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Influences and vulnerabilities in radicalised lone-actor terrorists: UK practitioner perspectives

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Abstract
The threat to national security from terrorists acting on their own initiative is a challenge for law enforcement and intelligence agencies in the UK and elsewhere. The UK Parliament's 2014 threat assessment noted 'a trend towards 'low signature' terrorism by small, self-directed groups and lone actors' [House of Commons Home Affairs Committee (2014) *Counter-Terrorism – Seventeenth Report of Session 2013–14*]. Lone actors have become a higher priority for counter-terrorism professionals (UK police, Prevent practitioners and security agencies), but there is a paucity of research into the views and awareness of these professionals. This qualitative study examined how Prevent practitioners perceived the radicalisation and motivations of lone-actor terrorists they had encountered. Participants were an opportunity sample of five Prevent practitioners; all had served as police officers with varying employment backgrounds and counter-terrorism experience. A thematic analysis of semi-structured interviews identified perceived general characteristics of lone-actor radicalisation. Three themes clustering around the concept of becoming a terrorist are discussed: mechanisms of radicalisation, vulnerability to radical discourse, and individual motivation. Participants construed radicalisation as a process over time, accelerated in the presence of generalised criminality or extensive Internet use. Vulnerability was seen as inherent, as well as a product of social context. Participants adopted folk-psychological explanations with mental health problems, social isolation and relative deprivation cited as prominent vulnerability factors. Lone actors were seen as motivated by grievances (e.g. deprivation), pressure from external sources (e.g. rational prospectors) or personal reward (e.g. sensation-seeking). Practitioners' perceptions of the process over time had parallels with a diathesis–stress model, although there was some support for social movement theory.

Keywords
Counter-terrorism, lone actors, radicalisation, Prevent, extremism

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The threat to national security from terrorists acting on their own initiative is a developing challenge faced by law enforcement and intelligence agencies in the UK and the

rest of the world. The House of Commons' counter-terrorism report noted 'a trend towards "low signature" terrorism by small, self-directed groups and lone actors' (House of Commons Affairs Committee, 2014: 6). The report also highlighted police concerns over self-radicalising individuals motivated to commit independent attacks (House of Commons Affairs Committee, 2014). Examples include Pavlo Lapshyn who stabbed an elderly Muslim man and detonated explosives outside three UK mosques in 2013 (Dodd, 2010, 2013; Lumb and Casciani, 2013) and lone actor Anders Breivik who killed 77 people in Norway (Bakker and de Graaf, 2010, 2011).

The extant literature revolves around particular topics. Radicalisation studies generally focus on individuals' cognition and the ways in which ideas culminate in violent action (Borum, 2011a, 2011b). It has also been established that lone actors are notoriously difficult to detect using the existing repertoire of investigative techniques (Bryniels-son et al., 2012). More generally, in counter-terrorism research, there is a paucity of empirical studies. A 2008 systematic review found thought pieces predominant, with empirical work comprising as little as 3% of the literature (Lum, Kennedy and Sherley, 2008). Sageman (2014: 565) wrote of the stagnation in counter-terrorism research due to 'an unbridgeable gap between academia and the intelligence community'. Sageman concluded that this academic–practitioner gap was responsible for the current failure to understand what leads someone to political violence. The lack of empirical studies from poor or no access to data may also explain the tendency to produce unrelated disparate academic models. Ackerman and Pinson (2014), noting the absence of data on lone actors, compiled their own chemical, biological, radiological or nuclear (CBRN) database of recorded incidents involving 474 perpetrators, but acknowledged significant gaps; some identities were unknown, other attributions (e.g. political cause, target) had to be categorised as 'probable' or 'possible'. Post attack, case studies do appear with public access documents used as data. Gartenstein-Ross (2013) used multiple data sources, interviewing criminal justice professionals and analysing public court documents to produce a case study on lone actor Abdulhakim Mujahid Muhammed (née Carlos Bledsoe). McCauley and Moskalenko (2014) also used publicly available data, collating opinion pools of UK and US Muslims to infer radicalised opinions (also see Kedar and Yerushalmi, 2011; Jasparro, 2011; and Jordan and Mañas, 2007). McCauley and Moskalenko (2014) also explored radical action via case histories of radicalised lone actors (also see e.g. Jensen, 2014, for historical case studies). Lone actor Anders Breivik's online postings and high media profile provided data for several studies. Pantucci (2011a, 2011b) acknowledged the debt to Breivik's own online biography as a data source, as did Johnsen (2014) who used it for content analysis (also see Bakker and de Graaf, 2011, on Breivik and other lone wolf case histories). Although rich in detail, idiographic approaches (for want of larger data samples) leave a research gap. As Sageman argued, access to data constitutes the more central challenge. Hewitt (2014) also drew on public records to examine lone wolf ($n = 10$) and other attacks ($n = 10$). The law enforcement agencies' investigation was an organising rationale for Hewitt's cases; however, being confined to publicly available data created a necessarily partial view. Sageman's (2014) view appears to be confirmed in that empirical work, where it appears at all, tends to rely on views from the outside rather than data from the inside. This lack of access to intelligence agencies' data may be unsurprising, but is nevertheless unsatisfactory for understanding the topic. Securing access to counter-terrorism professionals seems unfortunately rare, yet is necessary to establish an inside view of practice.

A further obvious inference from the dearth of empirical work is that counter-terrorism praxis may not be evidence based. However, it is difficult to be sure because comparatively little is known about practitioners. Researching practitioner perceptions of lone-actor terrorists therefore constitutes a valuable and rare addition to the literature. In short, the focus of the this article is less on establishing lone terrorists' internal motivations or cognitive factors and more on describing Prevent practitioners' perceptions of their encounters with lone actors.

This study faced the same challenges Sageman identified in that it comprised a very small sample, which was, therefore, likely to be viewed as problematic in some respects. For example, generalisation would be regarded as difficult as would seeking to validate academic theoretical models from such an underpowered sample. However, an opportunity to explore the perceptions of a rarely accessed professional group should not be lost. Asking 'To what extent does practice reflect what is known?' might not yield answers of sufficient power from which to generalise, but it was anticipated that an exploratory analysis of some counter-terrorism practitioners' perceptions would provide some interesting future directions on issues that could be fruitfully explored in greater depth. In short, an empirical study (with limitations acknowledged) was preferable to a further speculative 'thought piece'. Hence, we aimed to seize the opportunity for access and understand some practitioners' views. It is relevant to discuss officers' understanding of lone actors in light of the research evidence base. To that end, an overview is presented next.

Terminology and definitions

'Prevent' is the first of four key strands in the United Kingdom's (UK) strategic counter-terrorism document, CONTEST. Prevent is specifically concerned with preventing individuals becoming terrorists or being drawn into supporting terrorism. Prevent is a multiagency responsibility (e.g. criminal justice, education) and the document sets out guidance, structures or arrangements for relevant agencies to inform programme development and delivery (Home Office, 2011).

Given that participants were UK Prevent practitioners, 'radicalisation' was defined in accordance with their policy-prescribed working definition from the UK Prevent strategy: 'The process by which a person comes to support terrorism and forms of extremism leading to terrorism' (Home Office, 2011: 108). Similarly, the term 'lone actor' was adopted because it is used by MI5 and therefore pertinent to the UK counter-terrorism context. The term has been criticised as a multifarious construct (Nesser, 2012), but the literature shows reasonable consensus for the term when recognised affiliation was absent; in addition, lone actors also encompassed other definitions' referents (see e.g. Pantucci, 2011a, 2011b, on loners and lone wolves).

MI5 is part of the UK's security services responsible for protecting the UK's national security. Countering terrorism, espionage and latterly cyber threats all fall within the security services' remit. MI5 is responsible for domestic security, whereas its counterpart MI6 undertakes the same duties in relation to foreign threats. They do so via gathering, analysing and otherwise managing information and intelligence. Responsibilities also include advising the government or other agencies on how to combat security threats (MI5, 2015). The MI5 definition 'Groups or individuals [that] motivate themselves, develop the capability to carry out attacks and select targets completely independently of established terrorist groups' (MI5, 2014) was duly adopted and bounded the scope of the research.

It was not known what personal beliefs or values the participants held; indeed, the Prevent practitioners had varying backgrounds, but their occupational role nonetheless bounded, and thus homogenised, the group on the relevant dimensions. Policy and procedures are powerful communicators of the organisational status quo (Andras and Charlton, 2005). These and other organisational products also maintain organisational identity (Eyre and Alison, 2007; Eyre, Alison, Crego and McLean, 2008). Specifically, the practitioners' occupational role ties them to the Prevent strategy and accompanying programmes (e.g. Channel, see below) and situates their organisational identity, locating them as individuals within a specific organisational culture. Organisational norms would be mediated through a practitioner's individual organisational identity and likely experienced as pressure to conform to the policy or procedural status quo. Homogenising the group via organisational identity (Tajfel and Turner, 1986) may well enhance representativeness. This cannot be measured in this small study, merely averred; however, given they were drawn from a specialised population, it is likely that this small sample was more representative of its relevant population than general samples (Eyre, 2014). It is nonetheless acknowledged as speculative. Although these processes were not the main object of concern in this study, social (aka organisational) identity theory (Tajfel and Turner, 1986) and self-categorisation theory (Turner, Hogg, Oakes, Reicher and Wetherell, 1987) have explanatory power for the plausible mechanisms of practitioners conforming to or rejecting particular ideas or beliefs about lone wolves. Albeit beyond the scope of this article, it may prove a useful avenue for others to explore.

Scoping the problem

The discourses around violent extremism are replete with ill-defined concepts (see, e.g. Richards, 2011, on senior police confiding that they do not know what the Prevent strategy actually means, or Schmid, 2004, on various frameworks for conceptualising terrorism). Lone wolves are likewise a nebulous phenomenon. In highlighting the danger of Internet access for lone actors, some characterise lone wolves as misanthropes too socially inept to function as part of operational networks of terrorists (Ackerman and Pinson, 2014). The idiosyncratic nature of such actors reduces the possibility of identifying (and thereby effectively countering) their attacks. Lone wolves may, then, be disproportionately feared beyond the threat they actually present. In short, prediction demands a pattern, but there cannot be a pattern in a sample of one. Hence, this unpredictability means there is something of the bogeyman about a lone wolf that propels fear (Burton and Scott, 2008). In turn, worst case scenarios tend to appear with CBRN attacks cited despite the difficulties a lone actor would face in obtaining such weapons. Ackerman and Pinson (2014) acknowledged the difficulties lone wolves faced in obtaining CBRN weapons; where cases did exist, chemical agents were the most likely to be used, although biological weapons led to the greatest disruption (e.g. anthrax in the post). Cases were generally too few to distinguish reliably from individuals with formal terrorist affiliations, although lone actors' motives were found to be criminal or idiosyncratic, with the latter being associated with mental illness.

Identifying the scale of the challenge, Spaaij (2012) reported 198 lone-actor attacks in Europe, Australia and North America between 1968 and 2010. Within a context of 9591 total incidents recorded on the Homeland Security database (National Consortium for the Study of Terrorism

and Responses to Terrorism, n.d.), lone-actor attacks form a small proportion and, thus, are understandably seen as black swan events (Bakker and de Graaf, 2010). Research into the lone-actor phenomenon is, therefore, faced with the challenge of a comparatively small number of cases although the body of literature has grown as the number of lone-actor attacks has increased (Bakker and de Graaf, 2011). A range of topics have been covered. Theoretical frameworks explicate contextual influences. However, much of the literature focuses on 'looking inside' the individual, for example, the rationality of individuals' decision making, with studies of cost–benefit analyses (McCauley and Moskalenko, 2008), mental health difficulties (Spaaij, 2010, 2012) or isolation (Gruenewald, Chermak and Freilich, 2013) cited as contributory factors. It is difficult to move the research forward beyond speculation and fear-driven worst-case scenarios without access to reliable data. Indeed, Sageman (2014: 565) argued that terrorism research had stagnated, attributing this to 'an unbridgeable gap between academia and the intelligence community' denying researchers access to data and thus preventing empirical research.

Pathways to violence

Within the extant literature on radicalisation and other politically motivated violence, there is academic consensus on a complex and dynamic interplay of circumstances and mechanisms, and support for the notion of each individual's unique combination of contributory factors and psychological processes (Cohen, 2012). No single explanation is applicable to all instances (Borum, 2011a); some features and mechanisms are nonetheless recurrent, generating a number of phased-pathway models (Spaaij, 2012). Pathways typically propose adoption of extremist beliefs and progression to violent acts (Cohen, 2012) with stages in between that offer either disengagement opportunities or alternative radical expression (Spaaij, 2012).

Theoretical frameworks

Social movement theory and conversion theory are prominent theoretical frameworks. Social movements are acknowledged as dynamic and complex entities (Bayat, 2005), and social movement theory seeks to explain the processes entailed in social mobilisation (Marsden, 2014). The theory provides insight into the processes underpinning social movements, where movement refers to cooperating individuals who act collectively to effect social change such that cultural or political environments may be transformed (Bayat, 2005). It is predicated on the ideas of political opportunity to engage with or oppose elites and mobilise resources to attain specifically framed goals (Marsden, 2014). Fuist (2013) argued that culture was an important influence on social movement. Specifically, he cited the role of culture as a resource, as an influence on particular sites as seats of social movement and, more generally, as a contextual framework for activity (also see Gahan and Pekarek, 2013, on social movement theory as framework for the development of collective identities). The theory accommodates explanations of particular forces as being pivotal to social movements; for example, Tuğal (2009) introduced a hegemonic account to account for Islamist social mobilisation.

Social movement theory extends beyond individual cognition to consider the role of recruiters in the decision to embrace a movement or radical ideology, describing them as rational prospectors (Brady, Schlozman and Verba, 1999). Rational prospectors aim to stimulate the movement's growth by identifying vulnerable individuals and securing their participation (Borum, 2011a). The approach explicates group processes so might not initially appear applicable to lone actors, but online resources may function as a social influence in the absence of recognised terrorist affiliations (Brady et al., 1999). Thus, social movement models can incorporate lone-actor terrorists. Wiktorowicz's (2005) well-established model is perhaps the best known in social movement theory, positing a four-component radicalisation process: cognitive opening, religious seeking, frame alignment, and reinforcement from external commentators (Borum, 2011a, 2011b).

Compared with social movement theory, conversion theory has less emphasis on groups or movements and more on understanding how individuals change existing beliefs to conform to a new ideology. Nevertheless, there are some parallels with the stages in social movement theory models. Rambo's (1993) seven-stage conversion model (conversion, crisis, quest, encounter, interaction, commitment and consequences) explained the cumulative stages in the progression of religious change. The model is equally capable of explaining how individuals are able to change their belief system (Borum, 2011a, 2011b). Conversion theory's reliability and validity are considered reasonable given repeated study over the last half-century (Borum, 2011a, 2011b).

Drivers and motivations

For the most part, radicalisation theories develop the concept that the principal motivation driving radicalisation is discontent or deprivation relative to other populations (Spaaij, 2012). Such personal grievances propel lone actors to seek redress; they incorporate them into their own motivational narrative alongside the more general sentiments of a radical ideology. This amalgamation results in a personal ideology, but common grievances do not necessarily mean

a single profile (Spaaij, 2012). Lone actors may vary considerably in their respective ideological affiliation, method of attack and religious beliefs. Further, the reliability of the common features suggested may be questionable due to a lack of citable examples and an over-reliance on historical data from high-profile cases (Bakker and de Graaf, 2011).

Personal circumstances are thought to drive grievances that influence radicalisation (Bhui, Warfa and Jones, 2014). The variety of circumstances is reflected in the literature: for example, Nesser (2012) cited social isolation as a key vulnerability factor, whereas Brynielsson et al. (2012) argued that reclusion applied to real-world existence, but did not extend to online personae; Weimann (2012) regarded the Internet as having a significant role in radicalisation (also see Ranieri and Barrs, 2011; Raudler, 2014; Sivek, 2013); Conway and McInerney (2008) tracked greater accessibility of extremist content; and Dienel, Yair, Rapp and Ahituv (2010) examined online content and its effect on radicalisation of potential terrorists. Given the focus on practitioner perceptions, however, a detailed review of lone actors' actual circumstances is beyond the scope of this study.

Mental health

More generally, radicalisation research has shifted focus from the erstwhile assumption that violent extremism was the preserve of the mentally unstable to an understanding of radicalisation and violent extremism as a complex and dynamic process (Borum, 2011a). The existing literature typically develops the concept that the principal motivation for radicalisation is discontent, political suppression or deprivation relative to other populations (Spaaij, 2012). This is alongside a widely supported view that mental illness is not one of the overriding characteristics of terrorists (Bakker and de Graaf, 2011). However, that view was predicated on terrorists committing violent acts under the command and control of a terrorist organisation. By contrast, lone-actor terrorism has been identified as being associated with higher instances of psychological disturbance and social isolation (Spaaij, 2010). Mental health issues were also identified in the Channel Vulnerability Assessment Framework as a psychological hook likely to influence an individual's engagement with an ideology (Her Majesty's Government, 2012). The Channel assessment framework (or colloquially, 'programme') refers to a UK multiagency initiative designed to identify individuals at risk of radicalisation and provide them with support. Multiagency panels assess risk and decide how best to devise and deliver bespoke support. Interventions aim to de-radicalise individuals or safeguard against being drawn into acts of violence (Home Office, 2011). Among other issues, such assessments would consider this very important qualification: lone actors' mental health difficulties do not necessarily affect their cognitive regulation. They may still possess the mental capacity and organisation to plan and carry out an attack (Spaiij, 2012).

In sum, the extant literature ignores the professionals in favour of seeking to understand potential offenders. Several pathways or factors in radicalisation are proposed including higher rates of psychological abnormality in lone actors and the use of Internet resources to access radical materials.

Method

The current research built on the work of Spaaij (2010) on lone-actor radicalisation in the USA by providing a parallel UK picture. The MI5 definition adopted here was concordant with Spaiij's non-affiliated, non-trained individuals, some with mental health problems. Data comprised semi-structured interviews with UK Prevent practitioners.[1] Thematic analysis (Braun and Clarke, 2006) was used to examine the data. The theoretical and epistemological freedom of thematic analysis enabled analysis to stay close to the data and explore implicit and explicit concepts (Guest, McQueen and Namey, 2011). It was an ideal method for capturing in-depth, practitioners' perspectives.

As mentioned earlier, data came from a small sample. It is beyond the scope of this study to discuss the merits of small samples but, suffice to say, there is not a dichotomy between statistically sufficiently powered samples and no generalisation or even no insight at all. Empirical generalisation does not require a statistical technique or a sample size of sufficient power for statistics (Gomm, Hammersley and Foster, 2000). Williams' (2000) idea of moderatum generalisation can be invoked. Moderate claims can be made where there is some form of cultural consistency in the social environment, such as a shared occupational culture (also see Eyre, 2014; Fairweather and Rinne, 2012). This sample was homogenised on relevant dimensions, sharing organisational culture, professional development programmes, policy and procedures and so forth. These features may not have been measured, but they clearly existed, allowing some moderatum generalisations to be made. It could be argued that they are not as valid or reliable as higher powered larger samples; they may, nonetheless, serve to provide ecologically valid insights which can act as springboard for future in-depth research in a domain sorely lacking in empirical work.

Participants

Interviews were conducted with an opportunity sample of Prevent practitioners with varying employment backgrounds and counter-terrorism experience. Given the sensitivities of the work and the relatively small total population, anonymity could be compromised, so participant

Table 1. Participant demographics.

Participant number	Age (years)	Sex	Current employment (years)	Counter-terrorism experience (years)
1	43	Male	6	6
2	53	Male	2	15
3	59	Male	1	4
4	56	Male	2	9
5	58	Male	5	30

detail is necessarily restricted here although all had previous employment as police officers, homogenising the group in terms of organisational culture, professional development and so forth. The sample consisted of five participants responsible for the delivery of a variety of Prevent products, including delivery of the Channel programme. All participants were male; ages ranged from 43 to 59 years ($M = 53.8$); experience in counter-terrorism work ranged from 4 to 30 years ($M = 12.8$). Demographics are presented in Table 1.

Procedure

Participants were contacted via email with a description of the study, ethics and consent information, researcher contact details and a request for a semi-structured interview (max. 1 hour) with the researcher. Opt-in consent was obtained. A Dictaphone was used to record the face-to-face interviews that were later transcribed, coded and analysed to identify common themes. Handling of interview data conformed with all requirements of the Data Protection Act (Her Majesty's Government, 1998). Analysis comprised line-by-line coding. In vivo or summary codes were used to facilitate indexing of features. Categories were refined iteratively. Emergent themes were then reviewed in comparison with established lone-actor characteristics to assess relevance of current literature to UK radicalisation prevention initiatives. Findings are presented as direct quotations from transcript extracts supporting discussion of extant literature.

Results and Analysis

Three themes on lone-actor radicalisation, clustering around the concepts of vulnerability and motivation are discussed, they are: mechanisms of radicalisation, factors of vulnerability to radical discourse, and individual motivation; they are detailed below.

Mechanisms of radicalisation

Participants did not exemplify a particular model of lone-actor radicalisation. However, they did construe radicalisation as a process over time and described differences: those already predisposed to criminality were perceived as moving more quickly to acts of violence; others seen to move quickly did so via the assistance of Internet sources.

> Some people do go over a long process … and then get more and more frustrated and move towards direct action at the end. I think the longer process is for people outside the criminal arena, people with genuine grievances who've tried legal … they've protested and they think, 'Actually this is doing nothing for me', and then move on. … I think there are other people who are already in the criminal arena and they can jump straight into it. (P1)

> Somebody can go from A to Z very quickly, they become an unknown, sat in their bedroom, researching conspiracy theories, watching YouTube videos, and then do something without any precursor involvement with security services. (P5)

> I think it's very difficult to profile what the route to radicalisation is … it's very difficult to map out, what the key stepping stones [are] for somebody. (P5)

Radicalisation was perceived to be a social process, whereby external voices influenced individuals by encouraging and legitimising individual acts of terrorism. The perceived role of external voices lends some support for social movement theories. Importantly, it was seen to occur beyond the sight of the security services. Participants' views were reflected through a policing lens. For example, general criminality was cited as a catalyst. Similarly, being absent from the purview of the security services was taken as evidence of rapid progression to violence. Neither are necessary inferences to have taken. Further research could examine the degree of support for earlier literature; for example, whether grievances about relative deprivation were specific motivation for terrorism (Spaiij, 2012) or whether deprivation was a driver of generalised criminality later channelled towards terrorism. Alternatively, this finding could simply be a reflection of interpreting behaviour through a policing lens and subsuming behaviours into a general criminal category.

Vulnerability to radical discourse

Vulnerability to radical discourse was a prominent theme. Broadly, individuals were characterised as vulnerable because of a personal characteristic that rendered them unable to resist radical discourse, or the influence of the social context in which they lived, or both. All participants viewed mental health issues as a significant factor in personal vulnerability.

> Certainly in our Channel cases, I would say it's really common … most of our Channel referrals have a mental health

element. These are the people that are getting drawn into grievances and I think it's around that sort of compulsiveness within some mental health disorders. (P1)

No doubt whatsoever that people with mental health issues are far, far more vulnerable and susceptible to this messaging. (P2)

Most terrorist organisations won't touch them [individuals with mental health problems] because they're too risky. That doesn't stop them being lone actors. (P1)

Common features seem to be low-level mental health issues where people become isolated, low self-esteem … can drive some of their behaviour. (P5)

Reference was made to specific cases and the perceived contribution of mental health problems to vulnerability to radicalisation. It was not clear what participants' views were predicated upon: for example, whether participants possessed any expertise in mental health or whether they drew on other professionals' formulations (e.g. psychiatrists or psychologists). However, the views do support the literature on higher numbers of lone actors having mental health problems (Spaaij, 2010, 2012). Comments had a folk-psychological tone.

Deprived emotionally, psychologically, he wasn't nurtured. (P1)

Because of that mental health issue, they are actually in a place where they can't actually rationalise a lot of these things, they can't actually understand the implications of what they are doing … what people are manipulating you to do … they take things very much at face value. (P2)

He walks around in his community: nobody will acknowledge him … he's [got] no social skills … so he doesn't engage with people so he's not, in my opinion, equipped for life. (P1)

Social isolation was also identified as a vulnerability factor but was not necessarily seen as an adjunct to mental health problems:

Individuals tend to have characteristics linked to that isolation, don't have big networks, don't have big association networks, can access the Internet, live quite isolated lives, aren't well known, don't have a lot of friends. (P5)

On the whole, participants' comments revealed a paternalistic attitude towards those regarded by dint of poor mental health as vulnerable to radicalisation. Participants highlighted a number of social or environmental factors that they thought influenced vulnerability to radicalisation. Reference was not made to an evidence base; instead, as elsewhere, a folk-psychology approach (Hutto, 2009) was adopted to explain influences on lone actors.

Participants characterised education as having bi-directional influence: it could function as a protective factor or as a driver of vulnerability.

Education, depending on what that level of education is … it's not about attainment, it's about the level of education you've received, your ability to be educated, your ability to access education. (P2)

I think living in deprived areas, low educational aspiration or attainment, or where you get people that have done quite well at school but can't get university places or can't get, having been to university, can't get into the better quality employment opportunities … you see a lot of people who we've encountered who have gone through school, done quite well, been to university, got a decent degree but still stacking shelves at Tesco. (P5)

It can work on two levels: people who've not had access to education are in a position where you can't rationalise things … or if you're super educated you might over think things and get to a point where you'll work yourself into a position where you see issues round every corner, you see conspiracy … you see things that may or may not be there. (P2)

Pathways to or processes of radicalisation were not explicated beyond the level of generalised influences on vulnerability. Again, ideas were refracted through a police lens with participants reaching for a propensity to generalised criminality as explanation. This perhaps points to the absence of evidence-based knowledge on counter-terrorism.

If that environment involves criminality then obviously you're more likely to move into a criminal field. (P2)

If that environment isn't right, then individuals can be radicalised and influenced. (P3)

The people we see in our line of work are no less vulnerable to drugs gangs; no less vulnerable to sexual exploitation; no less vulnerable to being abused … it's just that … people that come along want them to do other things. (P1)

It should be noted that one participant did explicitly mention the evidence base with reference to case studies.

Again, from convicted terrorist case studies, you look at it and it's a massive factor all the time. They've been subjected to hate crime and discrimination and it's not been dealt with

> appropriately by whoever the authorities are … you absolutely are in a place where you will listen to people who tell you: you need to do something to hit back. (P2)

Results obviously support the general idea of a pathway. However, a pathway would be a reliable-enough characterisation of any series of behaviours over time, and participants' ideas did not correspond to any specific model. Where discussion did move beyond generalised (e.g. environmental) influences, participants' ideas were implicitly based on a diathesis–stress model (Goforth, Pham and Carlson, 2011), whereby life events functioned as insurmountable challenges and thus became turning points. Specifically, an individual's vulnerability to acceptance of a radical ideal and consideration of violence was not necessarily constant. Critical life events may reduce resilience, thus rendering the individual more vulnerable to radicalisation:

> I also think there's a timing element to it; sometimes there might be an issue and it might pass people by. And other times, because there's a lot of other things going on in their life, that issue that may have passed them by a year before, at that point in their life becomes the most important thing. Certainly if they've got low self-esteem and they need something to galvanise themselves then they can fixate on that thing. (P1)

> I went through a divorce and your whole perception changes and I think if at that time … you are more vulnerable … You might have had the same things happen to you in the previous twenty years but if something hits you at that point when you're down, I can see where you might change … you often need something else to focus on. I can see that being the hook really. (P1)

> If you have suffered a loss or bereavement … a loss usually means a breakup in the family unit … something that actually has had a massive impact on how you exist … but superficially bereavement; you are very, very vulnerable to extremism in that situation. (P2)

As the extracts show, participants made sense of the impact of environmental stressors experienced by lone actors by reference to folk psychology (Hutto, 2009) and also through analogy to their own adverse life experiences. Despite the social pressures exerted by the presence of external voices, some ascribed more agency and ultimate responsibility to the potential lone actor:

> I'm not so sure that there isn't always some sort of outside influence but I think it's fair to say … the influence is something they seek out via the Internet or whatever … They find and they come to their own conclusions in relation to what they've researched and done and then they decide what they want to do about it. (P2)

In conclusion, participants strived to explain vulnerability by making various causal attributions. Discussions clustered around folk-psychological explanations and an implicit diathesis–stress model was used (Goforth et al., 2011). Overall, very little reference was made to evidence-based research.

Motivation

A key part of examining lone-actor radicalisation is attempting to identify what motivates a potential lone actor initially to seek out and then identify with a radical ideology. Participants saw the idea of individuals possessing a grievance as the single overriding motivational characteristic regardless of whether the grievance was real, perceived or what the grievance itself was. This point of view was supported by all participants with examples cited.

> It's more about grievance, whether that's real or perceived. (P1)

> Whether it's right or wrong, that doesn't matter. (P2)

> Grievances are [the motivation], and we live in a country where at the moment Muslims are arguably treated differently than others, whether it's the criminal justice system. (P3)

> They've got a grievance which has kicked in. Whether it's the concept of a white Europe and they're trying to stick up for it … something kicks them off. (P4)

Notwithstanding the dominance of the concept of grievance, other motivational factors were proffered such as perceived personal rewards for participation:

> You've got somebody that's got nothing and no hope … and actually they were going to do what they were doing anyway but be told that they're going to score loads of points, get themselves very popular, 70 virgins, whatever … I think that can be quite a strong message. (P1)

Participants also expressed the idea that motivation could be due to personal gratification rather than altruistic participation to further ideological goals. Reference was made to a case in which the individual enjoyed a temporary escape from his circumstances:

> Possibly one of the most mundane existences [due to] a very, very strict family … He will tell you, when he walked towards the library, he was getting butterflies in his stomach because it was exciting. (P1)

When asked to suggest reasons for an individual choosing to commit a terrorist attack independently of any

organisational structure, participants provided three main reasons: the grievance was very personal to the individual, they had been encouraged to do so by an external party, and they did not possess the means/opportunity to join an organisation.

> The very easy way to get those people together is to tell them that actually you're special, you're part of an elite ... you're specially chosen. (P1)

> [Rational prospectors have] a skill in saying 'My job is to teach you and make sure you fulfil your duty as a martyr'. (P1)

> Defend the Umma, their Muslim brothers ... don't see it as a personal responsibility in the sense it's something they've chosen to do, they see it as an obligation as part of their faith. (P2)

> We know through some of the reporting that ISIS approaches, they've been posting information on the Internet, YouTube, that is encouraging people ... if they can't travel and fight at the frontline, then there's a fight here. (P5)

> It's huge, probably one of the key influences of most, if not all of the people we've engaged with ... over a three-year period we have engaged with 2 to 300 young people, the common denominator was the access and use of Internet. (P5)

Findings on motivation supported earlier literature on social movement theory with all participants making mention of external (rational prospectors') appeals to vulnerable individuals and the role of the Internet as a social force despite the absence of formal affiliations. Again, there was support for Spaaij's (2012) earlier work on individual grievance as a motivator. In the current study, there was less support for the detailed cognitive mechanisms contained in conversion theory. It might simply not account for the individuals whom participants had encountered. Alternatively, practitioners may be unfamiliar with the evidence base. They did nonetheless 'look inside' and speculate on lone actors' motivations which did not relate to grievance:

> You've got power. I think that's what it is. You've got power to do something, you can make a difference. We'd all like to make a difference in the world. (P4)

> The thing about politics: it takes forever, it's boring, lot of hassle and I think with young men in particular, they like guns, like fighting, it's very exciting, so there's that element to it as well. (P4)

Discussion

Five Prevent practitioners in this qualitative study saw radicalisation among lone actors as a process, although the participants did not map an exact procedure. The support of a radicalisation pathway without a singular model may seem to strengthen Spaaij's (2012) depiction of radicalisation as a unique trajectory of idiosyncratic chemistry between vulnerability factors. However, participants did not relate unique, idiosyncratic cases. Rather, they described mental health problems and grievances as classifiably common features. Generalised criminality or other common-sense or folk-psychological explanations (Hutto, 2009) were proffered (e.g. social deprivation, poor education, absence of nurturing).

Notwithstanding the lack of support for mapped radicalisation pathways, there was some correspondence between aspects of current themes and named stages of radicalisation models in the earlier literature, but it requires cherry-picking to do so. This may point to the Barnum effect, which casts doubt on the utility of radicalisation models with discrete stages. It would be too strong to conclude that such models are artefactual. An alternative conclusion may be more safely drawn: Prevent practitioners seem unaware of the evidence base, given that they made little to no reference to the literature when explaining motivations and mechanisms of radicalisation.

Current findings showed less support for conversion theory, although this does not necessarily militate against the theory's validity given participants were not psychologists (it may, however, point to their unfamiliarity with extant research). Some participants implicitly applied social movement theories to explain the radicalisation of lone actors. The Prevent practitioners drew on the concept of a rational prospector with the potential to manipulate individuals' sentiments, and the importance of a community as a means of testing and reinforcing thought processes. The social movement paradigm was also supported through practitioners' descriptions of the role of the Internet. Participants described the Internet as a suitable platform from which to disseminate messages, where rational prospectors could persuade an individual towards taking personal responsibility for furthering ideological goals.

Factors that increase an individual's vulnerability to radical discourse received extensive support from Prevent practitioners. Mental health issues appeared to be a common feature characterising the lone actors that participants come into contact with on a regular basis. This ostensibly contradicts earlier research that terrorists are not characterised by mental illness and that so-called normal psychology is an almost universal trait (Bakker and de Graaf, 2011), but it is countered by studies that focus on lone actors (Corner and Gill, 2015; Hewitt, 2003). However, it was not clear from current data what expertise informed participants' conclusions: it is a commonplace that behaviour which cannot be understood becomes categorised as irrational, with a small step from there to imputing mental health problems.

This study's participants tended to perceive lone wolves as individuals with mental health problems. What is not clear from this small study is whether those perceptions have any reliable basis. As mentioned earlier, the literature suggests a higher prevalence of mental health problems among lone wolves than among other terrorists (Hewitt, 2003; Spaiij, 2010, 2012). Future research might usefully explore more fully practitioners' awareness of research in this specific area. Likewise, further work is needed on the consequences of practitioners' perceptions of lone wolves as having mental health problems; specifically, further exploration is warranted into the impact these perceptions of mental illness might have on the delivery of Prevent and how widespread the perceptions are. The views of this small sample may well be insufficient to influence organisational culture, but it is possible that these views are actually already representative of organisational norms with a concomitant impact on practice. Generally, then, mental health is potentially a rich seam to explore with regard to its impact on counter-terrorism practice and delivery of Prevent. Given the more recent literature showing higher rates of mental illness among lone actors, it could foreseeably make efforts at disengagement more challenging (Springer, 2009).

It was evident from the references to generalised criminality that practitioner perceptions were refracted through a policing lens (but see Gill, Horgan and Deckert, 2014, on terrorism and generalised criminality). Nonetheless, the vulnerabilities and motivational factors highlighted constitute valuable future research avenues. For example, Eby (2012) found education to be a factor influencing individual vulnerability (albeit as an unreliable indicator of radicalisation potential). This study mirrored this conclusion as participants described how quality of education may indirectly affect radicalisation potential. However, this study has yielded a somewhat more original interpretation in that high educational achievement was seen to contribute to grievances stemming from perceived injustice.

More generally, practitioners expressed affinity for the idea of grievance being the key motivator, or push factor, of seeking redress by violent means; this is a well-understood concept in contemporary radicalisation research and may provide the cognitive opening or crisis in Wiktorowicz's (2005) model and conversion theory respectively (Borum, 2011a). Grievance was not the only motivation perceived in individuals who become lone actors. More narcissistic incentives such as sensation seeking, risky behaviour or attaining popularity or notoriety were also proffered. Although participants supported the notion of lone actors motivated by excitement potential, they did not suggest its significance in relation to achieving ideological goals. Bates (2012), however, postulated that engaging in risky behaviour can be as important as the affiliated ideology.

Conclusion

In conclusion, this study was able to identify key practitioner themes about lone actors allowing comparison with research outcomes of current literature. The study found that existing models of radicalisation were not validated specifically by Prevent practitioners, but some individual features were supported. Prevent practitioners saw radicalised individuals as vulnerable to external influences. Influences were seen as proximal and distal, the former including mental illness, deprivation or generalised criminality, the latter including rational prospectors via the Internet: findings that show some support for social movement theory. Indeed, participants saw online platforms as important in the radicalisation of lone actors, supporting earlier research (Weimann, 2012). Heath-Kelly (2013) reported a dearth of empirical counter-terrorism studies. This was also noted by King and Taylor (2011) who also argued that radicalisation models were developed without reference to earlier models. This might account for the lack of correspondence between discrete stages and findings in this study about practitioners' views of lone actors. It may also highlight the difficulty in obtaining ecologically valid data (Sageman, 2014).

Overall conclusions that can be drawn are that lone actors are viewed as proceeding down a radicalisation pathway due to the need/desire to address grievances or satisfy a deficiency based on vulnerability factors. Prevent practitioners did not make explicit reference to any evidence base, but drew on folk-psychological explanations (Hutto, 2009) to account for lone-actor radicalisation and violent behaviours.

Participants reached, then, for folk-psychological explanations to understand the phenomenon of lone-wolf terrorism for lack of research knowledge. It may be unsurprising that practitioners lack an in-depth understanding of academic literature, but this does not excuse the absence of evidence-based practice. There is a normative dimension to the problem: academia ought not to be a separate parallel stream from praxis and neither party can afford to be complacent. Knowledge exchange is the responsibility of academics and practitioners alike. Practitioners charged with delivering effective intervention programmes aimed at deradicalising individuals regarded as vulnerable ought to have a solid grounding in main theories and empirical findings on the subject. It is the responsibility of academics to ensure that research has utility beyond journal publication. Academic peers ought to be the start not the end point of dissemination of research findings.

In the U.K., the establishment of the College of Policing and commissioned partnerships with research councils are welcome trends in developing evidence-based counter-terrorism practice. Partnerships can also be built informally

from the ground up and direct approaches locally can encourage early adopters of ideas which ultimately bear fruit at national level. There are different channels available for dissemination. Conferences as forums for knowledge exchange are as familiar a practice for practitioner agencies as they are for academics. Practitioners responsible for education are keen to embrace academic input into practitioner training. Academics being proactive in offering to inform practitioners about the relevance of their research to applied problems would be a welcome step in developing evidence-based practice. For example, they would help to reduce the folk-psychological explanations of lone wolves revealed by this study.

Better knowledge exchange could help develop evidence-based policy. Given the influence of policy as a communicator of the status quo (Andras and Charlton, 2005) and of organisational products generally in maintaining organisational identity (Eyre, 2014), policy development is an obvious means of developing counter-terrorism practice and influencing organisational culture positively. Policies could incorporate recommendations that practice and continuing professional development must take account of the evidence base. Similarly, by citing them as poor practice, policy can invoke prohibitions on folk-psychological explanations (Hutto, 2009) or inferring mental health problems in the absence of assessment. This study has identified a potential training need in that the boundaries of roles and responsibilities need to be better understood; likewise, developing awareness of which key professionals hold appropriate responsibility might help reduce such attributions being made.

Better understanding of the phenomenon of lone-wolf terrorism is a requisite foundation if practitioners are to dissuade potential lone wolves from acts of violence and steer them towards alternative non-violent avenues that would appeal or engage the types of individual in this group. The preceding step is, of course, to displace the stagnation in terrorism research identified by Sageman (2014). It requires academics to embrace opportunities for access to data when and where they appear, which in turn, requires rejection of methodolotry. Acceptance of 'good-enough' methods with a keen eye on limitations might begin to build a better empirical picture. It would at least help to define the problem space (Barton, Corteen, Scott and Whyte, 2007) more accurately, which cannot be done if academics prize methodological detail too highly. When privileging methodological detail comes at the expense of paralysing empirical work altogether, the cost is too high and the methodological debate is in any case redundant (Eyre, 2014; Frost and Nolas, 2011).

More fundamentally, displacing the stagnation would be predicated on the forging of academic–practitioner partnerships based on trust: trust that data (from larger samples than the present one) can be safely released to academics with the methodological skills to conduct analyses; reciprocally, trust that results will find their way back to the practitioner community which needs them to inform and develop practice.

Given the difficulty in obtaining ecologically valid data, this study makes a contribution: it provides a rare insight into the perceptions and experiences of Prevent officers and a useful springboard for further exploration of radicalisation of and violent acts by lone actors. The ostensible disconnect between the academic literature and practitioner perceptions serves as a call to academics to engage more in applied research, to practitioners to facilitate access, to develop knowledge exchange and ensure practice becomes evidence based.

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1. Schedule informed by Quayle's and Taylor's (2002) earlier work into cycle of abuse, available on request.

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