidence: Counter-Terrorism Measures Destined for Failure and Societally Divisive*, 40 *BJPSYCH BULL.* 82, 82 (2016) ("The immediacy of terrorist threats, often unexpected and in spite

nicely: “by far the most awesome and fearsome dangers are precisely those that are *impossible*, or excruciatingly *difficult*, to anticipate: the *unpredicted*, and in all likelihood *unpredictable* ones.”²⁰⁸

These challenges again demarcate risk assessment as a far more knowledge-based exercise, even if that knowledge is incomplete. The risk assessment structure thus does not apply to future events like terrorist attacks, which are uncertain and whose quantitative probabilities are unknown and unknowable.²⁰⁹ This is even truer for the subset of lone-actor terrorists, considering their new embodiment of idiosyncratic trajectories and inventive forms of attacks.²¹⁰ On the other hand, perhaps there is a window toward intelligence-based investigation for detecting lone actors due to their greater tendency toward using social media, which provides some avenues to detection.²¹¹

Nevertheless, any structural form that forensic examiners may engage will have its limits. Uncertainty means that national security intelligence requires the input of distinctly human intellect and creativity.²¹² More particularly, the exercise in the futurization of terror²¹³ needs an imagination to be able to identify possible extremists, their vulnerabilities, emerging instrumentalities, and inventive modes of attack.²¹⁴ In sum, counterterrorism intelligence comprises an imaginary exercise to tame a hypothetical future.²¹⁵ Far beyond prediction, this means engaging “cultural fantasies of how risk scenarios may play out, and the concomitant mobilizations of collective anxieties and political possibilities in the present.”²¹⁶ Evaluators here may need to transcend their own cultural values and norms to be able to conceptualize the

of significant counter-terrorism intelligence and investment, has provoked a crisis in confidence and strategy, leading to calls for urgent intervention locally and internationally.”); Doty, *supra* note 205 (“[T]he aim is to stop terror before it happens in a future that is uncertain, identifying criminal acts of violence before they are committed even if we must remain uncertain about whether they would occur.”).

208. ZYGMUNT BAUMAN, *LIQUID FEAR* 11 (2006) (emphasis in original).

209. Prins & Reich, *supra* note 151, at 260.

210. Pantucci et al., *supra* note 26, at 6.

211. *Id.* at 11.

212. AMMAN ET AL., *supra* note 109, at 10 (describing how officials were able to tailor actions in response to actor’s mental disorder); Doty, *supra* note 205, at 349 (noting that “algorithmic and computationally intensive methods for decision making” are insufficient to drive counterterrorism strategies).

213. Doty, *supra* note 205, at 345.

214. José María Blanco Navaro & Jéssica Cohen Villaverde, *The Future of Counter-Terrorism in Europe: The Need to be Lost in the Correct Direction*, 2 EUR. J. FUTURES RES. 9 (Dec. 5, 2014), <https://link.springer.com/content/pdf/10.1007%2Fs40309-014-0050-9.pdf> [<https://perma.cc/GF56-G8T2>].

215. Doty, *supra* note 205, at 347.

216. de Goede & de Graff, *supra* note 160, at 317 (emphasis omitted).

individual terrorist's mindset and specific worldview.²¹⁷ At the very least, this would entail theoretically accepting the individual's grievance and non-normative belief system in order to hypothesize connections to extremist acts.

Developing national security intelligence is a complicated and intensive process.²¹⁸ Unlike the more common risk assessment projects regarding actuarial and clinical judgements rendered at discrete points in time, the terrorism threat assessment model envisions an evolving intelligence cycle, with a continuous feedback loop, and potentially repeated reassessments.²¹⁹ All of this means that threat assessment must draw on cross-disciplinary and professional genres—that is, a multidisciplinary threat assessment team.²²⁰ The team could well include forensic case examiners, behavioral scientists, intelligence analysts, law enforcement agents, and, in the context of detained or convicted terrorists, correctional professionals.²²¹

Despite the value of the imaginary exercises into the unknowable future, the “knowledge” gained from them and from anecdotal data must still be tested as it may well be unfounded when subjected to scientific scrutiny.²²²

E. Academic Research

There is a final piece to the overall threat assessment framework developed herein. The role of empirical research has been mentioned already. But greater emphasis on it requires highlighting and developing the subject matter even more, considering quality research on individual terrorists has generally been lacking to date.²²³

Multidisciplinary threat assessment teams could greatly benefit from more and stronger input from cross-disciplinary academic study. This observation is particularly salient in that security experts cite the need for more vigorous research specifically targeted at lone-actor terrorists.²²⁴ An important reason that lone-actor terrorism research is so far behind is that

217. Ronn Johnson, *Forensic Psychological Mindset of a Terrorist: More Questions than Answers for Public Safety Threat Assessments*, 29 SECURITY J. 185, 193 (2016).

218. Johnson, *supra* note 202, at 4.

219. Malone, *supra* note 120, at 54.

220. Meloy, *supra* note 83, at 241.

221. Hart et al., *supra* note 138, at 6, 11; *see also* Johnson, *supra* note 217, at 192.

222. Gary H. McClelland, *Use of Signal Detection Theory as a Tool for Enhancing Performance and Evaluating Tradecraft in Intelligence Analysis*, in INTELLIGENCE ANALYSIS: BEHAVIORAL AND SOCIAL SCIENTIFIC FOUNDATIONS 83, 95–96 (Baruch Fischhoff & Cherie Chauvin eds., 2011).

223. Bhui, *supra* note 207.

224. Meloy & Genzman, *supra* note 12, at 140–41; Peddell et al., *supra* note 49, at 64.

sufficient data may not be available for security reasons.²²⁵ However, this may be remedied if counterterrorism forces and academics liaise more frequently. Security officials have the data; academics have the methodologies and theoretical approaches.²²⁶ An exchange may be in order. At the same time, too little of intelligence analysis has been scientifically scrutinized to date.²²⁷

Overall, best practices for threat assessment are evidence-based in terms of drawing on data, knowledge, and theoretical insights from empirical research. A recent Federal Bureau of Investigation report affirmatively refers to the value of incorporating published research alongside practitioner experience into intelligence investigations.²²⁸

Two areas of research will be highlighted here. The first regards empirical study on individuals for terrorism potential. The second addresses theoretical offerings to inform broader perspectives in attempting to conceive how lone-actor terrorists will emerge in the future considering more macro-level, cultural climates.

1. Research on Lone Actors

Research methods on terrorism must be suited to its nature and its limits. The basis for risk assessment tools for ordinary criminal violence is properly a nomothetic, population-based approach for research and analysis.²²⁹ As ordinary criminal violence is common, large datasets are available to mine for correlative factors. This comprises a “many individuals-many cases” form of analysis.²³⁰ In contrast, the extremely low base rate of terroristic violence and the paucity of known terrorists available to study means that statistical analyses for terroristic violence generally cannot follow the same model. The evidence-based model for threat assessment simply leads to another respecification of the methodological option.

Empirical studies for terroristic violence can appropriately use an idiographic, case study approach.²³¹ The case study approach is eminently appropriate for idiosyncratic lone-actor terrorists as singular cases.²³² Any single case study may provide some insight into at least one

225. Peddell et al., *supra* note 49, at 64; Meloy & Genzman, *supra* note 12, at 140–41.

226. Blanco & Cohen, *supra* note 13, at 27.

227. McClelland, *supra* note 222, at 96.

228. AMMAN ET AL., *supra* note 109, at 1.

229. Malone, *supra* note 120, at 53.

230. Jeryl L. Mumpower & Gary H. McClelland, *A Signal Detection Theory Analysis of Racial and Ethnic Disproportionality in the Referral and Substantiation Processes of the U.S. Child Welfare Services System*, 9 JUDGEMENT & DECISION MAKING 114, 114 (2014).

231. Malone, *supra* note 120, at 53.

232. Danzell & Montañez, *supra* note 22, at 145.

trajectory toward extremism. Without group-based influences necessarily explaining the radicalization or extremist action pathways for lone actors, case study research may help contextualize what starts individuals down those pathways.²³³ Case studies can also help delineate the various personality and/or environmental drivers that may be unique to lone actors.²³⁴

The study of human actors who are planning, thinking, and modifying their behavior based on an intended target's responses is well suited to a case study research approach, as the pathway to an attack is not likely to be a linear one.²³⁵ Rather, it may become a cat-and-mouse game between the threat and his target. Still, while the individual case may have value, it also has its limits in terms of generalizability. Notably, a methodological procedure exists in which case studies can be a disciplined and ordered research regime, the results of which may be useful beyond the single case.²³⁶ This form of study entails the "single individual-many cases" approach.²³⁷

Scholars have sketched out a systematic approach to the case study method as follows:

[A structured focused comparison model] allows the researcher to apply structure and focus to the evaluation of explanatory factors [and] . . . establish validity by conducting theoretical uniformed inquiries of each explanatory factor. Simply put, this method is "structured," in that it allows the researcher to create general questions that emphasize and reflect upon a research objective. These questions are asked of each selected case thus, creating a "systematic comparison." Second, the method is focused, in that it only evaluates certain features within the historical cases. The benefit of using this method is that it standardizes the research.²³⁸

In short, researchers using this systematic case study approach can make inferences from patterns observed both within and across cases.²³⁹ The systematic case study approach offers the advantage of honing

233. *Id.* at 136.

234. *Id.*

235. See Perman et al., *supra* note 150.

236. Mumpower & McClelland, *supra* note 230.

237. *Id.*

238. Danzell & Montañez, *supra* note 22, at 145 (citations omitted).

239. Andrew Bennett, *Case Study: Methods and Analysis*, in 3 INTERNATIONAL ENCYCLOPEDIA OF THE SOCIAL & BEHAVIORAL SCIENCES 208, 208 (James D. Wright 2d ed., 2015).

behavioral science theories about the mindsets of lone-actors.²⁴⁰ The method is suitable as well for creating theoretical typologies of types of causal patterns across cases.²⁴¹ Such an approach may actually be better suited to accounting for equifinality and complex interaction effects.²⁴² Both are hypothesized as relevant where various terrorist radicalization pathways exist and experts note the tendency for clustering effects, such as when certain terrorist behaviors often co-occur.²⁴³

Another methodological change that the empirical study of lone-actors can beneficially make concerns the unit of analysis. Most research on terrorism has tended to focus on the group or event levels.²⁴⁴ For the study of lone-actor terrorists, the more suitable unit of analysis seems to be the individual terrorist.

In sum, it is important to improve upon knowledge and insight into individual terrorists, their mindsets, and their trajectories into extremist violence. Yet this information must be conveyed throughout the multidisciplinary threat assessment team.²⁴⁵ There are signs that this may not be happening. For example, a recent study found that intelligence analysts in England tended not to rely on evidence-based knowledge; instead the analysts appeared to be drawing on pop-psychology to conceptualize lone-actor terrorists, their mindsets, and their strategic choices.²⁴⁶

2. Research to Inform Dynamically Changing Climates

The second area in this research agenda responds to a call for empirical research at more macro-levels. Critics have decried “the fetishization of parts” occurring in much of terrorism research, meaning the “tendency to study terrorism separately from the social movements, state structures, conflicts, history, contexts, and international relationships within which it occurs.”²⁴⁷ Hence, potential philosophical

240. Johnson, *supra* note 217, at 187.

241. Bennett, *supra* note 239, at 210.

242. *Id.*

243. John P. Sawyer & Justin Heinz, *What Makes Them Do It? Individual-Level Indicators of Extremist Outcomes*, in HANDBOOK CRIMINOLOGY TERRORISM 47, 50 (Gary LaFree & Joshua D. Freilich eds., 2017).

244. Aaron Safer-Lichtenstein et al., *Studying Terrorism Empirically: What We Know About What We Don't Know*, 33(3) J. CONTEMP. CRIM. JUST. 273, 275 (2017).

245. Meloy, *supra* note 83, at 241.

246. Peddell et al., *supra* note 49, at 72.

247. Richard Jackson et al., *Critical Terrorism Studies: Framing a New Research Agenda*, in CRITICAL TERRORISM STUDIES: A NEW RESEARCH AGENDA 216, 219 (Richard Jackson et al. eds., 2009) (citation omitted).

groundworks could include social movement, social ecology, personality, social disorganization, and social cognitive theories.²⁴⁸

Similarly, in the future-oriented logic of risk prevention there exists a significant gap between largely static-oriented academic research and the more dynamic needs of counterterrorism officials making decisions in real time and on the ground.²⁴⁹ Thus, counterterrorism officials seek theoretical foundations for insights into cultural and environmental changes that may promote new forms of terrorists and modes of attack.²⁵⁰ Consistent with such a call, the European Commission recently announced funding for research on emerging trends in drivers to radicalization, and specifically on the motivations posed by the new lone actor threats.²⁵¹

In other words, instead of terrorism studies being mostly retrospectively oriented on historically limited events, researchers could better aim to assist counterterrorist agencies and the threat assessment process by offering evidence-based insights into newer pathways to extremism and terrorist acts. As an example, some researchers are more timely in exploring how the increase in far-right populism in the United States and England in the last few years has created an environment of nationalism, welfare chauvinism, and xenophobia in which right-wing, lone-actor terrorists are surfacing.²⁵²

CONCLUSIONS

Unlike risk assessment of ordinary criminals, analyses of the potential that individuals will carry out lone-actor terrorist attacks cannot rely upon big data to feed its information needs. Nonetheless, there is hope that the threat assessment of lone actors may still have a basis in scientific research. This Article sets forth an evidence-based framework for the threat assessment of lone actor terrorists. On the micro-level, it conceptualizes a multidisciplinary threat assessment team using structured professional judgment to analyze the individual's intent, capability, and vulnerability to extremism, while also considering the potential consequences of an attack. More and greater efforts on the part

248. Sarma, *supra* note 136, at 285.

249. Blanco & Cohen, *supra* note 13, at 27; *see also* Lindekilde et al., *supra* note 101 (suggesting research beyond the micro-level to uncover “mechanisms that can link individual actor characteristics to specific settings and configurations of social relations in fostering the propensity to consider terrorism as a viable action alternative”).

250. Edwin Bakker, *Forecasting Terrorism: The Need for a More Systematic Approach*, 5 J. STRATEGIC SECURITY 69, 77–78 (2012).

251. Preventing Radicalisation, *supra* note 32.

252. *See generally* THOMAS GREVEN, RIGHT-WING POPULISM AND AUTHORITARIAN NATIONALISM IN THE U.S. AND EUROPE (2017) (explaining how right-wing populists and authoritarian nationalists have capitalized on the failure to socially regulate economic globalization and cultural change); Feldman, *supra* note 34, at 272, 281.

of empirical researchers to study lone actors may, in the future, form the basis of structured judgment tools.

Intelligence experts must also engage in an imaginary exercise of foreseeing the future—considering lone actors are highly unpredictable—in a relative vacuum of solid knowledge of all relevant facts and circumstances. The framework considers macro-level theoretical research informing counterterrorism forces of the cultural, environmental, and situational drivers that may spawn new forms of terrorists and modes of attack. The evidence-based practice set forth conceives of the need for intelligence communities and empirical researchers to substantially improve their cooperation. Academics need relevant data that intelligence agencies harbor, and agencies seek theoretical and knowledge-based insights from researchers. Urgency in addressing these considerations is clear as even newer forms of lone-actor attacks are likely on the horizon.