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Countering Lone-Actor Terrorism Series No. 1

Lone-Actor Terrorism
Literature Review

Raffaello Pantucci, Clare Ellis and Lorien Chaplais

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About this Paper

This paper is the first publication in the Countering Lone-Actor Terrorism (CLAT) project, which aims to improve understanding of, and responses to, the phenomenon of (potentially) violent lone actors through analysis of comprehensive data on cases from across Europe. The eighteen-month project is co-funded by the Prevention of and Fight against Crime Programme of the European Union, and has been undertaken by a RUSI-led consortium. Partnering institutions include Chatham House, the Institute for Strategic Dialogue (ISD) and Leiden University, one of the founding organisations of the International Centre for Counter-Terrorism (ICCT) at The Hague.

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DESPITE RECENT DEPICTIONS within the media, lone-actor terrorism is not a new phenomenon; however, research suggests the threat is increasing as pressure from security services forces a tactical adaptation and groups – including Daesh (also known as the Islamic State of Iraq and Syria, ISIS) – call on those who share their ideology to act alone without direction or support. This paper examines the current state of knowledge surrounding the phenomenon, assessing the limitations of the literature and identifying where further research should focus to add real value to countering the threat. Three recommendations are made: first, increased methodological rigour in empirical research; second, focus on process as well as perpetrators; and third, specific examination of the confluence between returning foreign fighters, domestic Daesh supporters, and the lone-actor threat.

On 22 July 2011, seventy-seven people were killed during a terrorist attack in Norway: eight died in an explosion in Oslo and a further sixty-nine lost their lives during a sustained firearm assault on Utøya Island. The attack was conceived, planned and conducted by a single person, Anders Behring Breivik. Since this large-scale atrocity – the largest terrorist attack on European soil since the 7/7 bombings in London – there have been numerous other plots in which isolated individuals or cells have launched attacks. Increasingly, lone-actor terrorism is the crest of the terrorist wave, with groups such as Daesh explicitly advancing and instigating the strategy, and terrorists increasingly choosing it as their methodology to launch attacks.

Policy-makers and practitioners across Europe have recognised the prominent place of lone actors in the current terrorist-threat landscape; however, considerable obstacles remain in effectively countering the threat. Acting in isolation, without guidance, communications or potentially any interaction with a wider group, lone actors present acute difficulties in detection and disruption. Furthermore, it 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. Research has an important role in providing insights into this threat and its likely manifestation, and can make a particularly strong contribution as the threat continues to evolve through its interaction with the phenomenon of foreign fighters travelling to Syria and Iraq. However, before undertaking research in this area it is important to understand the state of the current literature, where significant gaps remain, and what can be learned from the application of different methodologies.

This paper examines the current state of knowledge surrounding the phenomenon of lone-actor terrorism, assessing the limitations of the literature and identifying where further research should focus to add real value to countering the threat. It ultimately finds that there is a bias towards research examining the people who become lone actors, suggesting that increased examination of the processes in planning, preparation and execution of the attack may indicate potential areas of law-enforcement intervention. It further contends that the confluence between the lone-actor threat and returning foreign fighters urgently requires further study. Finally, the paper issues a note of caution with regard to methodologies, highlighting the importance of empirical rigour if research is to truly inform and assist the work of policy-makers and practitioners.

The paper is structured as follows: the first section examines the variety of definitions offered for lone-actor terrorism, specifically considering the impact of such continued uncertainty on our understanding of the phenomenon. The second section outlines key findings from research examining the profile of lone actors, while section three focuses on our understanding of the role of the Internet. Section four examines the insights the literature provides into the tactics of lone actors and section five considers its contributions towards policy responses. The final section considers where future research might focus to add the greatest value to this area.

This literature review includes all of those articles identified by the research team in the relevant academic journals; books on the topic of lone-actor terrorism; and non-academic articles focusing on the topic. In total, more than fifty publications were reviewed.

Background

Lone actors can be identified in the earliest examples of non-state terrorism. David Rapoport argues that terrorism has occurred in waves, with each one characterised by a common driving ideology or objective, and with similar activity undertaken by groups within different countries.[1] He identifies four such waves: the anarchists who originated in 1880s Russia; the anti-colonial terrorists that followed the First World War; the new left which emerged in the 1960s; and the religious wave which dominates the current threat landscape.[2] Lone actors have been active during each wave. This is not then a new phenomenon, but one that is resurfacing. The parallels in comparative historical analysis may therefore be instructive in understanding the motivations of lone-actor terrorists; this approach is championed by Richard English, whose most fundamental argument is that terrorism is best understood within a broader historical and political context.[3] For the specific threat of lone-actor terrorism, there is a general perception that not only is it re-emerging, but current trends suggest an increasing threat.[4] In his work on the topic, Australian academic Ramón Spaaij offers an important caveat, concluding that while the phenomenon may be on the increase, the attackers are neither becoming more violent nor more effective. In fact, he suggests that the scale of this increase has been tempered because

1. David C Rapoport, 'The Four Waves of Modern Terrorism', in Audrey Kurth Cronin and James M Ludes (eds), *Attacking Terrorism: Elements of a Grand Strategy* (Washington, DC: Georgetown University Press, 2004), pp. 46–73.
2. *Ibid.*
3. Richard English, *Terrorism: How to Respond* (Oxford: Oxford University Press, 2009).
4. See Clark McCauley, Sophia Moskalenko and Benjamin Van Son, 'Characteristics of Lone-Wolf Violent Offenders: A Comparison of Assassins and School Attackers', *Perspectives on Terrorism* (Vol. 7, No. 1, 2013); Petter Nesser, 'Research Note: Single Actor Terrorism: Scope, Characteristics and Explanations', *Perspectives on Terrorism* (Vol. 6, No. 6, 2012); Jeff Gruenewald, Steven Chermak and Joshua D Freilich, 'Far-Right Lone Wolf Homicides in the United States', *Studies in Conflict and Terrorism* (Vol. 36, No. 12, 2013); Ramón Spaaij, *Understanding Lone Wolf Terrorism: Global Patterns, Motivations and Prevention* (London: Springer, 2012); Charles A Eby, 'The Nation that Cried Lone Wolf: A Data-Driven Analysis of Individual Terrorists in the United States since 9/11', thesis, Naval Postgraduate School, 2012; Instituut voor Veiligheids- en Crisismanagement (COT), 'Lone Wolf Terrorism', report, 2007; Matthew Feldman, 'Comparative Lone Wolf Terrorism: Toward a Heuristic Definition', *Democracy and Security* (Vol. 9, No. 3, 2013), pp. 270–86; Gabriel Weimann, 'Lone Wolves in Cyberspace', *Journal of Terrorism Research* (Vol. 3, No. 2, 2012).

few individuals radicalise to the point of violence; it is difficult to translate theory into action; and the need to overcome confrontation, tension and fear is harder for an individual as he does not have a support network around him.[5] Nevertheless, that the threat appears to be increasing remains of concern.

Some studies also suggest that lone-actor attacks are a tactical adaptation to external pressure from counter-terrorism efforts.[6] As intelligence agencies and law enforcement have developed increasingly sophisticated means of disrupting networked plots, groups have been forced to adapt, calling on those who share their ideology to act on their own without direction or support. The Danish Security and Intelligence Service suggests that there may also be a strategic element to the push in this direction, with an intention 'to confuse and overburden "hostile" [that is, anti-jihadist] intelligence services in order to avoid being unravelled by the security forces.'[7] Moreover, developments in information and communications technology have been suggested as an enabling factor. The Internet, especially, has made it easier than ever before to find and access both radicalising material and guidance on conducting attacks.[8]

This trend is expected to continue. Moreover, the situation in Syria and Iraq offers further reason for concern. Thousands of nationals from across Europe have travelled to take part in the conflict, many of them fighting alongside Daesh. There is significant apprehension about their return; with battlefield training they could launch an effective attack without direction or assistance from a wider network. Those prevented from reaching the conflict pose a further lone-actor risk, potentially viewing a domestic attack as an alternative means of supporting the cause. While these actors may lack the direct battlefield training and increased lethality of returning fighters, they remain a significant threat in an environment where any casualties are unacceptable. Already there appears to be evidence of this threat manifesting in Canada and parts of Europe. Understanding lone-actor terrorism has never been more pressing.

Definitions

A fundamental challenge presented by the literature is that there is no consistent definition of lone-actor terrorism. Instead, each report or article commences by outlining the definition to be applied. Spaaij suggests that lone wolves are persons who '(a) operate individually, (b) do not belong to an organized group or network; and (c) whose modi operandi are conceived and directed by the individual without any direct outside command or hierarchy.'[9] The Danish Security and Intelligence Service offers a particularly narrow definition, specifying that a lone

5. Spaaij, *Understanding Lone Wolf Terrorism*.
6. See PET, 'The Threat from Solo Terrorism and Lone Wolf Terrorism', Center for Terroranalyse, April 2011; Nesser, 'Research Note'; Beau D Barnes, 'Confronting the One-Man Wolf Pack: Adapting Law Enforcement and Prosecution Responses to the Threat of Lone Wolf Terrorism', *Boston University Law Review* (Vol. 92, No. 5, October 2012), p. 1,613.
7. PET, 'The Threat from Solo Terrorism and Lone Wolf Terrorism'.
8. Gabriel Weimann, 'Lone Wolves in Cyberspace', *Journal of Terrorism Research* (Vol. 3, No. 2, 2012); Spaaij, *Understanding Lone Wolf Terrorism*.
9. Ramón Spaaij, 'The Enigma of Lone Wolf Terrorism: An Assessment', *Studies in Conflict and Terrorism* (Vol. 33, No. 9, 2010) pp. 854–70, 856.

actor can have 'no contact to terror groups (not even historically)',[10] while Jessica Stern uses a comparatively broad characterisation which encompasses 'small groups who commit terrorist crimes, inspired by a terrorist ideology, but [do] not belong to established groups.'[11]

As Spaaij and Mark S Hamm highlight, this variation impedes the development of a comprehensive literature as 'the diverging definitions of lone wolf terrorism make comparisons between studies problematic.'[12] In turn, this increases the challenge of understanding the phenomenon and identifying key characteristics for further analysis.

There are, nonetheless, some consistent elements. Most definitions refer to a lack of direction from a wider terrorist group; an absence of clear command and control separates lone wolves from networked terrorist plots.[13] Thus a clear distinction can be made from 'solo terrorists' who attack alone for operational reasons, but do so under direct instructions.[14] It is also generally agreed that the lone actor may be inspired by the ideology of a terrorist group.[15] Indeed, lone actors are often described as emerging from a milieu –'[they] are inspired by a certain group', but importantly, 'are not under the command of any other person, group or network.'[16]

However, beyond this point the definitions quickly diverge. The Danish Security and Intelligence Service excludes any individuals who make contact with a terrorist group or other radicalised individuals, even where they have no connection to the attack or the relationship was historical.[17] This substantially reduces the cases included for consideration. In contrast, many other papers accept that such links may exist, insisting instead that the absence of direction is the key component. As the Instituut voor Veiligheids- en Crisismanagement (COT) summarises:[18]

> although lone wolf terrorists are by definition not tied to any established terrorist group, this is not to say that at one time they might have been a member or affiliate of some type of terrorist organization ... Their terrorist attack or campaign, however, results from their solitary action during which the direct influence advice or support of others, even those sympathetic to the cause is absent.

A number of authors emphasise the importance of this distinction, highlighting that it is an absence of direction but not an absence of links.

10. PET, 'The Threat from Solo Terrorism and Lone Wolf Terrorism'.
11. Jessica Stern, *Terror in the Name of God: Why Religious Militants Kill* (New York, NY: Ecco, 2003).
12. Ramón Spaaij and Mark S Hamm, 'Key Issues and Research Agendas in Lone Wolf Terrorism', *Studies in Conflict and Terrorism* (Vol. 38, No. 3, 2014), p. 168.
13. See Barnes, 'Confronting the One-Man Wolf Pack', p. 1,613; Spaaij, 'The Enigma of Lone Wolf Terrorism', pp. 854–70; Michael Becker, 'Explaining Lone Wolf Target Selection in the United States', *Studies in Conflict and Terrorism* (Vol. 37, No. 11, 2014), pp. 959–78.
14. See PET, 'The Threat from Solo Terrorism and Lone Wolf Terrorism'; Edwin Bakker and Beatrice de Graaf, 'Preventing Lone Wolf Terrorism: Some CT Approaches Addressed', *Perspectives on Terrorism* (Vol. 5, No. 5–6, 2011).
15. See *ibid*.; Spaaij, *Understanding Lone Wolf Terrorism*.
16. Edwin Bakker and Beatrice de Graaf, 'Lone Wolves: How to Prevent this Seemingly New Phenomenon?', expert meeting paper, ICCT, The Hague, November 2010, p. 2.
17. PET, 'The Threat from Solo Terrorism and Lone Wolf Terrorism'.
18. Instituut voor Veiligheids- en Crisismanagement (COT), 'Lone Wolf Terrorism', p. 7.

A further important distinction is that between terrorism and criminal intent or personal motivation: Spaaij highlights how some individuals are incorrectly classified as lone-actor terrorists when in fact their attacks were 'violent acts by stand-alone individuals that were carried out for reasons of personal motivation or simply with criminal intent'.[19] Diversion also arises regarding the classification of lone assassins: Spaaij is uncertain about whether they should be considered lone-actor terrorists,[20] while Jeffrey Simon is quite categorical in his conclusion that they fall within the definition, stating that 'the role of the lone wolf as an assassin has, of course, been well documented.'[21]

Further disagreement emerges with regard to the inclusion of dyads or triads (small cells of two or three individuals that do not appear to be part of the broader threat picture, but act as isolated cells launching terrorist attacks under their own direction). Authors including Randy Borum, Robert Fein and Bryan Vossekuil; Jeff Gruenewald, Steven Chermak and Joshua D Freilich; and Ramón Spaaij focus specifically on individuals, therefore excluding attacks committed by couples or small cells even where they act in isolation from a broader terrorist network.[22] In contrast, the recent work of Paul Gill, John Horgan and Paige Deckert includes dyads, and both Christopher Hewitt and Sarah Teich also incorporate triads within their definitions. Raffaello Pantucci has gone further by suggesting that such small groups form their own subset, naming this typology 'lone wolf packs'.[23]

The effect of such disparity is to limit the cumulative value of the work in this area, as many studies are effectively examining slightly different phenomena.

The Profiles of Lone-Actor Terrorists

There is a general consensus in terrorism literature that it is impossible to profile terrorists. When looking at any large database of perpetrators, the conclusion is often that they are drawn from across society, age group and even gender. Nonetheless, even accepting this limitation, important insights can be gained from the literature. First, the phenomenon of lone-actor attacks is not restricted to a specific ideology. Rather, three dominant ideological drivers can be

19. Spaaij, *Understanding Lone Wolf Terrorism*, p. 11.
20. *Ibid*.
21. Jeffrey D Simon, *Lone Wolf Terrorism: Understanding the Growing Threat* (New York, NY: Prometheus Books: 2013), p. 29.
22. Randy Borum, Robert Fein and Bryan Vossekuil, 'A Dimensional Approach to Analyzing Lone Offender Terrorism', *Aggression and Violent Behavior* (Vol. 17, No. 5, September/October 2012), pp. 389–96; Gruenewald, Chermak and Freilich, 'Far-Right Lone Wolf Homicides in the United States'; Spaaij, 'The Enigma of Lone Wolf Terrorism', pp. 854–70.
23. Paul Gill, John Horgan and Paige Deckert, 'Bombing Alone: Tracing the Motivations and Antecedent Behaviors of Lone-Actor Terrorists', *Journal of Forensic Sciences* (Vol. 59, No. 2, March 2014), pp. 425–35; Christopher Hewitt, *Understanding Terrorism in America: From the Klan to Al Qaeda* (New York, NY: Routledge, 2003); Sarah Teich, 'Trends and Developments in Lone Wolf Terrorism in the Western World: An Analysis of Terrorist Attacks and Attempted Attacks by Islamic Extremists', IDC Herzliya and ICT, 2013; Raffaello Pantucci, 'A Typology of Lone Wolves: Preliminary Analysis of Lone Islamist Terrorists', Developments in Radicalisation and Political Violence, International Centre for the Study of Radicalisation and Political Violence, March 2011.

identified: right-wing ideas drawn predominantly from the work of Ulius Amoss, Louis Beam and 'leaderless resistance'; the work of Abu Musab Al-Suri and Al-Qa'ida in the Arabian Peninsula under Anwar Al-Awlaki's tutelage; and idiosyncratic, self-developed ideologies. Most recently, Daesh has specifically advocated the use of lone-actor-style attacks through its magazine publications, speeches, social media and propaganda videos, trying to inspire and instigate radicalised individuals in Western countries to launch attacks against their home governments.

While there is no consistent profile for lone-actor terrorists offered, the literature nevertheless provides valuable insights into the prevalence of specific characteristics. The recent empirical study by Gill, Horgan and Deckert found that the average age of lone actors was higher than in comparable studies of terrorist groups. Their dataset of lone actors had an average age of thirty-three years – which was substantially higher than Colombian militants at an average age of twenty years, the Provisional Irish Republican Army at twenty-five years and Al-Qa'ida-related terrorists at twenty-six years. They conclude that 'the onset of lone-actor engagement in terrorism has a different temporal trajectory than that of engaging in terrorism within formal groups.'[24]

Although their study looks exclusively at far-right attacks in the US and only at homicides rather than including all aspects of terrorist violence, the research of Gruenewald, Chermak and Freilich offers further support for this finding: the actors in their dataset who committed attacks alone and without links to a wider organisation were found to be in their late thirties.[25]

However, this is a pattern that could change. With the increasing use of the Internet and social media, these avenues now provide an ideal – and widely used – means of dissemination for propaganda. This may be significant in the radicalisation of future lone actors and potentially suggests that their average age may begin to decrease as a reflection of the user base of social media.

Across the literature, regardless of the particular definition of lone-actor terrorism applied, there are notably few female perpetrators. This is reflected in the conclusions of Gruenewald, Chermak and Freilich: '[a]s expected … suspects were overwhelmingly white males regardless of subtype.'[26] This male bias is further reflected in a study by Gill, Horgan and Deckert that concludes that there is 'no uniform profile of lone actor terrorists' except that they are heavily 'male oriented'.[27]

This reflects gender bias in violent offending more broadly. In 2009 it was reported that females engaging in violent crime did so at a rate of about 25 per cent of the male participation rate;[28] for single-offender crimes in the same year, the female participation rate was 18 per cent of the

24. Gill, Horgan and Deckert, 'Bombing Alone', p. 427.
25. Gruenewald, Chermak and Freilich, 'Far-Right Lone Wolf Homicides in the United States'.
26. *Ibid*., p. 1,015.
27. Gill, Horgan and Deckert, 'Bombing Alone', pp. 425–35, 434.
28. Janet L Lauritsen, Karen Heimer and James P Lynch, 'Trends in the Gender Gap in Violent Offending: New Evidence from the National Crime Victimisation Survey', *Criminology* (Vol. 47, No. 2, May 2009), pp. 361–99.

male rate.[29] Such statistics illuminate a clear gender gap in violent crime, which becomes more acute when examining lone-actor terrorism. As Peter Phillips concludes, 'the gender gap that so clearly characterises lone wolf terrorism in the United States is one of the starkest manifestations of the gender gap that generally characterises participation in crime, especially violent crime'.[30] Alessandra González, Freilich and Chermak attribute this disparity to the increased likelihood of women working in groups or acting upon the influence of a partner, describing relationships as a fundamental prerequisite for female involvement in terrorism.[31] However, Phillips recognises the gender gap as an indicator for further research. He suggests that in order to develop a comprehensive understanding of lone wolves, the analysis of both male and female rationales will shed light on the decision-making process undertaken by individuals prior to and during lone-actor attacks.[32]

Although the dataset used is rather limited, Michael Fredholm highlights the prevalence of previous convictions among lone actors.[33] Gruenewald, Chermak and Freilich also examine this, concluding that around half of the far-right terrorists examined had 'evidence of prior arrests'.[34] This is further supported by the work of Gill, Horgan and Deckert that found that 41.2 per cent of lone-actor cases had previous criminal convictions, a significantly higher figure than those with links to wider terrorist networks. Of this subset, 63.3 per cent had served time in prison and, whilst incarcerated, 32.3 per cent had experienced the radicalisation that ultimately led to the attack they later conducted or planned.[35] While these datasets each employ different definitions of the phenomenon and Gruenewald's team focuses on a specific subset, the finding that previous convictions are more prevalent among lone actors remains consistent.

While it is often assumed that terrorists – and lone actors in particular – are economically or socially disadvantaged, the literature offers no evidence to support this. Spaaij concludes they tend to be 'relatively well educated and relatively socially advantaged.'[36] Charles A Eby is less categorical but offers a similar conclusion, stating that the 'literature shows that terrorists need not be disadvantaged to turn to terrorism' and that his dataset of American cases affirms this.[37] Rather than emphasising they are high achievers in society, Eby points out that 'lone wolf terrorists are not necessarily lower-class residents with no prospect of social mobility … [and are] as likely to be employed as unemployed.'[38] These conclusions are particularly interesting as

29. *Ibid.*
30. Peter J Phillips, 'Female Lone Wolf Terrorism – The Economic Analysis of Uniquely Gendered Lived Experiences', Social Science Research Network, 2013, p. 4.
31. Alessandra L González, Joshua D Freilich and Steven M Chermak, 'How Women Engage Homegrown Terrorism', *Feminist Criminology* (Vol. 9, No. 4, October 2014).
32. Phillips, 'Female Lone Wolf Terrorism', p. 4.
33. Michael Fredholm 'Hunting Lone Wolves – Finding Islamist Lone Actors Before They Strike', Stockholm Seminar on Lone Wolf Terrorism, 2011.
34. Gruenewald, Chermak and Freilich, 'Far-Right Lone Wolf Homicides in the United States', p. 1,015.
35. Gill, Horgan and Deckert, 'Bombing Alone', pp. 425–35.
36. Spaaij, *Understanding Lone Wolf Terrorism*, pp. 52–53.
37. Eby, 'The Nation that Cried Lone Wolf', p. 35.
38. *Ibid*., p. 61.

both Spaaij and Eby's studies use datasets of hundreds to draw their conclusions, strengthening their salience.

These conclusions are further supported by studies examining the education of lone actors. Here the data are distributed relatively evenly: in Gill, Horgan and Deckert's study, 24.7 per cent of actors attained the lowest level of education of high school or equivalent; 20.8 per cent achieved the highest level of graduate school; with the remaining actors completing a level between the two.[39]

However, employment data suggest a higher rate of deprivation after completing education. Within the same study's sample of 112 individuals, 40 per cent were unemployed; 23.2 per cent were employed within the service industry; and a comparatively small subset of 10.7 per cent were within professional occupations during the period in which they became involved in terrorist activity.[40] Whilst it is not clear how this compares to the general population, in comparison with the relatively balanced figures on education, these employment data reflect a greater indication of potential deprivation alongside a general notion of a lack of direction. In other words, seen from an employment perspective, this group was not in the high-achieving strata of society – rather, small jobs or unemployment were the norm, with few professionals.

At 26 per cent the level of military experience is also noteworthy within the sample,[41] as it is higher than would be expected for the general population: the 2000 US census found that 13 per cent of the population aged 18 or over were serving, or had served, within the armed forces.[42] This is potentially significant given that military training is likely to endow a perpetrator with skills useful in committing a successful attack, such as evading detection or using weapons.

Gill, Horgan and Deckert's dataset also highlights the potential significance of the perpetrator's relationship status. Where relationship statuses were available, 50 per cent of lone actors were single and had never married, 24.4 per cent were married, and 18.9 per cent were divorced or separated.[43] In contrast, 73 per cent of Al-Qa'ida-related terrorists were married.[44] It is not clear whether this difference is something that is peculiar to ideologies or is attributable to something else.

It is widely speculated that lone-actor terrorists suffer from greater degrees of mental illness than both the general population and the broader community of terrorists. This conclusion seems to be one that is supported by the literature. Gruenewald, Chermak and Freilich found that 40 per cent of the lone actors in their dataset experienced mental illness, which was

39. Gill, Horgan and Deckert, 'Bombing Alone', pp. 425–35.
40. *Ibid*.
41. *Ibid*.
42. Trudy A Suchan et al., *Census Atlas of the United States* (Washington, DC: US Census Bureau, 2007), chap. 5.
43. Gill, Horgan and Deckert, 'Bombing Alone', pp. 425–35.
44. *Ibid*.

significantly higher than the 7.6 per cent among the group-based actors.[45] This study focused on right-wing extremists; however, recent work by Emily Corner and Gill concluded that this finding is consistent across terrorist ideologies. In their dataset, a lone actor is 13.49 times more likely to have a mental illness than an actor within a terrorist group.[46]

The existence of mental illness should not be considered an indicator of limited rationality or a reduced ability to plan and conduct an attack; on the contrary, a number of studies have highlighted that such actors can be effective terrorists.[47] The correlation of mental illness with lone-actor terrorists should not therefore be considered an indicator that some lone actors may present a reduced threat; rather, the finding is a further contribution towards understanding the phenomenon.

Alongside studies of mental illness, personality issues are also examined in the literature. Individuals who become lone-actor terrorists tend to exhibit social problems to varying degrees:[48] as the ICCT concisely summarises, 'one common characteristic among lone wolves is that they do not "work and play well with others"'.[49] These difficulties can result in social alienation, which Gill found to be prevalent within his database of 119; though it is not clear how this was defined.[50] Questions remain as to how lone actors interact with the radical milieu around them; however, the literature suggests that social problems can act as a barrier to joining wider terrorist groups, where individuals have sought to do so. As Spaaij outlines: '[t]hose lone wolves who yearned to be a member of a group often found in the end that they had difficulty being accepted, feeling a part of, or succeeding in a group. Thus, a number of lone wolves developed an isolationist attitude which led them to act on their own.'[51]

Significant personal events or grievances are also highlighted in the literature. In Clark McCauley and Sophia Moskalenko's study comparing lone-actor terrorists with school shooters and assassins, four common characteristics are identified, which include grievance and 'unfreezing' (defined as 'a situational crisis of personal disconnection and maladjustment').[52] Drawing on his more limited dataset of fifteen, Nesser similarly concludes that 'personal frustrations appear

45. Jeff Gruenewald, Steven Chermak and Joshua D Freilich, 'Distinguishing "Loner" Attacks from Other Domestic Extremist Violence: A Comparison of Far-Right Homicide Incident and Offender Characteristics', *Criminology and Public Policy* (Vol. 12, No. 1, February 2013), pp. 65–91.
46. Emily Corner and Paul Gill, 'A False Dichotomy? Mental Illness and Lone-Actor Terrorism', *Law and Human Behavior* (Vol. 39, No. 1, 2015).
47. Randy Borum, 'Informing Lone-Offender Investigations', *Criminology and Public Policy* (Vol. 12, No. 1, February 2013); Gill, Horgan and Deckert, 'Bombing Alone', pp. 425–35; Corner and Gill, 'A False Dichotomy?'.
48. Spaaij, 'The Enigma of Lone Wolf Terrorism', pp. 854–70.
49. Bakker and De Graaf, 'Lone Wolves', p. 4.
50. Paul Gill, 'Seven Findings on Lone-Actor Terrorists', International Center for the Study of Terrorism (ICST), 6 February 2013, <http://sites.psu.edu/icst/2013/02/06/seven-findings-on-lone-actor-terrorists/>, accessed 14 December 2015.
51. Spaaij, *Understanding Lone Wolf Terrorism*, p. 51.
52. Clark McCauley and Sophia Moskalenko, 'Toward a Profile of Lone Wolf Terrorists: What Moves an Individual from Radical Opinion to Radical Action', *Terrorism and Political Violence* (Vol. 26, No. 1, 2014), pp. 69–85.

to have been an important factor behind the ideological radicalisation'.[53] This conclusion might seem spurious were it not supported by the much more substantial data-driven report offered by Gill, Horgan and Deckert, whose dataset of 119 highlights that 'a wide range of activities and experiences preceded lone actors plots or events.'[54] The contention of each study is that major events in an individual's life preceded his or her choice to move from being a passive supporter of an ideology to someone preparing for terrorist activity – suggesting a potentially identifying profiling element, though one that seems very hard to operationalise. Neither study indicates whether there is specific activity that is indicative of an individual moving into an operational terrorist phase.

A number of pieces also suggest that lone actors conflate such personal grievances with terrorist ideologies. A team from the Swedish Defence Research Agency (FOI) concluded that 'lone wolf terrorists are often creating their own ideologies, combining aversion with religion, society, or politics with a personal frustration. Hence, a lone wolf terrorist can in theory come in any size, any shape, and any ethnicity, as well as representing any ideology.'[55] This conclusion is echoed by Spaaij, who consequently recommends caution in developing typologies or profiles for lone actors, as the integration of personal grievances within their motivation can create cases that do not tidily fit into the constructed typologies.[56]

There are suggestions within the literature that different ideological subgroups are associated with distinct profiles. Edwin Bakker and Beatrice de Graaf state that while there is 'no single profile for a lone wolf, it is possible to distinguish between different categories of lone wolf terrorists based on their ideological or religious background.'[57] While they offer no specific empirical data in support of this assertion, similar conclusions can be drawn from Gruenewald, Chermak and Freilich's research focusing on right-wing actors,[58] and the premise is further supported by Gill's wider sample:[59]

> Al-Qaeda-related offenders were younger and were more likely to be students, seek legitimization from epistemic authority figures, learn through virtual sources and display command and control links. They were less likely to have criminal convictions. Right-wing offenders were more likely to be unemployed and less likely to have any university experience, make verbal statements to friends and family about their intent or beliefs, engage in dry-runs or obtain help in procuring weaponry. Single-issue offenders were more likely to be married, have criminal convictions, have a history of mental illness, provide specific pre-event warnings and engage in dry-runs. They were less likely to learn through virtual sources or be depicted as being socially isolated.

53. Nesser, 'Research Note', *Perspectives on Terrorism* (Vol. 6, No. 6, 2012), p. 67.
54. Gill, Horgan and Deckert, 'Bombing Alone', pp. 425–35, 433.
55. Joel Brynielsson et al. 'Analysis of Weak Signals for Detecting Lone Wolf Terrorists', European Intelligence and Security Informatics Conference, 2012, p. 198.
56. Spaaij, *Understanding Lone Wolf Terrorism*.
57. Bakker and De Graaf, 'Preventing Lone Wolf Terrorism', 44–45.
58. Gruenewald, Chermak and Freilich, 'Far-Right Lone Wolf Homicides in the United States'.
59. Gill, 'Seven Findings on Lone-Actor Terrorists'.

The Role of the Internet

The Internet features heavily in the literature on lone-actor terrorism. It is considered by some to be a driver of the threat, by others as an accelerator, and by some commentators as a surrogate community – a social environment in which lone actors feel they belong. A substantial body of the literature further concludes that given the prevalence of internet activity as a significant feature in lone-actor cases, it also offers a vehicle through which to detect them. Simon rather grandly concludes that we are seeing 'waves of terrorism' with lone-actor terrorism as the newest expression of the most recent wave –'the technological wave' in which the 'Internet is the [driving] energy.'[60]

Although it has not yet been empirically proven, it appears that youth-dominated internet sites are increasingly becoming the favoured medium through which terrorist and radical Islamist groups recruit new members and followers – a trend epitomised and accentuated by Daesh's active online campaigns. The Internet is frequently described in the media as the main interface between terrorist groups and individuals vulnerable to radicalisation. The volume of potential viewers and the ability to disseminate extremist material at an alarmingly fast rate makes the medium an extremely effective tool for ideological dissemination. This is of particular significance in relation to lone actors, who may become radicalised through such material and interaction without establishing direct links to a specific group. 'Terrorist groups have learned how to appeal to potential lone wolves, to attract and seduce them, to train and teach them and finally to launch them on their attacks – all by using online communication, from forums and chat rooms to Facebook, YouTube and Twitter.'[61]

The rapid rise of Daesh has dramatically underscored the potential impact of social media in this area. The use of Twitter and other social-media platforms by the group and its supporters has been highly effective in disseminating its message. Glynn Cosker, quoting a Joint Intelligence bulletin issued by the Department of Homeland Security and the Federal Bureau of Investigation (FBI), warns that 'ISIS-inspired individuals may attempt to carry out lone wolf operations to kill police, government officials and "media figures"'.[62] An NBC News report also cites a US official who claims that 'Given [Daesh's] skilled use of social media, these threats to inspire lone wolves produce a bit more urgency for intelligence and law enforcement officials'.[63] Officers from the UK Counter Terrorism Internet Referral Unit have acknowledged that they are up against groups which are using the Internet to disseminate propaganda quickly and slickly. In 2013 the unit instigated the removal of more than 45,000 pieces of material.[64] Last year the UN's Counter-Terrorism Committee Executive Directorate warned that 'the rapid pace of technological progress facilitated global communication, travel and access to information. This provided

60. Simon, *Lone Wolf Terrorism*, p. 15.
61. Weimann, 'Lone Wolves in Cyberspace', p. 86.
62. Glynn Cosker, 'FBI and DHS Warn of ISIS-Inspired "Lone Wolf" Attacks in US', In Homeland Security, <http://inhomelandsecurity.com/fbi-and-dhs-warn-of-isis-inspired-lone-wolf-attacks-in-us/>, accessed 14 December 2015.
63. *NBC News*, 'Feds Warn of ISIS-Inspired Threat Against Police, Reporters in US', 13 October 2014.
64. Shiv Malik et al., 'ISIS in Duel with Twitter and YouTube to Spread Extremist Propaganda', *Guardian*, 24 September 2014.

fertile ground for the recruitment of lone actors across vast distances and the dissemination of, and identification with, global causes. These factors also presented particular challenges for judicial authorities.'[65] Although the activity is often public, the international nature of the Internet makes it very difficult for agencies to identify, locate and pursue individual users.

In relation to understanding the lone-actor phenomenon, it remains unclear the degree to which the Internet encourages violent action, or alternatively is used by actors to seek out justification for their actions. Some commentators have categorised the Internet as providing a surrogate community or 'support structure',[66] while Gabriel Weimann goes further, considering this interaction sufficient to suggest that 'lone wolves are not really alone'.[67]

The Internet can also be seen as playing a more tangible or practical supportive role. Jason-Leigh Striegher concluded that it provides lone actors with 'arms and targets',[68] while other authors have suggested this can be interpreted more broadly; the Danish Security and Intelligence Service has stated that the role is also ideological,[69] while Canada's Integrated Threat Assessment Centre (ITAC) considers it to provide 'ideological motivation, encouragement, justification, target information, and instruction on techniques. And all in an anonymous environment.'[70] This more comprehensive interpretation is supported by Weimann's specific study of online radicalisation and lone actors.[71]

Some of the tactical support offered by the Internet is essentially of a copycat nature: the Internet facilitates communication and subsequent emulation. Spaaij highlights that David Copeland (the far-right London bomber who, in 1999, left explosive devices in Brixton, Brick Lane and a pub in Soho) was inspired by Eric Rudolph's lone-actor bombing at the 1996 Atlanta Olympic Games,[72] while Bakker and de Graaf note that Breivik specifically transmitted his ideas online so others would see them.[73] As Nesser states: 'Terrorism research has solidly documented that terrorists tend to emulate each other's operational methods. Globalisation and Internet-based mass media and social media accelerate and intensify such processes.'[74]

65. Counter-Terrorism Committee Executive Directorate, 'Bringing Terrorists to Justice: Challenges in the Prosecution of Terrorists Acting Alone or in Small Cells', p. 3, <http://www.un.org/en/sc/ctc/docs/2014/Report_on_terrorists_acting_alone_or_in_small_cells.pdf>, accessed 14 December 2015.
66. Spaaij, *Understanding Lone Wolf Terrorism*.
67. Weimann, 'Lone Wolves in Cyberspace', p. 78.
68. Jason-Leigh Striegher, 'Early Detection of the Lone Wolf: Advancement of Counter-Terrorism Investigations with an Absence or an Abundance of Information and Intelligence', *Journal of Policing, Intelligence and Counter Terrorism* (Vol. 8, No. 1, May 2013), pp. 35–53.
69. PET, 'The Threat from Solo Terrorism and Lone Wolf Terrorism'.
70. Integrated Threat Assessment Centre, 'Lone-Wolf Attacks: A Developing Islamist Extremist Strategy?', June 2007.
71. Weimann, 'Lone Wolves in Cyberspace'.
72. Spaaij, *Understanding Lone Wolf Terrorism*.
73. Bakker and De Graaf, 'Preventing Lone Wolf Terrorism'.
74. Nesser, 'Research Note', p. 69.

The Internet also offers a means of training for potential lone actors. There are a multitude of instructional texts in circulation along with a growing number of videos, offering guidance on using weapons, mixing poisons or constructing explosive devices. Weimann highlights the use of chat rooms or forums as particularly effective sites for the dissemination of tactical advice. 'Jihadist message boards and chat rooms have been known to have "experts" directly answer questions about how to mix poisons for chemical attacks, how to ambush soldiers, how to carry out suicide attacks and how to hack into computer systems'.[75] Weimann further suggests that the primary purpose for forums such as Qalah, Al-Shamikh, Majahden, and Al-Faloja, are seemingly to persuade prospective members to join groups or carry out attacks alone.[76]

However, not all authors agree regarding the success of the Internet as a training tool. Stratfor highlights the low quality of the tactical information that is transmitted online: 'although radical web sites and online training magazines provide written instruction in surveillance, mastering the complex and subtle set of skills required to be a good surveillance operative takes a great deal of training and practical experience.'[77] Michael Kenny explains this by separating the skills required into two distinct elements: first, 'techne' – abstract technical knowledge which instructions and manuals can provide; and second, 'metis' – intuitive, practical knowledge that they cannot.[78] These conclusions are reflected in the research of Jytte Klausen et al that examined four case studies of extensive online jihadi networks with substantial links to the US.[79] Their conclusion was that the greatest threat to domestic security remains from those who have undergone some form of physical training, whether with a terrorist group or through legitimate means such as military service.

This sceptical analysis feeds into an issue that permeates the literature: the degree to which things can be completely ascribed to the Internet. The authors of the FOI's report emphasise that 'Internet-based recruitment to terrorists groups is ... likely to grow in significance, although recruitment to terror organizations are [sic] more often dependent also on offline networks.'[80] The implication is that the Internet is not the only explanation for radicalisation, a point which Nesser backs using a historical view: 'while there is evidence that many lone terrorists have radicalised online, explanations emphasising the Internet and social changes do not account for historical patterns of single actor terrorism (such as the 19th century anarchists).'[81]

The principal deficiency in this area of the literature is the absence of empirical evidence about how lone actors have used the Internet and, crucially, how this might differ from use by networked terrorists. Charlie Edwards and Luke Gribbon conducted some interesting work

75. Gabriel Weimann, 'Terror on Facebook, Twitter, and YouTube', *Brown Journal of World Affairs* (Vol. 16, No. 2, Spring/Summer 2010), p. 47.
76. *Ibid*.
77. Scott Stewart and Fred Burton, The "Lone Wolf" Disconnect', *Security Weekly*, 30 January 2008.
78. Michael Kenney, 'Beyond the Internet: Métis, Techne, and the Limitations of Online Artifacts for Islamists Terrorists', *Terrorism and Political Violence* (Vol. 22, No. 2, April 2010).
79. Jytte Klausen et al., '"Open Source Jihad": Online Mobilization for Domestic Attacks', research paper, May 2014.
80. Joel Brynielsson et al., 'Analysis of Weak Signals for Detecting Lone Wolf Terrorists', p. 198.
81. Nesser, 'Research Note', p. 69.

using the hard drives of individual convicted terrorists to understand the role of the Internet in radicalisation, but their research did not focus on lone actors specifically.[82] Nevertheless, the work showed that the link between online and offline activity was clearer than was often suggested. Many commentators have traditionally viewed online activity as an independent, driving factor in radicalisation, requiring no offline counterpart. In fact, as the research showed, there was little evidence that radicalisation took place in isolation in front of a computer screen; instead, it involved the interplay of the individual's online activity with his activity offline. Given the anecdotal nature of the reporting and the focus on individual case studies, it is clear that this aspect of lone-actor terrorism is one that has not yet been effectively tackled, at least in an academic or public format.

The Tactics of the Lone Actor

Terrorist tactics are diverse – whilst there remains a preference for bombings, groups and individuals tend to use knives, guns and other simple forms of weaponry to launch their attacks. This is reflected in lone-actor plotting where, in terms of tactical choices, the literature is somewhat mixed in its conclusions. The more anecdotal and non-empirical research tends to conclude that lone wolves are random and unpredictable, carrying out sudden acts. Simon sees them as more 'creative' since they have no need to get plots or ideas 'approved'. He further suggests that 'one of the biggest reasons why lone wolves are likely to use a weapon of mass destruction is that these individuals have proven time after time that they can "think outside the box"'.[83] Stratfor concludes that lone wolves are 'capable of self-activation at any time',[84] while ICCT highlights the exceptionally diverse nature of 'target selection, use of weapons and modus operandi. Lone wolf attacks range from threatening and intimidating people to shootings and bombings … Moreover, huge differences exist in the time span of incidents ranging from a single attack – most cases – to a prolonged terror campaign, such as the case of Ted Kaczynsky [*sic*] [the Unabomber].'[85]

However, the empirical studies do offer some parameters. Gill concludes that 'lone actor terrorist events were rarely sudden and impulsive' suggesting strong premeditation.[86] Spaaij's and COT's datasets indicate a prevalent use of firearms, though both also point to a bias towards the US in this regard. Eby, drawing on a solely US-based dataset, instead suggests that within the US there is a preference for using explosives;[87] however, caution must be taken with regard to this conclusion. In discussing his finding that explosives are the most common weapon of choice among lone actors he adds that 'fourteen of the last sixteen lone-wolves' primary weapon was a bomb',[88] yet five of these were FBI sting operations, and in four cases the FBI provided the 'explosives'. In considering the problems that can be caused by inclusion of such cases without caveat, Spaaij and Hamm suggest that '[i]ncluding sting cases in the list of "authentic"

82. Charlie Edwards and Luke Gribbon, 'Pathways to Violent Extremism in the Digital Era', *RUSI Journal* (Vol. 158, No. 5, October/November 2013), pp. 40–47.
83. Simon, *Lone Wolf Terrorism*, p. 80.
84. Stewart and Burton, 'The "Lone Wolf" Disconnect'.
85. Bakker and De Graaf, 'Lone Wolves', p. 4.
86. Gill, 'Seven Findings on Lone-Actor Terrorists'.
87. Eby, 'The Nation that Cried Lone Wolf', p. 37.
88. *Ibid*., p. 37.

lone wolf terrorist attacks can skew the data and subsequent inferences and conclusions'.[89] This is particularly pronounced in relation to tactical decisions: 'in most sting cases the FBI's confidential informants and/or undercover agents played an important role in both coming up with the bombing idea and supplying fake explosives.'[90]

The literature also suggests that lone wolves are more likely to launch attacks on a given weekday than on a given day during a weekend. Younger attackers tend to launch attacks near their homes, while older perpetrators prefer to travel further to carry out their acts.[91] While not commenting on age, Fredholm suggests that in his dataset of fifteen cases, the majority tried to 'strike near home'.[92]

Offering no specific evidential base, the papers of Bakker and de Graaf and Stratfor both posit that lone wolves are particularly prone to detection during the reconnaissance and planning stage of their attack cycle.[93] This seems a logical conclusion to make given the presumed illicit activity that they would potentially have to undertake at this phase and their lack of professional training to mask their activities, but neither paper proffers data to support this assertion. Nevertheless, the area is a potentially underexplored approach to try to detect lone actors.

Responses to Lone-Actor Terrorism

The question of response does not receive detailed consideration in the literature. Rather than considering specific programmes directed towards the individual actor, there is instead an implicit suggestion that responses should focus on wider society. While lone actors, by definition, act in isolation without direction or support from a wider group, they generally remain part of a broader community. The logic underlying a societal response is that actors within that community such as doctors, social workers, librarians or even a neighbour may interact with potential lone actors and detect unusual behaviour. A societal response that raises awareness therefore increases the possibility of detection, and also increases the possibility of behaviour being reported and the potential attack disrupted.

The suggestion has empirical support. Gill suggests that 'in the time leading up to most lone-actor terrorist events, evidence suggests that other people generally knew about the offender's grievance, extremist ideology, views and/or intent to engage in violence.' Furthermore, 'Lone-actor terrorists regularly engaged in a detectable and observable range of behaviors and activities with a wider pressure group, social movement or terrorist organization.'[94] Both of these suggest some level of visible interaction between lone actors and the communities with which they self-identify, offering a way for security agencies to detect individuals prior to them launching terrorist attacks.

89. Spaaij and Hamm, 'Key Issues and Research Agendas in Lone Wolf Terrorism', p. 172.
90. *Ibid*., p. 12.
91. Eby, 'The Nation that Cried Lone Wolf'.
92. Fredholm, 'Hunting Lone Wolves'.
93. Bakker and De Graaf, 'Lone Wolves'; Stewart and Burton, The "Lone Wolf" Disconnect'.
94. Gill, 'Seven Findings on Lone-Actor Terrorists'.

The British case of Andrew Ibrahim offers a clear example. In April 2008, members of a Bristol mosque noticed burn marks on Ibrahim's hands and arms; already concerned by his radical views, they contacted their community police officer. When police subsequently raided Ibrahim's flat, they discovered explosives, a suicide vest and evidence that he had been planning to attack a local shopping centre. Strong relationships between the police and the community had created an environment in which Ibrahim's suspicious behaviour could be detected and his plans disrupted. However, replicating this is challenging; it is not sufficient to establish reporting mechanisms. Trust must also be engendered and steps taken to ensure the public can accurately identify concerning behaviour. Bakker and De Graaf suggest that 'awareness programs for parents, schools, universities could be interesting to reflect upon – obviously without launching large scale public campaigns that only serve to create a moral panic.'[95]

However, such strategies are often part of general counter-terrorism policy, and there is a consensus across the literature regarding the difficulty of crafting specific policies to counter the lone-actor threat. Instead, most papers offer ideas that tackle the problem of terrorism more broadly, suggesting that in addressing this, the more limited problems of lone-actor terrorism will also be tackled. It should be noted, however, that there is little evidence concerning the effectiveness of this approach.

Nonetheless, some potential areas for intervention are identified in the literature. In particular, the Internet is offered as a vehicle of early detection. The FOI concludes 'there is a good possibility that [lone actors] leave digital traces in the form of weak signals that can be gathered, fused, and analyzed.'[96] Moreover, the fact that 'many lone wolf terrorists are only loners in their offline life [makes] the Internet an incredibly important source for finding them.'[97] Fredholm and Weimann agree with this conclusion, highlighting to various degrees how the Internet might be used to focus on lone actors.[98] Katie Cohen goes further, suggesting that authorities should monitor the radicalisation and attack-planning processes of individuals by tracking and analysing movements and linguistic patterns on social media.[99] Machine translation, mapping websites and author recognition are all mechanisms for detecting linguistic markers which can indicate warning behaviours on social media. Linguistic markers 'can be used as inputs to computer algorithms so that they may be able to recognize signs of radical violence'.[100] The effectiveness of all of this remains unclear, however, with Jason-Leigh Striegher in particular making the salient point that the issue with lone actors is that often there is known intelligence (either online or elsewhere), but it is not known to be useful.[101]

95. Bakker and De Graaf, 'Lone Wolves', p. 7.
96. Brynielsson et al., 'Analysis of Weak Signals for Detecting Lone Wolf Terrorists', p. 197.
97. *Ibid.*
98. Fredholm, 'Hunting Lone Wolves'; Weimann, 'Lone Wolves in Cyberspace'.
99. Katie Cohen et al., 'Detecting Linguistic Markers for Radical Violence in Social Media', *Terrorism and Political Violence* (Vol. 26, No. 1, 2014), pp. 246–56.
100. *Ibid.*, pp. 246–56, 253.
101. Striegher, 'Early Detection of the Lone Wolf', pp. 35–53.

Conclusion

While there is some excellent research in the literature, there are many opportunities to add further value to our understanding of this growing threat. Three in particular are highlighted here: first, increased methodological rigour in empirical research; second, focus on process as well as perpetrators; and third, specific examination of the confluence between returning foreign fighters, domestic Daesh supporters, and the lone-actor threat.

Lone-actor terrorism presents particular challenges for empirical research. This issue has recently been examined in some depth by Spaaij and Hamm who conclude that 'While research on lone wolf terrorism contains pockets that meet high scholarly standards ... overall, it still suffers from considerable problems regarding quality and rigor, including definitional, conceptual, methodological, and inference issues.'[102] As discussed above, the inconsistency in definitions of the phenomenon means caution must be exercised in comparing studies; however this issue is surmountable. Of greater concern is the unqualified inclusion of 'sting operations' and evidence of poor research practice. Sting operations are a prevalent tactic in the US and many studies examining lone-actor terrorism include perpetrators identified through such methods;[103] however, as Spaaij and Hamm highlight, their inclusion in the statistics on lone-actor terrorism is questionable as 'in the mind of the perpetrator, he or she was acting with a like-minded individual as part of a small group or cell.'[104] Moreover, the FBI involvement influences the development of the plot, and is often instrumental in procuring weapons or explosive material, undermining any analysis of 'lone-actor' weapon choice or tactics.[105] Spaaij and Hamm also find evidence of poor research practice, with papers taking data from open-source databases without further work to verify their accuracy or completeness, meaning analysis can sometimes miss key lone-actor cases, skewing findings and misrepresenting the threat as a result.[106] Future empirical research should consider such issues and pursue a high standard of methodological rigour, without which there will always be limitations to the contribution academic research can make to quantifying this threat and understanding its trends.

Research exploring those who become lone actors will always have value, especially as we seek to identify those at risk and prevent radicalisation to violence. However, to date the focus on this area has been at the expense of understanding the process employed from plot inception, through planning, to execution. It has been highlighted that it is perhaps during this terrorist-attack cycle that lone actors are most vulnerable to detection.[107] Increased focus on this

102. Spaaij and Hamm, 'Key Issues and Research Agendas in Lone Wolf Terrorism', p. 175.
103. Eby, 'The Nation that Cried Lone Wolf'; Becker, 'Explaining Lone Wolf Target Selection in the United States', pp. 959–78; Teich, 'Trends and Developments in Lone Wolf Terrorism in the Western World'.
104. Spaaij and Hamm, 'Key Issues and Research Agendas in Lone Wolf Terrorism', p. 172.
105. *Ibid*.
106. The paper cited is Victor Asal, Kathleen Deloughery and Ryan D King, 'Understanding Lone-Actor Terrorism: A Comparative Analysis with Hate Crimes and Group-Based Terrorism', Final Report to the Resilient Systems Division, Science and Technology Directorate, US Department of Homeland Security, September 2013.
107. Stewart and Burton, 'Lone Wolf Lessons'; Bakker and De Graaf, 'Lone Wolves'.

process, rather than only the perpetrators and their characteristics, may therefore produce more opportunities for detection and disruption.

Finally, the current political context and its impact on the growing threat have not yet been examined in sufficient depth. Although not a new phenomenon, recent waves of European nationals travelling to Syria and Iraq to join Daesh have served as a catalyst for increasing concern about fighters carrying out attacks upon their return. Nigel Inkster compares this recent wave of 'international jihadists' with those who fought the Soviets in Afghanistan in the 1980s and suggests that once they form ties and affiliations, they become a 'band of brothers, united by shared experiences, shared outlooks, shared ideology, and that they then move on looking for new forms of jihad to undertake, one of which could well consist of attacks in countries such as the UK'.[108]

Returning fighters may represent a particularly potent threat, having acquired skills in bomb-making or the use of small arms, gained combat experience or developed valuable contacts within terrorist networks.[109] Examining terrorist activity between January 2011 and June 2015, Thomas Hegghammer and Petter Nesser found evidence to support these concerns of increased lethality, concluding that plots executed by fighters resulted in an average of 7.3 deaths per attack, in contrast to 1.2 for those attacks without such experience.[110] If returning foreign fighters pose a terrorist threat, it is perhaps most likely to be manifested in a lone-actor attack; indeed, Daesh is explicitly encouraging its supporters to pursue this model, carrying out attacks without specific direction in order to minimise the chances of detection.

The threat from the conflict emanates not only from returning fighters, but also supporters who have not travelled to Syria or Iraq. In the UK, Brusthom Ziamani did not think he would be able to reach the conflict so instead planned a domestic attack; he was arrested with a knife and hammer on his way to behead a soldier. In Australia, Abdul Numan Haider stabbed two police officers after learning that his passport had been cancelled, while in Canada, Martin Couture-Rouleau attacked two soldiers three months after he was prevented from travelling to Turkey. Since January 2011 there have been more than twice as many plots by Daesh sympathisers as foreign fighters.[111] While these actors may lack the direct battlefield training and increased lethality of returning fighters, they remain a significant threat in an environment where any casualties are unacceptable.

Recognising the challenges of the current environment, the UN's Counter-Terrorism Committee Executive Directorate has suggested the following as factors that may predict whether an individual is a prospective lone-actor terrorist: interest or attempt to travel abroad to certain

108. House of Commons Home Affairs Committee, 'Counter-terrorism', HC 231, Seventeenth Report Session of 2013–14, May 2014, p. 19.
109. MI5, 'Foreign Fighters', International Terrorism, <https://www.mi5.gov.uk/home/about-us/what-we-do/the-threats/terrorism/international-terrorism/foreign-fighters.html>, accessed 21 October 2015.
110. Thomas Hegghammer and Petter Nesser, 'Assessing the Islamic State's Commitment to Attacking the West', *Perspectives on Terrorism* (Vol. 9, No. 4, 2015).
111. *Ibid*.

conflict zones or to areas where one can get training; length of time spent abroad in conflict zones, based on the rationale that interest deepens over time; attempts to join or engage with a terrorist organisation; frequenting certain websites or chat forums, and developing increasingly extremist views.[112] However, this remains one of the few examples in the literature to have specifically examined the connection between foreign fighters, attempted travellers and lone-actor terrorism.

Given the current focus across Europe on returning foreign fighters and domestic supporters of Daesh, and considering the vocal encouragement from the group to pursue the lone-actor model, it seems clear that this form of terrorist threat will be a central concern among security planners for the foreseeable future. Currently, however, the literature has not caught up, and in particular remains relatively bare in its examination of the threat from failed or prevented foreign fighters. While there are many areas in terrorism studies where further research would be valuable, within the current climate, the lone-actor dimension is perhaps the most pressing.

112. Counter-Terrorism Committee Executive Directorate, 'Bringing Terrorists to Justice', p. 4.

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