EXPLORING THE ROLE OF THE INTERNET IN THE RADICALISATION PROCESS AND OFFENDING OF INDIVIDUALS CONVICTED OF EXTREMIST OFFENCES

JONATHAN KENYON

(N0772947)

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THESIS ABSTRACT

Individuals holding extremist views are often considered as having exploited the Internet to spread their ideas, recruit others and communicate with one another. The threat of online radicalisation is also one of the most ubiquitous topics of academic and policy debates within the terrorism field. Through an overarching focus on the role of the Internet in the radicalisation process and offending of those who have committed extremist offences, the findings from this thesis have the potential to influence policy, inform counter-terrorism measures and effect changes in forensic practice in the identification, assessment and management of these individuals.

This thesis provides an original contribution to the literature by addressing the following:

1) The role of the Internet in the radicalisation process and offending of individuals convicted of extremist offences in the UK using a substantial data set and unique data source of 269 Structured Risk Guidance (SRG) and Extremism Risk Guidance (ERG22+) reports;
2) Reviewing the literature on lone actor terrorists, a sub-group of extremist offender where Internet use is assumed to be particularly prominent given their lack of contacts and influence in offline settings;
3) Providing recommendations for policy makers and forensic practitioners for those at risk of online radicalisation and those who have committed extremist offences.

This is accomplished via the contribution of two original pieces of work, a systematic literature review of pathways to lone actor terrorism and an empirical study exploring the role of the Internet in radicalisation pathways and offending of individuals who have committed extremist offences.

Within the systematic review, a lack of clarity is uncovered over definitions of lone actor terrorism, along with the emergence of typologies for differentiating between various forms of lone actor terrorists. An original contribution is made to the debate on pathways to lone actor terrorism by identifying six stages that shape lone actor behaviour, including use of the Internet. Similarities are also found between lone actor terrorists and other lone offender types, as well as comparatively high prevalence of mental health issues and personality disorder. The empirical study illustrates the increasing relevance of online radicalisation and online activity within extremist offending, suggesting the Internet has altered the means by which radicalisation is now taking place. Not only have there been changes in the way the Internet is used, but also a different profile of individual is now becoming susceptible to radicalisation through the online space, resulting in different types of offences and a range of considerations for assessment and management of risk.

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CHAPTER 1
INTRODUCTION TO THESIS

INTRODUCTION TO THESIS

The rapid expansion of the Internet and digital technologies within all aspects of society has resulted in marked changes in the way individuals communicate, think and ultimately live their lives. However, this widespread use of advanced information communication technologies has posed new risks relating to the spread of violent extremism, the adoption of new recruitment strategies and the propagation of extremist ideologies within communities (Bastug, Douai & Akca, 2018). This has resulted in Internet use to promote radicalisation and terrorism being described as "…one of the greatest threats that countries including the UK face" (UK House of Commons Home Affairs Committee, 2017, p. 2).

As is the case for the general public, those who support extremism or commit extremist offences often leave behind a digital footprint. Whilst it is recognised that 'extremism' as a concept is difficult to define, the definition adopted throughout this thesis is that proposed by the UK Government, which refers to; "vocal or active opposition to fundamental British values, including democracy, the rule of law, individual liberty and mutual respect and tolerance of different faiths and beliefs" (HM Government, 2019, para. 7). A number of high profile extremist cases involving Internet use have resulted in concerns around exposure to and networking around violent extremist content online. This includes the potential impact of increasing levels of engagement or identification with an extremist group, cause or ideology and influence over decisions to commit extremist offences (Scrivens & Conway, 2019). This process of becoming increasingly engaged with an extremist group, cause or ideology is referred to as 'radicalisation' throughout this thesis, having adopted the following UK Government definition; "the process by which a person comes to support terrorism and extremist ideologies associated with terrorist groups" (HM Government, 2019, para. 147).

Whilst policymakers and the media have only recently become aware of the extent of Internet use by individuals who have committed extremist offences, many extremist groups and movements have recognised the power of this medium and used every emerging online platform and tool at their disposal to disseminate extremist material and ideas, with the intention such messages will resonate with supporters and attract new members. Scrivens and Conway (2019) suggest that websites, social media channels and even gaming platforms have proved to be useful propaganda and networking platforms where recruiters are able to actively identify potential recruits among those posting or showing support for specific groups or causes.

Law enforcement and security agencies have focused much attention on developing insight into how online discussions, behaviours and actions of those who hold extremist beliefs can spill over into the offline realm. Similarly, a number of social media companies have expressed concern about their

platforms facilitating extremist communications, which has then translated into violent offline activity on a number of occasions. Policy-makers are generally concerned that the ever increasing levels of Internet access, along with the production and wide dissemination of large amounts of violent extremist content online may have violent radicalising effects, particularly as this is the primary goal of those producing such content (Berger & Strathearn, 2013; Carter, Maher & Neumann, 2014). Despite these concerns, there is a lack of empirical knowledge around the role of the Internet in the facilitation of violent extremism and terrorism (Gill et al., 2017). Determining the significance of the role of the Internet in contemporary extremism and terrorism is the primary goal of this thesis.

1.1. General aims/objectives

Through an overarching focus on the role of the Internet in the radicalisation process and offending of those who have committed extremist offences, this thesis intends to provide a novel contribution to the literature by seeking to address the following three aims. The first aim is to investigate the role of the Internet in the radicalisation process and offending of individuals convicted of extremist offences in the UK using a substantial data set and unique data source comprising of 269 Structured Risk Guidance (SRG) and Extremism Risk Guidance (ERG22+) reports. This includes every report available to the Ministry of Justice that was completed between October 2010 and December 2017 for those convicted of extremist offences in the UK as well as those not convicted of extremist offences but where sufficient concern existed relating to their potential engagement with an extremist group, cause or ideology to warrant an assessment. The second aim is to systematically review the literature on pathways to lone actor terrorism. The systematic review is linked to the empirical study in several ways as lone actor terrorists are a sub-group of extremist offender where Internet use is assumed to be particularly prominent given their lack of contacts with other extremists in offline settings. Concern has often been expressed in relation to the ease with which potential lone actors could self-radicalise using the Internet, through the widespread availability of extremist content online. However, if this is true, it has yet to be established how dangerous these individuals are. So whilst the systematic review provides an opportunity to review current knowledge of pathways to lone actor terrorism, the empirical study enables an investigation into the level of risk posed by those subject to online radicalisation, including individuals considered to be lone actors, with little or no contact with extremists in offline settings. The third aim is to provide a number of recommendations for policy makers and forensic practitioners for those at risk of online radicalisation and those who have committed extremist offences.

1.2. Outline of chapters

Having introduced the topic of this thesis, chapter two features a systematic literature review exploring pathways into lone actor terrorism. The existing literature includes a range of definitions

for what constitutes a lone actor terrorist, some inclusive and others more exclusive. Alongside this, much of what has been reported about lone actor terrorists within existing literature and media outlets is based on assumption, with little empirical support. The systematic review intends to address the clear need for an improved understanding of this sub-group of extremist offender and was beneficial in not only guiding the definition of lone actors used within the empirical study, but was also a reference point when exploring the role of the Internet in the radicalisation process and offending of those convicted of extremist offences more widely.

The third chapter of this thesis includes the empirical research study, which sets out to explore the role of the Internet in radicalisation pathways and offending of individuals convicted of extremist offences. This study involved the development of a comprehensive database of those convicted of extremist offences in the UK by reviewing content of specialist assessment reports produced by professionals with access to a range of restricted information sources and contact with the individual concerned. A series of quantitative analyses were then conducted on the data. The central areas of investigation included whether the Internet has altered the way in which individuals are radicalised, whether profile differences exist in those taking different radicalisation pathways and whether they utilise the Internet in different ways. Other areas of investigation include whether the radicalisation pathway undertaken impacts on the likelihood of violent extremist offending based on assessed levels of commitment, willingness and capability to perpetrate violent extremist acts. This empirical study intends to make a significant contribution with a unique data source to a field with a literature base lacking a strong empirical underpinning. This study should also inform the debate on the relevance of the Internet to radicalisation pathways and extremist offending, along with guiding counter-terrorism approaches and future policy in this area.

Chapter four features the thesis conclusion, where key findings from the systematic review and empirical study are outlined. Nine important recommendations highlighted within the empirical study are also presented, all of which are considered to have the potential to make a significant contribution to existing counter-terrorism policy and practice.

Within chapter five, the Individual Learning Plan (ILP) outlines my development and key reflections towards becoming a researching practitioner over the past two and half years. These reflections focus on the four domains of knowledge and intellectual abilities, personal effectiveness, research governance and organisation, and finally engagement, influence and impact.

CHAPTER 2
SYSTEMATIC LITERATURE REVIEW

A SYSTEMATIC REVIEW OF PATHWAYS TO LONE ACTOR TERRORISM

A SYSTEMATIC REVIEW OF PATHWAYS TO LONE ACTOR TERRORISM

Abstract

This systematic review contributes to the growing body of knowledge on lone actor terrorism by presenting the first systematic review of the literature in this area. The review identifies five main themes that characterise the literature on lone actor terrorism. First, a lack of clarity over the definition of lone actor terrorism. Second, the emergence of several important typologies for differentiating between various forms of lone actor terrorism. Third, the importance of pathway stages into lone actor terrorism by highlighting six important stages, drawn from the literature in this area, that shape lone actor behaviour: inner turmoil, isolation, ideology, (the role of the) Internet, interaction with others and identification of targets and triggers; or what is termed the six 'I's pathway stages into lone actor terrorism. Fourth, comparisons with other lone actor criminal types. Fifth, the significance of mental health issues and/or personality disorder as a factor in lone actor terrorism.

Keywords: Lone Actor Terrorism; Literature Review; Definitions; Typologies; Pathways

2.1. Introduction

Whilst lone actor terrorism is not considered a new phenomenon, there is a general perception that it is not only resurfacing, but is currently on the rise. This perception is linked to the recent spate of lone actor terrorist attacks across Europe and the USA, highlighting the dangers posed to members of the public. Recent examples of lone actor terrorism in the UK include the politically motivated stabbing and murder of Labour Party MP Jo Cox by Thomas Mair in June 2016 (Europol, 2017) and the attack by Khalid Masood just outside the Houses of Parliament on Westminster Bridge in March 2017, where a car was driven into pedestrians and an unarmed police officer was fatally stabbed (Europol, 2018). These attacks have brought lone actor terrorism to our attention and have raised important questions as to how these individuals, who are often portrayed as isolated from a wider network or organisation, were radicalised.

When considering frequency and lethality, it has generally been found that lone actor attacks are relatively infrequent and less deadly than attacks carried out by groups (Asal & Rethemeyer, 2008). Möller-Leimkühler (2018) supported the notion that lone actor terrorism is rare, but suggested it was becoming an increasing phenomenon across Europe and the USA. Spaaij (2012) conducted one of the most comprehensive studies of lone actors by examining all terrorist incidents that had occurred between 1968 and 2010 across 15 countries. It was found that only 1.8% of attacks were carried out

by lone actors, and these generally had low lethality due to a disconnect between intention and capability. In another study, Hamm and Spaaij (2017) reported that the number of attacks by lone actors had increased after the 9/11 attacks in New York, although found the lethality had not.

This surge in lone actor terrorism over recent years is seen as being due to pressure from security services on terrorist groups, which in turn has forced a tactical adaptation. This has resulted in terrorist groups, particularly Daesh,[1] calling on those who share their ideology to act alone without direction or support (Möller-Leimkühler, 2018; Pantucci, 2014). Some researchers have suggested that we are currently in a transformation from 'fourth-wave' religious terrorism (see Rapoport, 2004) to 'fifth-wave' lone actor terrorism, in which 'solo terrorists', 'lone operators' and 'self-radicalised' individuals are now becoming 'the greatest concern to society' (Brighi, 2015; Post, McGinnis & Moody, 2014). As this trend is expected to continue, understanding lone actor terrorism and radicalisation pathways has never been more pressing.

In a reflection of terrorism research more generally, our current notions regarding lone actor terrorists are often based on conceptually and methodologically questionable assumptions, largely borne out by the lack of data-driven research within the literature (see Spaaij & Hamm, 2015). Lone actor terrorists are generally assumed to be socially isolated individuals who do not engage in any form of communication with others and therefore plan, prepare and execute their acts of violence alone (Lindekilde, Malthaner & O'Connor, 2018; Schuurman, Bakker, Gill & Bouhana, 2017). They are also typically viewed as highly capable and largely undetectable (Kaati & Svenson, 2011; Lindekilde, O'Connor & Schuurman, 2017; van Buuren, 2018). These assumptions about lone actor terrorists are considered detrimental to those studying this phenomenon as they may lead to ineffective policy responses, as well as those tasked with detecting, preventing and responding to this threat. However, a number of more recent studies relating to lone actor terrorism have reported findings which help challenge many of these long-held assumptions portrayed in some of the academic and popular literature (examples include Corner & Gill, 2015; Gill, Horgan & Deckert, 2014; Schuurman et al., 2017).

A systematic review of the literature was conducted to take account of these more recent findings and reflect the current state of knowledge of this sub-group of individuals who have committed extremist offences. The first core aim is to provide greater clarity around conceptualisations of lone actor terrorism as it is clear this is a contested concept,[2] with no consistent definition used within the literature. The focus of this review will be definitions used within the academic literature as opposed

[1] Daesh is an Islamic terrorist group also known as ISIL, Islamic State, or ISIS.
[2] See Gallie (1956) for an introduction to 'essentially contested concepts', defined as 'concepts the proper use of which inevitably involves endless disputes about their proper uses on the part of their users' (p. 169).

to other areas, such as Government policy definitions. The second core aim is to summarise literature relating to pathways to lone actor terrorism, considering similarities and differences with group-based terrorists and other lone offender types. This systematic review is structured as follows: having first introduced the topic of lone actor terrorism, this review will outline the method used to systematically review literature in this area, before outlining a number of identified key themes. The review will then discuss and summarise the current state of knowledge of pathways to lone actor terrorism, identifying where gaps and debate still remain.

2.2. Method

The review process was based on the Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) statement[3] (Moher, Liberati, Tetzlaff, Altman, & The PRISMA Group, 2009), with deviation where necessary due to the nature and format of the literature.

2.2.1. Inclusion and Exclusion Criteria

This review included literature that met the following inclusion criteria: (1) Either a theoretical article or data-driven study with a primary focus on lone actors as initial database searches highlighted a lack of data-driven research relating to lone actor terrorism; (2) any book, book chapter or journal article from any subject area, as it is recognised the literature base is still developing in this area and there is multi-disciplinary interest in the topic; (3) any published research (which included theses/dissertations accessible within institutional depositories); (4) written in English; and (5) produced between 1st January 2000 and 31st October 2018 (when the search was conducted) as the focus of the review was on modern lone actor terrorism. Where necessary, supplementary literature relating to the study of terrorism, radicalisation and extremism more generally was included to critically reflect on the claims made in the lone actor terrorism literature and add substance to the analysis that follows.

2.2.2. Literature Search and Screening Process

Four online databases were searched: PsycINFO, PubMed, SCOPUS and Google Scholar. For three of the online databases (PsycINFO, PubMed and SCOPUS), keyword searches were conducted within the title/abstract using all possible combinations of a three-part search term approach, with Boolean and wildcard operators utilised to increase search sensitivity. This consisted of one 'Lone Actor' term (*Lone wol* OR Lone actor*), one 'Terrorism' term (*Terror* OR Extrem**) and one 'Pathway' term

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[3] The PRISMA statement is an evidence-based standard for reporting evidence in systematic reviews and meta-analyses, consisting of a 27-item checklist and a 4-phase flow diagram.

(*Radicali* OR Pathway OR Route OR Journey*). The following demonstrates what was entered within PsycINFO, PubMed and SCOPUS to find potentially relevant records:

(Lone wol OR Lone actor) AND (Terror* OR Extrem*) AND (Radicali* OR Pathway OR Route OR Journey)*

Given the more restricted search specifications with Google Scholar and the substantially different inclusion criteria of the database itself, a two-part search term approach was used for this database. This consisted of including the 'exact phrase' of one 'Lone Actor' term (*Lone wolf, Lone wolves, Lone actor, Lone actors*), paired with 'at least one' of the following 'Pathway' terms; *Radicalisation, Radicalization, Journey, Pathway, Route*. Keyword searches were restricted to the title of the article only. Previous trials using expanded sets of search terms (one 'Lone Actor' term paired with 'at least one' of either a 'Terrorism' term or 'Pathway' term), returned large numbers of results with a high proportion of irrelevant entries.

Initial literature searches identified 138 records across all four online databases. Following a screen for duplicates within and across all databases, 72 records remained. When the title and abstract of each item was reviewed against the specific inclusion criteria set out above, 55 records remained. For the final stage of the sifting procedure, closer scrutiny and full-length reading of each record was used to establish suitability for inclusion in the review. This resulted in nine records being excluded as they were found not to contribute to either the definitional/conceptual debate concerning lone actor terrorists or current knowledge relating to lone actor terrorist pathways. The final selection of 46 records consisted of 36 journal articles, four book chapters, four theses/dissertations (with full-text access via the database within institutional depositories), one conference paper (from the 2011 European Intelligence and Security Informatics Conference) and one report for the U.S. Department of Justice (see PRISMA Statement Flow Diagram in Figure 1).

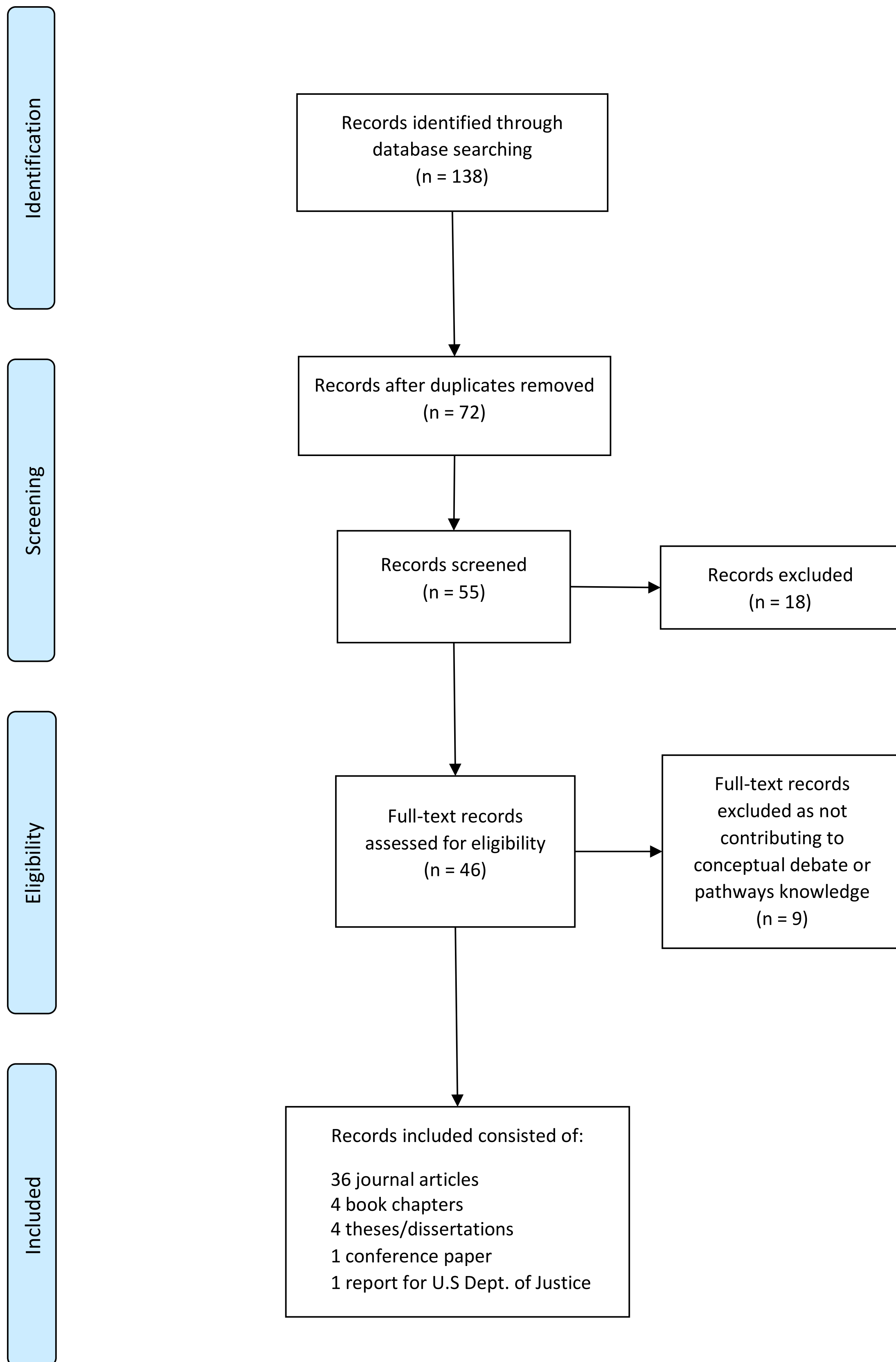

Figure 1. PRISMA Statement Flow Diagram

Of the final selection of 46 records, 18 were found to have a theoretical focus with no new data included. Of those studies presenting new data, 17 relied upon primary data in the form of single or small-n case studies to support their arguments, whilst 10 utilised larger-n datasets that were developed from secondary data gathered from open sources. One record featured analysis of a larger number dataset and inclusion of a small number of case studies to illustrate and support broader theorisation.

A rating of methodological quality was not applied to the final selection of articles for the following reasons. First, both theoretical and empirical articles were included as a result of a lack of data-driven research in this area, but also due to interest in the conceptual/definitional debate around lone actor terrorism, which was considered more likely to feature within theoretical articles. It would only be possible to apply a rating of methodological quality to a selection of the final records included within the review (the empirical articles), which was not considered appropriate. Second, the final selection of 46 records was seen as a manageable number to identify themes without the need to further exclude work. Third, whilst a consequence of not rating empirical articles on methodological quality may have resulted in some weaker studies being included in the final selection of records, their inclusion was considered unlikely to dominate the outcome of the review. Fourth, the narrative nature of the systematic review provided an opportunity to comment on the quality of studies and which findings were supported by data as the themes were discussed.

2.2.3. Data synthesis and Content Analysis

To synthesise the data from the 46 records, content analysis and grounded theory methods were applied (Glazer & Strauss, 1967; Holsti, 1969; Krippendorf, 1980). This was an iterative process completed in two stages. First, each record was read with the intention of identifying common or recurrent topics, issues, concepts and/or ideas about lone actor terrorism across sources. Second, having identified a broad set of topics from within the literature, these concepts and ideas were refined and then merged and grouped into broader thematic categories. The analysis employed a 'grounded theory' approach, whereby the analysis was assumed to be complete when a second review of the literature could not identify any new thematic categories beyond those identified in the first iteration of the review. Adopting an interpretive approach to the content analysis, codes were not identified before collecting and reviewing the data; instead, the themes were revealed as the records were analysed (see Baker-Beall, 2016).

By adopting this process, the systematic review led to the identification of five overarching themes that capture the current debate relating to lone actor terrorism in a navigable structure. The five themes include: (1) Lack of clarity over the definition of a lone actor; (2) Proposed typologies of lone

actor terrorists; (3) Pathway stages to lone actor terrorism: the 6 'I's; (4) Comparisons with other lone offender types; and (5) Significance of mental health issues and/or personality disorder. Each of the five themes is reviewed below in order of perceived prominence the theme was accorded within the literature and with reference to its contribution to advancing the current state of knowledge on lone actor terrorism. The importance of these themes will be discussed as the review proceeds and the review will conclude by identifying gaps in the literature and highlighting future avenues for research.

2.3. Results

2.3.1. Theme 1: Lack of clarity over the definition of a lone actor

The first theme identified within the literature is a lack of clarity over the definition of the 'lone actor' term. According to Becker (2016), definitions used within the literature are very diverse and there is no clear or agreed-upon definition of what constitutes lone actor terrorism. This reflects literature on terrorism and radicalisation more widely, where research has been beset by issues over a lack of clarity and the contested nature of definitions (see Heath-Kelly, Jarvis & Baker-Beall, 2015; Schmid & Jongman, 1988). Becker (2016) suggested that such definitional, conceptual and methodological disputes are a normal, healthy part of scholarly discourse and should not be cause for concern. However, Becker (2016) stressed the importance of such debates, particularly as responding to the lone actor threat depends on gaining an understanding of lone actor behaviour patterns. As lone actors are found to behave in different ways from violent organisations, Becker (2016) argued it is critical for researchers studying lone actor terrorism to only include genuine lone actor cases.

A general lack of consensus around the terminology for lone actor terrorists has contributed to the confusion, with Borum, Fein and Vossekiul (2012) highlighting that individuals who have engaged in lone actor terrorism have been referred to as lone wolves, individual terrorists, solo terrorists, lone operator terrorists and freelancers. Van der Heide (2011) used 'lone operator terrorist' explaining that this subsumes not only 'the traditional individual 'lone wolf' but also the smallest networks (e.g. two persons, autonomous cells, leaderless jihadism) almost undetected by intelligence agencies; individuals part of a larger network but who solely decide, plan and perform their act, inspired rather than instructed' (p. 7). Hewitt (2003) referred to lone actor terrorists as 'freelancers', defining this as characterising 'individuals who are not members of a terrorist group or members of an extremist organisation under the orders of an official of the organization' (p. 79).

One of the central areas of disagreement in attempts to define lone actor terrorism relates to the degree to which individuals can have support from others or prior affiliation with extremist groups (Cedros, 2015). Borum et al. (2012) reported that some proposed definitions have stipulated the

attacker must act alone, whilst others allow for the involvement of one or two others. Some definitions would completely exclude cases where there is any evidence of outside (group) support or direction, whilst others allow for some contact or even operating under a formal command and control structure (if *acting* alone). Another central area of disagreement in attempts to define lone actor terrorism relates to the intentions behind acts of violence (Cedros, 2015). Some researchers would apply the label of lone actor terrorist only to cases where there was clear evidence the attack was intended to achieve ideological, political or religious objectives (e.g. Spaaij, 2010), whilst others are willing to extend the definition of lone actors to include both personal and ideological motivations (e.g. De Roy van Zuijdewijn & Bakker, 2016).

In terms of specific definitions, some researchers have chosen to adopt a narrow definition and criticised others who would include acts committed by personally or financially motivated offenders, or acts committed by more than one person. One example is Spaaij and Hamm (2015) who stated, ‘Arguably, if two or three people carry out an act of terrorism, then it is no longer a ‘lone’ act of violence committed by ‘unaffiliated’ individuals’. Spaaij and Hamm (2015) argued that these broader definitions can ‘inflate the incidence of lone wolf terrorism’, and ‘render invisible important differences and nuances that … policymakers need to keep in mind as they develop interdiction and prevention strategies’ (p. 169).

According to Borum et al. (2012), one of the serious attempts to define the phenomenon of lone actor attacks was proposed by the Instituut voor Veiligheids- en Crisismanagement (COT, 2007) in the Netherlands. COT defined acts of lone actor terrorism as intentional acts committed by persons who operate individually, do not belong to an organised terrorist group or network, act without the direct influence of a leader or hierarchy and whose tactics and methods are conceived and directed by the individual without any direct outside command or direction. A more concise definition was proposed by STRATFOR, a non-governmental global intelligence firm, who defined a lone actor as ‘a person who acts on his or her own without orders from – or even connections to – an organisation’ (Stewart & Burton, 2009).

Mueller and Johnson (2018) suggested that the definition of lone actor terrorism continues to be shaped as time goes on, in part due to the continuous development of technology. They argued that it is now known that lone actors may connect with other like-minded individuals and engage in online conversations to gather information or seek validation of their beliefs. These individuals may have some loose affiliations to terrorist groups or have been inspired by the beliefs, ideology or political reasoning of a terrorist group. Given the lack of a clear or agreed-upon definition, Borum et al. (2012) have argued it may be more useful to view the dimensions of lone actor terrorism along a continuum,

rather than attempting to force categorical distinctions. Borum et al. (2012) proposed using an approach based on three dimensions to classify and analyse lone actor attacks. This included giving consideration to the degree of loneness (ranging from those acting without direct assistance from anyone to those who had direct assistance from one or two others), the degree of direction (ranging from those who received no personal instruction concerning whether to attack, target selection and means to attack to those who received some level of instruction), and clarity of motivation (ranging from those with a clearly held political, social or ideological motivation to those who did not communicate this or where motivation is unclear).

To summarise, what is clear is that there is currently no commonly accepted definition for what constitutes lone actor terrorism, with a wide variety of labels and terminology used that have added to the confusion on this issue. This lack of clarity around definitions reflects the literature on terrorism and radicalisation more widely. Central areas of disagreement include the degree to which lone actors can be assisted by others or have prior affiliation with extremist groups, along with the intentions behind their violent actions and whether those with personal, along with ideological motivations, should be included. It has been suggested that rather than forcing categorical distinctions, it may be more helpful instead to classify or analyse lone actor terrorist attacks based upon dimensions of behaviour.

2.3.2. Theme 2: Proposed typologies of lone actor terrorists

The second theme identified from the literature relates to a set of proposed typologies of lone actor terrorists, which may be one way of overcoming the contested nature of definitions. However, a number of issues have been raised in terms of these typologies, including the number proposed and their demarcation, whilst others have rejected some of the specific labels used.

Pantucci (2011) offered one of the first attempts at identifying specific typologies of lone actor terrorists, identifying four possible types based on research on Islamist terrorism. These include 'The Loner', described as 'isolated individuals who seek to carry out an act of terrorism using the form of extremist Islamist ideology as their justification' (p. 14). They appear not to have contact with, or connections to known extremists or their organisations, and their attack plans are not influenced by any external system of 'command and control'; 'Lone Wolf', who are described as individuals 'appearing to carry out their actions alone', but having support and possibly even 'command and control'-type direction from other militant extremists (pp. 20-24); 'Lone Wolf Pack', who are 'similar to the Lone Wolves, except rather than there being a single individual who becomes ideologically motivated, it is a group of individuals who self-radicalise' (p. 24). They have no face-to-face contact with known militant extremists or representatives from extremist groups, and most likely have not

received any operational support or direction from them; and 'Lone Attackers', who operate with direct support and operational control but execute their attacks alone. They are most clearly distinguished from the other types by their active contact with, and direct ties to, militant extremists, their organisations, and networks. These network contacts often have a significant role in operational planning, including the acquisition and preparation of weapons for the attack.

Holt, Freilich, Chermak, Mills and Silva (2018) concurred with a distinction between 'loners' and 'lone wolves'. They argued that loners operate individually and lack affiliations with extremist groups, whilst lone wolves also operate individually, but differ by affiliating with other active extremists operating within a group context. Other research supporting the existence of these two typologies included the work by Gruenewald, Chermak and Freilich (2013) who found that loners are more likely to have a military background, be married, commit a suicide attack, and have a mental illness compared with lone wolves. Schuurman et al. (2017) also described loners as being different from lone wolves in that the acts they carry out are less lethal, in part because they do not have the skills necessary to carry out a more sophisticated terrorist act.

A number of researchers have rejected the labels given to certain typologies, especially the use of the term 'lone wolf' to describe lone actor terrorists. Spaaij and Hamm (2015) argued this term is merely 'a construct of the media and of radical political actors themselves rather than a social science concept or legal terminology' (p. 168). Borum et al. (2012) also rejected this term, stating it carries the potential to glorify or portray the image of power to attackers, who are otherwise powerless and often ineffectual. Jenkins (2011) proposed that for lone actor terrorists, 'stray dog' is a more appropriate term, as a stray dog is 'estranged from but dependent on society, streetwise but lacking social skills, barking defiantly, and potentially dangerous but at the same time, suspicious, fearful, skittish' (p. 21). Further criticism of the concept of the lone wolf comes from Schuurman et al. (2017) who prefer the term 'lone actor' as they consider 'lone wolf' implies a high degree of lethality and cleverness that is rarely the case among these individuals.

Alternative typologies have been proposed by Phillips (2012) who described two types of lone actor terrorists: 'serial' and 'spree'. The serial lone actor was described as someone who carries out a series of attacks over a period of time, whilst the spree lone actor carries out a sudden spree of violence in a very short time period. In contrast, Theweleit (2015) argued that lone actor terrorists typically belonged to the 'laughing killer' type, described as, '…men who enjoy their murderous game, who see themselves as part of a higher power that condones all of this. They laugh as they celebrate the sanctioned crime, their unpunished, godlike actions'. Theweleit (2015) referred to Anders Breivik

(Europol, 2012) as a prime example as he was reported to have burst into ecstatic laughter during his killing spree, and then presented as relaxed and smiling during the trial.

Other researchers have tried to classify different types of lone actors more generally. One example is Corner, Gill and Mason (2016) who differentiated between lone-mass murderers (who kill four or more people in a 24 hour period, but do not have an identified ideological motivation), lone-actor terrorists (who carry out an attack that is ideologically motivated, but who are not directed by a terrorist group to engage in the attack), solo actor terrorists (who commit an act of terrorism by themselves, but were directed and controlled by a larger terrorist group), and lone dyads (a group of two terrorists). Some researchers are more sceptical about attempts to identify various typologies of lone actor terrorists. Borum et al. (2012) criticised some of the classifications by Pantucci (2011) suggesting these were not derived from any systematic analysis of case features among a defined sample of lone actor terrorists. Borum et al. (2012) suggested the inclusion of 'lone wolf packs' in particular as a form of lone actor terrorism was likely to potentially confuse, rather than clarify the definitional boundaries. Feldman (2017) also argued against the inclusion of typologies relating to two or more individuals as lone actors, suggesting this would fundamentally change terrorist dynamics. For this reason, Feldman (2017) stated that 'small cell' acts of terrorism, involving two or three terrorists, should be carefully separated from the wholly self-directed process by a lone individual.

To summarise, a number of typologies have been proposed within the literature relating to lone actor terrorism. Some researchers have been sceptical about the use of typologies due to concerns that these are not derived from a systematic analysis of case features. Some of the labels used have also come under criticism, especially the 'lone wolf' term and those who suggest small group terrorism can also be considered forms of lone actor terrorism, such as 'lone wolf packs', due to the change in dynamics when more than one individual is involved.

2.3.3. Theme 3: Pathway stages to lone actor terrorism – the 6 'I's

Research exploring profiles of lone actor terrorists has generally found them to be heterogeneous, with the only common factor being they are predominantly male (Möller-Leimkühler, 2018). Lone actors often come from diverse educational, socioeconomic, ethnic and family backgrounds, and differences in age, criminal backgrounds, education levels, operational ability, training and access to financing have all been found in past research (Post, 2015). Despite this diversity, some commonalities have been identified relating to pathway stages that lone actors proceed through, or common behaviours that they exhibit, in the lead up to a terrorist offence being committed. Within this review, each stage is presented as a sub-theme and, as a novel contribution to the existing literature, these

have been termed the 6 ‘I’s: Inner turmoil, Ideology, Isolation, Internet, Interaction with others, and Identification of targets and triggers. However, it is important to note that not all stages apply to all lone actor terrorists and the sequence in which these stages are passed through is not necessarily fixed.

Inner turmoil. One of the consistent findings from the literature is that lone actor terrorists experience a sense of inner turmoil at an early stage on their journey to committing a terrorist offence. Mueller and Johnson (2018) argued that lone actor terrorists often experience internal turmoil that leads them to seek out materials online to assist in carrying out a lone actor terrorist attack. Meloy and Yakeley (2014) suggested the decision to commit a terrorist act by lone actors combines not only a sense of inner turmoil but is often also motivated by a combination of personal grievance and moral outrage concerning particular historical, religious, or political events.

Böckler, Leuschner, Roth, Zick and Scheithauer (2018) reported that studies of lone actor terrorists have often found an initially subjective dissatisfaction with social and institutional structures that grows through various experiences of crisis. They also suggested that radicalisation processes are often preceded by experiences of discrimination, injustice, powerlessness and alienation, as well as socioeconomic disadvantage and relative deprivation. Walther (2014) argued that the concept of dissonance best describes the effect of the states of tension this produces, involving a subjectively experienced contradiction between an individual’s inner wishes and their external reality, which in turn creates a desire to change their situation.

Further support for the relevance of inner turmoil includes Pajunen (2015) who claimed that only an intrinsic trigger, which comes in the form of personal grievance or inner animosity that is aimed at an external source, can forge a lone actor. He suggested that grievances help lone actors to align their inner beliefs with external sources, and identification is complete when this convergence in belief systems is solidified. Similarly, Endal (2018) assessed two cases of right wing lone actor terrorism and reported similarities in terms of both individuals growing up in dysfunctional environments, which produced insecurity and various degrees of paranoia. Additional evidence for the importance of inner turmoil was presented by Corner, Bouhana and Gill (2018), who used sequential analysis to develop an understanding of vulnerability in the specific context of lone actor terrorism. They found that 53% of their lone actor sample had suffered some form of psychological crisis prior to radicalisation.

Lloyd and Kleinot (2017) argued that for many individuals who were experiencing inner turmoil and harboured a deep sense of grievance as a result of personal humiliation, alienation, injustice and/or identity confusion, adopting an extremist identity met a variety of needs. This included providing them with a sense of identity, meaning, belonging, safety, respect and status. Other researchers have

highlighted the significance of an identity crisis, in terms of vulnerability to extremist rhetoric. One example is Prats, Raymond and Gasman (2018) who referred to a lone actor, diagnosed with schizophrenia, who they claimed had experienced an identity crisis since adolescence. This individual was reported to have adopted a jihadist ideology at a time when he was questioning the purpose of life and experiencing suicidal thoughts. Prats et al. (2018) suggested a jihadist ideology appealed as it provided the individual with an orientation through life, based on a simplistic binary worldview, where good and evil are opposed.

Isolation. Another common finding is that lone actor terrorists are generally socially isolated (Danzel & Maisonett Montañez, 2016). This was supported by Pajunen (2015), who suggested the first step of the process that takes someone from civilian to lone actor terrorist is a sense of isolation. He attributed this to biological factors by suggesting that many lone actors have suffered from limited development of the prefrontal cortex region of the brain and, as a result, often display traits of impulsivity, grandiosity, and vulnerability that are all indicative of psychological immaturity. According to Pajunen (2015), this combination of factors results in isolated tendencies and for isolated individuals, extremist rhetoric can be particularly appealing. It has been argued that for some lone actor terrorists, identification with an extremist cause or ideology can become increasingly important for their sense of self-worth (Böckler, Hoffman & Zick, 2015) or as an 'identity stabiliser' if they are struggling to fit in within a larger community (Endal, 2018).

Support for the relevance of social isolation in lone actors includes the study by Corner and Gill (2015), who found that 53% of their lone actor sample were socially isolated; however, this isolation was considered the result of a recent interpersonal conflict rather than a chronic state. Corner et al. (2018) also found high prevalence rates for social withdrawal (51.7%) and living alone (38.5%) among another lone actor sample. Cedros (2015) found evidence of a lack of integration between lone actor terrorists and the community when reviewing three Islamist extremist lone actor cases. Cedros (2015) considered this lack of integration led to them eventually allying with their Muslim identities over their social ones. Others have emphasised that, while lone actors physically isolate themselves from society, they simultaneously seek recognition for their causes through spoken statements and threats, manifestos, e-mail messages, texting and videotaped proclamations (Gill, 2015).

When examining lone actor patterns of radicalisation of three high profile lone actor terrorists, Springer (2009) found that each case followed a similar pathway and that conditions surrounding their childhood and adolescent years resulted in 'loners' and 'isolationists'. Each lone actor was found to have spent considerable time alone and as a result did not acquire adequate social skills necessary to establish close human relationships. All three were unable to find female companionship, which

abated their reasons to lead peaceful and normal lives. Furthermore, all three had wanted to be a member of a group, failed in each attempt, but never stopped trying to attain group status. When they found they did not fit into any groups, Springer (2009) reported they then adopted an extremist ideology.

This notion that lone actors may have previously sought group membership before eventually committing an act of terrorism in isolation was supported by Danzel and Maisonett Montañez (2016). They claimed that lone actors have often failed to affiliate with, or been rejected by, an extremist group they are interested in joining. This rejection from an extremist group was a prelude to isolation and the development of a belief system that violence is the only answer. Further support comes from Malthaner and Lindkilde (2017) who argued that lone actor pathways are often shaped by patterns of failed joining, marginal drifting, rejection or impatiently pressing ahead and breaking away from a reluctant group or milieu. They emphasised the importance of considering how characteristics of an individual's attitudes and personality may shape relations with their social environment, such as impeding their ability to connect to others and 'function' within a group. It was emphasised that lone actors may make a choice to be alone, perhaps even a strategic choice, but at times, it may be the product of them lacking social skills and their personality traits.

Ideology. When individuals commit acts of terrorism, it is generally considered to be framed by an ideology, where a specific belief system, based on religion, political philosophy or secular commitment, is the driving force (see Neumann, 2013). Borum (2011) argued that one of the key stages for a lone actor on their pathway to committing a violent terrorist act is their growing identification of an ideological worldview. Through the radicalisation process, the lone actor becomes increasingly motivated to interpret and consolidate their self-concept in accordance with their ideology and experiences growing loyalty towards the belief system and social group advocating it. This leads to a shift from individual grievances to collectively experienced injustices.

When examining the pathways of three high profile lone actor terrorists, Springer (2009) reported that when all three found themselves alone, not accepted into a group and isolated, they formulated rigid ideologies to compensate. These ideologies were not instantly created, but took years to cultivate until they reached a point where it became no longer acceptable to explain their ideologies through discussion and instead it was considered necessary to commit violence in the name of their ideologies. This supports Neumann's (2013) claims about the distinction between cognitive and behavioural forms of radicalisation. Likewise, whilst exploring factors that were significant to the radicalisation phase for lone actors, Corner et al. (2018) found that the birth of a child was particularly significant to increasing someone's overall vulnerability to radicalisation, by increasing both their

susceptibility to exposure to radicalising settings and their susceptibility to moral change. Corner et al. (2018) found that lone actors were highly likely to intensify their religious beliefs following the birth of a child, which in turn moved them towards espousing a radical ideology.

Despite evidence of lone actors increasingly identifying with an ideological worldview, some researchers have described the belief systems of lone actor terrorists as often being quite superficial (Marvasti & Rahman, 2017). In support of this, Meloy and Yakeley (2014) suggested the belief systems of lone actors generally consist of a cluster of chosen statements that provide a broad rationalisation for the terrorist attack. They presented Timothy McVeigh, who perpetrated the 1995 Oklahoma City bombing, as an example stating he claimed to be a believer in the philosophy of the Patriot Movement,[4] but rather than studying their philosophy to any great degree, he adopted favourite phrases to justify his terrorist act. This notion of a superficial belief system was supported by Sageman (2008) who argued that absolutist and simplistic ideological framing can result in lone actors being susceptible to 'seductive Manichaean arguments' (p. 60).

Internet. Recent empirical research on lone actor terrorism has highlighted the importance of the Internet within pathways to lone actor terrorism, where use of the Internet has supported participation in ideological discussions, the radicalisation process, operational planning and signalling behaviours of lone actor terrorists (Hofmann, 2018). The important role of the Internet was also emphasised by Hamm and Spaaij (2015) when referring to significant changes to lone actor radicalisation in the USA specifically. They argued that since the events of 9/11, radicalisation that was most frequently connected with previous membership in an extremist group has gradually been replaced by the Internet.

Böckler et al. (2018) argued that as lone actor terrorists are typically socially isolated individuals, social ties are established primarily through virtual media contexts. This claim is supported by Meloy and Yakeley (2014) who stated the Internet is a tool which allows lone actors to engage in research and find other like-minded individuals who are also seeking to settle their grievances.

Zeman, Bren and Urban (2017) suggested that whilst the Internet acts as an environment that enables lone actors to become acquainted with extremist opinions, search for ideological texts or easily establish contact with other co-ideologues, current knowledge suggests it plays a more limited role during the preparation of terrorist attacks. This claim is supported by Gill (2015) who found that the Internet played an important role specifically in reinforcing the perpetrator's own radical thoughts, ideas and beliefs to legitimise violent action, in disseminating propaganda, or when

[4] 'Patriot Movement' is a collective term used to describe a set of related extremist movements and groups in the United States whose ideologies center on anti-government conspiracy theories.

informing others of the imminent act of violence. Collins (2014) also highlighted the relevance of the Internet when suggesting that lone actors possess a 'deep backstage' where their fantasies experience confirmation and recognition through exposure to extreme online materials, upon which a further cognitive escalation and self-commitment play out and where emotional preparation for the terrorist act occurs.

Gill, Horgan and Deckert (2014) explored the degree to which lone actor terrorists engage in online activities. Of 119 individuals, 35% interacted virtually with a wider network of political activists, while 46% learned aspects of their attack method by using virtual sources. Ideological differences were found with Al-Qaeda–inspired lone actors significantly more likely to learn through virtual sources than right-wing–inspired counterparts (65% vs. 37%). Further evidence includes a study by Gill, Corner, Conway, Thornton, Bloom and Horgan (2017) who conducted a statistical analysis of 223 convicted U.K. terrorists, which included a number of lone actor cases. They found that lone actors were 2.64 times more likely to learn online than was the case for group-based terrorists. Gill et al. (2017) concluded that online learning was more of a requirement for lone actors over group-based terrorists as they lacked the pooled human talent typically associated with an attack cell.

According to Benson (2014), the benefits to Internet use by lone actors includes the availability of vital information such as instructional material relating to bomb making, weapons access or terrorist tactics, with this information enabling lone actors to prepare for attacks and act truly independently. An example, frequently cited within the literature, is the case of Roshonara Choudhry, who stabbed her local Member of Parliament (MP) Stephen Timms, stating this was in response to his parliamentary vote in favour of the 2003 Iraq war (Europol, 2011). This attack was considered the result of a solitary online radicalisation and example of a 'pure lone-wolf' attack (Pearson, 2016). However, other researchers have challenged the notion that lone actors can self-radicalise, suggesting this concept does not exist and that terrorist groups ask for acts of lone actor terrorism to be committed. For example, Clark (2014) argued that propaganda and materials available on the Internet are designed to recruit and inspire acts of terrorism, and therefore it is impossible for self-radicalisation to occur.

Interaction with others. According to Hoffman (2018), conventional knowledge and early academic work on lone actor terrorists popularised the view that they radicalise, operate, plan and execute plots in relative anonymity, with little connection to formal or more organised terrorist groups and networks. However, recent studies have increasingly challenged the 'loneliness' of lone actors, with some suggesting the notion of a completely isolated, self-reliant lone actor has been resoundingly debunked (Bouhana et al., 2018; Gattinara, O'Connor & Lindekilde, 2018). According to Borum et al.

(2012), cases in which a lone actor terrorist has planned an attack completely without outside influence, encouragement or inspiration are considered very rare.

Whilst lone actors may be socially isolated in real life, they often establish social ties and communicate with like-minded individuals within social media contexts (Zeman et al., 2017). Fonagy (quoted in Hough, 2004) suggested that many lone actors experience insecure attachments in childhood, along with a poor sense of core individual identity. As a result, they seek to adopt the identity of a large group to function as this offers them a sense of belonging and safety. For lone actors specifically, this group identity can be found and fostered in a virtual community, and may have been preceded by social rejection from an actual extremist group. This was supported by Post (2015), who suggested that lone actors are typically isolated loners and 'losers' with fractured relations with family. In search of belonging, they found the virtual community of hatred an attractive environment with its repetitive messages of oppression, which reinforced their own view of themselves as a victim. According to Post (2015), some showed compensatory grandiosity, whilst others seeking recognition sought to go out in a 'blaze of glory'.

In their analysis of 119 individual cases, Gill, Horgan and Deckert (2014) reported a number of findings relating to lone actors interacting with others, often through the online space. They found that: one in six directly sought some form of legitimisation from religious, political, social, or civic leadership; a third tried to recruit others to their cause; almost 60% of cases shared specific information with others relating to their research, planning, and/or preparation prior to the event itself; and more than half linked their actions with some form of wider group or movement. These findings are supported by a recent study of 55 lone actor terrorists by Schuurman et al. (2017) who found that: in 62% of cases the individual had prior contacts with larger radical circles; 78% were encouraged by external supporters; and 58% engaged in some sort of signalling behaviour by informing others of aspects of their plot to commit an act of terrorism.

Gattinara et al. (2018) and Lindekilde et al. (2018) argued there are two dominant patterns of radicalisation for lone actors that demonstrate the relevance of interactions with others and importance of considering broader sets of relational ties. The first of these two patterns are 'peripheral' lone actors, who internalise the beliefs of their ideological milieus or preference sufficiently to carry or attempt to carry out a violent attack but fail to fully integrate or gain acceptance by their co-ideologues. Three sub-groups of 'peripheral' lone actors are also identified: withdrawn, anti-social and volatile types, which correspond to particular personal characteristics. The withdrawn type are those who fail to integrate into radical groups because of social dynamics shaped by their indecisive, unassertive personalities and low self-belief. The anti-social type are notable for their

limited social capacities, with their behaviour seen as socially awkward due to their inability to read social cues. This limits their ability to forge strong social ties in their personal lives and political efforts. These individuals remain on the periphery of radical movements due to their domineering, imposing and narcissistic personalities. Volatile lone actors are also on the periphery of radical groups but this is primarily due to their unstable commitment and reputation as erratic and untrustworthy. Unlike anti-social lone actors, these individuals are considered relatively capable of maintaining social ties, but are prone to aggression and violence.

The second of these two dominant patterns are 'embedded' lone actors, who are accepted by their contemporaries and are often prominent and respected actors in their milieu or formal members of groups and organisations. However, these individuals still decide to plot and carry out violent attacks alone. Gattinara et al. (2018) suggested that within this embedded form of lone actor radicalisation, two distinct sub-patterns exist: formerly embedded, incorporating those who leave or are rejected by movements to which they used to belong, and autonomous lone actors, who are neither socially or politically isolated and combine non-violent activist careers in parallel to preparing their subsequent violent plots.

Becker (2016) suggested there is no question that lone actors communicate with other people or can become radicalised through exposure to group-based political or religious grievances. He argued that if lone actors were totally isolated throughout the attack cycle, their activity could hardly be political and would therefore fail to meet definitions of terrorism. Becker (2016) made a distinction between operational and ideological or social aloneness, stating that whilst by definition lone actors plan and execute their attacks by themselves, others play important roles during other parts of their cycle of activity. This was supported by Hofmann (2018) who examined two lone actor case studies and found the radicalisation, planning and operational stages were tied to and influenced by a mixture of small-group and person-to-person social dynamics.

Corner et al. (2018) found that lone actors often benefit from interactions with wider networks as this provided them with access to propaganda, which resulted in either immediate attack planning, stockpiling weapons, further research, arrest, an attack, or towards what they described as a 'secondary stream'. In the secondary stream, access to a network and propaganda moved the lone actor towards a cycle of proclaiming their ideology and preparations to others in both written and verbal statements, or towards a more direct route of written statements just prior to committing an attack. Lone actors sharing or 'leaking' their violent intentions were discussed by Hoffmann, Glaz-Ocik, Roshdi and Meloy (2015) who stated that, particularly for lone actors where attack planning is not subject to the discipline of a group, the desire for self-projection often overpowers the tactical

need for discretion. A number of other studies too have found that lone actors signalling their intentions to others is a common occurrence (Gill, 2015; Zeman et al., 2017).

Identification of targets and triggers. Becker (2014) reported three main findings relating to the process by which lone actors identify targets, having analysed a database of 84 'lone wolf' attacks committed in the USA between 1940 and 2012. First, it was found that lone actors tend to select civilian targets (rather than government or military targets) due to constraints relating to their relative weakness compared to violent organisations. Other studies have found the type of target has a significant bearing on whether lone actors carry out successful or foiled attacks, with successful attacks tending to occur when lower value targets and members of the public are chosen, rather than government targets (Corner et al., 2018). Second, the relative weakness of lone actors contributed to them mainly using firearms as their weapon of choice, closely followed by explosives, particularly in recent years. Third, it was found that lone actors tend to identify targets at the intersection of their daily routines (e.g. familiar, local areas, such as the route they take to and from work – and the ideology they claim drives their behaviour).

In terms of target location, Marchment, Bouhana and Gill (2018) examined the residence-to-attack journeys of 122 lone actor terrorist acts committed by 70 lone actor terrorists in the USA and Europe. They found the frequency of attacks decreased as the distance from home locations increased. They described this as the 'distance decay pattern'. Marchment et al. (2018) suggested that distance was a constraining factor that governed the selection of targets for lone actor terrorists, in much the same way as for traditional criminals.

Alongside the selection of targets, Böckler et al. (2018) argued that certain triggers are key to determining whether a lone actor attack is ultimately committed. These triggers may be events that generate pressure to act, such as events that result in danger of discovery of attack planning, or they may take the form of re-traumatising events that may reactivate earlier negatively experienced emotional states or negatively connoted self-images. Other triggers may include events in the social setting that are perceived as legitimising their ideological beliefs and attack planning, or an event resulting in loss, such as the end of an important relationship. These triggers result in the lone actor viewing an act of violence as necessary, justified, inevitable and meaningful. Hamm and Spaaji (2017) suggested these triggers could be personal, political or a combination of both, but usually relate to grievances the individual already has.

Supporting the significance of triggering events, Meloy and Pollard (2017) found that in some recent cases of lone actor terrorism, the individual had acted in response to some form of triggering event relating to loss and humiliation. They found that lone actors often acted precipitously, despite

the planning and preparation that had been carried out over the preceding weeks and months. In some cases, it was found that a precipitating or triggering event had led to an attack within minutes or hours that involved only a portion of the weaponry, preparation and planning that investigators discovered after the attack.

In summary, the literature indicates that lone actor terrorists go through a number of stages on the pathway to committing a terrorist offence. It is important to note, however, that the order in which they go through these stages may vary and not all stages are relevant to all individuals. The literature suggests lone actor terrorists experience a sense of inner turmoil at an early stage on the pathway to committing a terrorist offence. This can lead to them interpreting and consolidating their self-concept in accordance with a specific ideology and adopting the belief system, resulting in a shift from individual grievances to collectively experienced injustices. Although lone actors are generally found to be socially isolated individuals, they do interact and communicate with others, particularly via the Internet and social media. Trigger events also appear to play a critical role prior to the committing of a terrorist offence. These can be personal, political or a combination of both, but once a trigger event has occurred, this often results in rapid action despite all previous planning. Target identification often focuses on so-called civilian or 'soft targets', particularly for successful attacks, which occur close to home and are often linked to the lone actor's daily routines.

2.3.4. Theme 4: Comparisons with other lone offender types

The fourth theme relates to comparisons between lone actor terrorists and other types of lone offender criminals in terms of their characteristics and motivations, particularly school shooters, assassins, non-ideologically motivated mass shooters or individuals who commit 'ordinary' homicide. In one study, Lankford and Hakim (2011) compared Palestinian suicide bombers with American school shooters by reviewing retroactive psychological autopsies compiled from sources including witness statements, journals and suicide notes among others. It was found that the primary differences between the groups existed at a cultural rather than individual level; in terms of their underlying psychological constitution and motivation, the perpetrators from each group shared many characteristics. This included a highly troubled childhood, social deprivation and low self-esteem. In both cases, personal crises represented the starting point for the turn to violence, with underlying motives of avenging injustice and acquiring fame and repute.

McCauley, Moskalenko and Van Son (2013) reported similar findings in their comparative analysis of politically motivated attackers and school shooters. For both types, the perpetrators planned their actions in advance, often acted alone, with their motivation explained more through the role of emotional or social factors, rather than material or instrumental needs. Both types of actor were

characterised by depression, despair, and suicidal tendencies, with significant differences only found in terms of age and marital status (i.e. politically motivated attackers were considerably older and more likely to be married). Similarly, Capellan (2015) compared ideological and non-ideological active shooter events in the USA, finding similarities in the demographic and personal profiles, but significant behavioural differences. Within a sample of nearly 200 ideological and non-ideological mass shooters, the majority of shooters in both groups were white males in their thirties with dysfunctional adult lives, either single or divorced, with lower levels of education and a history of mental illness. However, it was found that ideological shooters acted more methodically, showed higher levels of sophisticated planning, had experienced some kind of military training, and used a greater number of firearms. Capellan (2015) stated that the reason for these similarities overall was that both ideological and non-ideological mass shooters should be considered subgroups of a homicide type that he has termed 'lone actor grievance-fuelled violence'.

Capellan and Anisin (2018) compared extremist versus non-extremist mass shootings and mass shooting attempts in the USA by analysing 306 incidents. They found different causal pathways existed for extremist and non-extremist groups. Most notably, they found the extremist group were driven by a combination of group grievance (towards other social groups), along with mental ailment or general strain. Similar to other studies (Hamm & Spaaij, 2015; McCauley et al., 2013), these findings reflected the importance of group grievance for ideologically motivated violence to occur. In contrast, personal grievances were not found to be relevant in pathways to extremist shootings, but were relevant for non-extremist mass shootings. In light of these findings, Capellan and Anisin (2018) suggested the type of grievance held (personal or political) may determine the path of violent radicalisation and ultimately the type of violence exhibited (ideological or non-ideological). The nature of strains experienced by individuals were also significant, with acute strain (e.g. as a result of loss of a relationship, job or social standing) notably absent in pathways to extremist mass shootings. These findings suggested that different criminogenic factors might be attracted to specific types of grievances, and subsequently lead to different types of outcomes.

McCauley, Moskalenko and Van Son (2013) compared the characteristics of lone actor terrorists with assassins and school attackers. Whilst obvious demographic differences were found (teenagers vs adults), four common characteristics were identified. These included feelings of grievance, depression (including despair and suicidal ideation), unfreezing (a situational crisis of personal disconnection and maladjustment), and weapon use outside the military. McCauley and Moskalenko (2014) suggested these four characteristics demonstrated the importance of means and opportunity, in that grievance is a motive for violence, weapons experience provides a means, and depression lowers the opportunity cost of violence as the perpetrator has less to lose. These findings suggested

that grievance-fuelled lone attackers were likely to have weapons experience, depression or another mental disorder, and temporary or chronic social isolation.

In a recent study comparing the characteristics of lone actor terrorists with ‘ordinary’ homicide offenders, Liem, Van Buuren, De Roy van Zuijdewijn, Schönberger and Bakker (2018) found that lone actor terrorists exhibited higher levels of education than those who had committed murder for non-political purposes. In contrast to other research relating to lone actor terrorism, they also argued that lone actor terrorists were not usually socially isolated and operated in dyads and triads more often than ‘ordinary’ homicide offenders.

To summarise, the literature indicates that lone actor terrorists have much in common with other lone offender types, particularly with respect to demographic and personal profiles. Aside from the more obvious similarities of acting alone, lone actor terrorists and other lone offender types are generally found to have planned their actions in advance and been motivated primarily from emotional/social needs. However, some differences were also apparent, such as lone actor terrorists generally acting more methodically, showing higher levels of sophisticated planning, experiencing some form of military training and in terms of weapon selection. General strain and group grievance appears more relevant for lone actor terrorists, as opposed to acute strain and personal grievance for other lone offender types.

2.3.5. Theme 5: Significance of mental health issues/personality disorder

The fifth theme identified within the literature concerns the prevalence of mental illness and personality disorder characteristics exhibited by lone actor terrorists, particularly when compared to group-based terrorists and the general population. This supports the common conception that lone actor terrorists suffer from a certain degree of psychological or personality disorders (Endal, 2018).

As part of a larger study, Spaaij (2010) examined five cases of alleged lone actor terrorism and found three of the five cases had a personality disorder, one was diagnosed with obsessive-compulsive disorder and four had experienced severe depression at some stage in their life. According to Spaaij (2010), these cases suggested a possible correlation between lone actor terrorism and the co-occurrence of a psychological disturbance. Pantucci (2011) and Spaaij (2010) both suggested higher rates of mental disorder among lone actors in contrast with the more general (group-based) terrorist population, where psychological disturbance was found to be rare (Silke, 1998). Meloy and Yakeley (2014) and Möller-Leimkühler (2018) also claimed that lone actor terrorists may be more mentally and/or personality disturbed than other terrorists embedded in groups.

Lloyd and Kleinot (2017) argued that lone actors were typically those with higher levels of conventional psychopathology and idiosyncratic grievances, whilst group actors generally presented as hostile and aggrieved but were largely emotionally and cognitively intact, despite elements of personality disorder and accompanying depression. When Lloyd and Kleinot (2017) identified three broad pathways into terrorism (based on the first author's professional experience with convicted terrorists between 2008 and 2011), the third pathway (termed 'The Ugly') was considered an explanation for mainly lone actors, particularly those who were motivated by pathological narcissism. Further evidence for the prevalence of mental disorder and personality difficulties for lone actor terrorists includes the findings of a systematic literature review on the relationship between mental health, radicalisation and mass violence conducted by Misiak et al. (2018). Some evidence was found that lone actors represented a specific subgroup of individuals with extreme beliefs who can be characterised by high prevalence of psychotic and/or mood disorders. Misiak et al. (2018) suggested that lone actors and group-based terrorists might be more accurately characterised as two distinct groups of radicalised individuals in respect of their mental health characteristics.

Further support for the important role of mental illness in lone actor terrorism has been presented by Corner and Gill (2015) who found that lone actor terrorists were over 13 times more likely to have psychological disorders than members of terrorist groups. Similarly, Hewitt (2003) also found that the rate of psychological disturbance was higher among lone actors than among other US terrorists. Building on their earlier research, Corner, Gill and Mason (2016) collated multiple psychiatric epidemiological studies to calculate the prevalence of diagnosed mental disorders in the general population, compared with lone actors and group actors. Whilst group actors were found to have significantly lower levels of mental disorder than would be expected within a general population, this was found not to be the case when lone actors were compared with a general population, where a substantially higher prevalence of schizophrenia, delusional disorder and autism spectrum disorder was found. Differences in the relevance of mental illness for lone actor terrorists have also been found when comparing different extremist ideologies. For example, Gill, Horgan and Deckert (2014) found that lone actors holding single-issue ideologies (in this case, animal rights, anti-abortion and environmentalism) were significantly more likely to have a history of mental illness compared to those representing other ideologies (i.e. right-wing related or al-Qaeda-related ideology).

It is important to note that psychological issues or mental illness do not necessarily act as a barrier to committing a sophisticated attack. Gattinara et al. (2018) suggested that whilst lone actors are generally found to have a higher rate of clinical and sub-clinical mental illness than group-based terrorists and members of the general population, this should not be regarded as a causal factor by itself. Instead, they note that mental illness, along with sub-clinical personality disorders, condition

an individual's interactions and disorders like narcissism, psychopathy or depression result in different interactional challenges with their immediate social environment. Despite the higher prevalence of mental illness for lone actor terrorists, it has been shown that those diagnosed with mental illness frequently display rational motivations (Gill, 2015) and are capable of sophisticated attack planning (Borum, 2013). This is supported by Pantucci (2011), who suggested that lone actor terrorists often demonstrate functional processing of reality and act in a rational and organised manner.

To summarise, the literature indicates the prevalence of mental disorder and personality difficulties for lone actor terrorists to be higher than for group-based terrorists and the general population. However, it is suggested this should not be considered a causal factor by itself. There is also some evidence indicating differences in the prevalence of mental illness for lone actors when various ideologies are compared. It also appears that the higher prevalence of mental disorder and personality difficulties within the lone actor group has not prevented many individuals engaging in sophisticated planning and acting in a rational and organised manner in both the lead up to and carrying out of terrorist offences.

2.4. Discussion

The focus of this review was to summarise current academic discussion and debate of concepts and pathways of lone actor terrorism. The first theme identified related to the lack of clarity around what constitutes a lone actor, with a variety of terms and definitions having been used. Based on a review of the conceptual and definitional issues, several prominent distinctions have emerged. This includes whether only one person can be involved; whether cases with any degree of outside support would qualify; and how purely political or ideological the individual's motivation must be. Therefore, a central issue appears to relate to the inclusivity/exclusivity of definition used and it is recommended that future research on lone actor terrorism pay particular attention to this and strive for conceptual clarity. As reported by Dickson (2015), the use of various definitions has led to disagreement in who qualifies as a genuine lone actor and hindered cross-study comparisons.

Researchers have attempted to address contrasting definitions of the lone actor concept through the development of typologies, which was the second theme identified within this review. Whilst typologies appear useful in thinking about multiple dimensions of a problem and how these dimensions may interact, some researchers have questioned whether they are accurate or useful, whilst others have criticised the use of particular terminology (e.g. 'lone wolf'). Some have argued that rather than using typologies and forcing either/or choices, it may be more useful to take a

dimensional approach, viewing lone actor behaviour along a continuum. This approach is generally seen as a useful way to emphasise that a wide spectrum of lone actors exist (Spaaij & Hamm, 2015).

The third theme identified relates to a number of typical pathway stages for lone actor terrorists. Research has provided useful insights around the motivations, behaviours and pathways that lead to lone actor terrorism, however it has failed to establish a usable and typical profile of a lone actor terrorist due to the individuality of each case (Gill, Horgan & Deckert, 2014). Within this review, similarities were found in relation to lone actor terrorists experiencing a sense of inner turmoil early on in their pathway, before adopting a specific ideology or belief system, which leads to a shift from individual grievances to collectively experienced injustices. Whilst many lone actor terrorists appear to be socially isolated in the offline world, they are often socially connected in the online world. This challenges one of the commonly held assumptions that lone actors avoid interacting with others and it is even suggested that the label of 'lone actor' may be a misnomer, as most individuals to which this label is applied do not in fact radicalise, prepare, and execute their plans in social, ideological, or operational isolation. The Internet appears to play an important role within modern lone actor terrorism, whether used as a source of inspiration, how-to advice or as a way of connecting with like-minded others. Patterns in target identification have emerged, with the most successful attacks aimed at civilian targets and violent acts generally occurring close to home, at the intersection of the individual's daily routines and chosen ideology. Research has also emphasised the importance of trigger events in tipping lone actors from extremist thoughts to violent action.

This review has provided a novel contribution to the existing literature by labelling these pathway stages the 6 'I's. It has previously been suggested that due to extremely low base rates, lone actor terrorism cannot accurately be predicted but, in many cases, it can be prevented (Meloy & Genzman, 2016). Whilst the sequence in which these pathway stages are passed through can vary and not all stages will apply to every lone actor, it may be that potential lone actors and acts of lone actor terrorism become easier to prevent when more of these stages can be ascertained. As with the use of established tools such as the Terrorist Radicalisation Assessment Protocol (TRAP-18,[5] Meloy & Gill, 2016), this may help with prioritising cases for monitoring or risk management. Alongside the common finding that lone actors frequently signal their violent intentions to others, this should provide encouragement to security and law enforcement agencies that disruption and prevention of

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[5] The TRAP-18 is designed to code for eight proximal warning behaviours and 10 longer term distal characteristics of the lone terrorist derived from empirical and theoretical research on terrorism, along with Meloy's professional experience working with lone actors as a forensic psychologist.

lone actor terrorism is possible and goes some way to disprove the commonly held assumption that lone actor terrorists are largely undetectable.

What is apparent from the literature and highlighted as the fourth theme in this review is that lone actor terrorists have much in common with other lone offender types. For this reason, academics and practitioners in the lone actor terrorist field are likely to benefit from sharing knowledge with those who work with or have expertise relating to other lone offender types. The fifth theme relates to the increased prevalence of mental illness or personality disorder for lone actor terrorists, with the literature suggesting higher rates of difficulties in these areas compared to group-based terrorists and the general population. However, despite these difficulties, research has found that many lone actors are capable of sophisticated planning and act in a rational, organised manner prior to committing violent extremist offences. As it is considered unlikely that mental illness or personality disorders directly influence the development of extremist ideation for lone actor terrorists, it is recommended that future research focuses on the processes or characteristics that mediate or moderate the effects of mental health or personality issues.

Whilst conducting this review, there was some evidence of an emerging theme around differences in motivation between lone and group actors when committing terrorist offences, with lone actors combining personal grievances and frustrations with religious or political ideologies, whereas group-based terrorists typically share collective grievances (Hamm & Spaaij, 2015; Möller-Leimkühler, 2018). Whilst there was insufficient reference to motivational differences between lone and group actors for inclusion within this review, this emerging theme would benefit from further investigation in subsequent reviews of the literature in this area.

Whilst the current study relies on a systematic and rigorous methodological approach for reviewing literature relating to pathways to lone actor terrorism, several methodological issues may have implications for the validity of findings. Within a specialist topic such as lone actor terrorism, it is possible a number of important articles were published only in terrorism-specific journals. Some of these may not have been captured within the four online databases where searches were conducted and as a result, these articles could be missing from this review.

Search criteria were set deliberately to include conceptual and theory-driven work as well as data-driven studies with a primary focus on lone actor terrorism. Of the final selection of 46 records, over a third of articles had a theoretical focus, with no new supporting data provided. Furthermore, over a third of articles relied upon primary source data in the form of single or small number case studies to either examine trajectories, develop typologies or generate models of lone actor radicalisation. Bouhana et al. (2018) have previously drawn attention to the difficulties in attempting to generalise

findings to a wider population from small numbers of case studies and therefore the external validity of conclusions from these articles may be limited.

Even the smaller number of data-driven articles within the final selection of records, relying upon larger number datasets, have limitations in terms of findings being primarily descriptive and concerned with behavioural indicators associated with lone actor terrorists. These studies are therefore unable to establish causality (Bouhana et al., 2018). It has also been argued that research relating to lone actor terrorism is hampered by a common deficiency that is equally applicable to wider terrorism research, namely, the over-reliance on media reporting and secondary source data (Spaaij & Hamm, 2015). Much of the data-driven research included within this review is derived from secondary source information from databases, where publicly available information on cases is limited.

Whilst barriers to accessing quality primary source data are significant, overcoming these is necessary to gain a more holistic understanding of the structural, relational, and social dynamics of lone actor terrorist networks. If direct interviews with lone actor terrorists are not possible, future research could overcome these barriers to an extent by accessing personal journals, biographies, video statements, social media profiles and other online content, including manifestos. Alternatively, accessing friends and family members of those who have committed such offences may be a useful source of information. Schuurman and Eijkman (2013) argue that use of detailed and reliable primary data, including interviews or data from government archives, is vital to expand our understanding of terrorism.

If difficulties with direct access to lone actor terrorists remain, another avenue for future research includes use of Extremism Risk Guidance (ERG22+) data for individuals convicted of extremist offences in the UK if possible and/or accessible. These specialist assessment reports are often completed collaboratively with those convicted of extremist offences and using these reports could help to either corroborate or challenge the claims made about lone actor terrorism in the literature.

Besides the lack of current primary data on lone actor terrorism, one of the major difficulties with research in this area is that lone actors typically have fewer interactions with others in offline settings. As a result, their planning and pathways are less talked about and more concealed (Gruenewald, Chermak & Freilich, 2013). Whilst most research has focused on lone actors who have committed terrorist acts, significant challenges exist in identifying those who decided not to act or abandoned their ideology. Researchers have yet to provide an adequate explanation as to why only a few individuals become terrorists from the many who are subject to the same conditions and therefore further research in this area is considered beneficial.

2.5. Conclusion

This systematic review represents a comprehensive summary of the current knowledge regarding pathways to lone actor terrorism. This review has demonstrated the lack of clarity that exists within the literature in terms of how lone actors have previously been defined and the contested nature of the various typologies, many of which are not universally accepted. This review has also identified a number of typical pathway stages for lone actor terrorists, providing encouragement to security and law enforcement agencies that disruption and prevention of lone actor terrorism is possible. Lone actor terrorists were found to have much in common with other lone offender types, particularly in relation to their demographic and personal profiles, whilst differences were found when compared with group-based terrorists in terms of prevalence of mental health and personality disorders, and potentially also motivation behind acts of violence. It is clear that many of the same barriers and criticisms relevant to terrorism and radicalisation research more widely are applicable to research focusing on lone actor terrorism, including the difficulties with establishing agreed-upon definitions and an overall lack of primary and data-driven research.

It is recommended that future research on lone actor terrorism pays particular attention to the inclusivity/exclusivity of definition used for lone actors and should strive towards achieving conceptual clarity. Research in this area should also strive to include primary source data where possible, or data from good quality secondary sources, such as specialist assessment reports completed by those working directly with this client group. Future avenues for research identified within this review include exploring whether potential lone actors and acts of lone actor terrorism can be predicted when more pathway stages are ascertained and to investigate why some potential lone actors, exposed to the same conditions as those who do commit terrorist offences, decide not to act or abandon their ideology. Lone actor terrorists have generally been found to have higher rates of mental health and personality difficulties than group actors, yet have also shown sophisticated planning and ability to act in a rational and organised manner prior to offending. Research identifying the processes or characteristics that mediate or moderate the effects of mental health issues or personality disorder for lone actor terrorists would likely be beneficial.

CHAPTER 3
EMPIRICAL RESEARCH STUDY

THE ROLE OF THE INTERNET IN RADICALISATION PATHWAYS AND OFFENDING OF THOSE CONVICTED OF EXTREMIST OFFENCES

THE ROLE OF THE INTERNET IN RADICALISATION PATHWAYS AND OFFENDING OF THOSE CONVICTED OF EXTREMIST OFFENCES

Abstract

The aim of this study was to establish the role of the Internet in radicalisation pathways and offending of those convicted of extremist offences. Four key areas were investigated within this empirical study. First, whether the Internet had altered how radicalisation takes place. Second, whether those taking different radicalisation pathways differed in their use of the Internet. Third, whether differences are found in demographic profile and type of offending between radicalisation pathway groups. Fourth, whether those taking different radicalisation pathways differed in terms of risk of committing future violent extremist offences. A unique data source of 269 specialist offender reports (Structured Risk Guidance - SRG and Extremism Risk Guidance – ERG22+ reports) were accessed to code a range of Internet activities/behaviours, demographic and offence-type variables, along with professional ratings for commitment, willingness and capability to perpetrate violent extremist acts. A quantitative research design was utilised, involving analysis of coded information for all cases within the dataset. The relevance of online radicalisation and use of the Internet within the context of extremist offending was found to have increased over recent years, suggesting the Internet has altered the means by which radicalisation takes place and now plays a prominent role. Marked differences were found between radicalisation pathway groups in terms of Internet activities/behaviours that members had engaged in, with changes over time evident in relation to the types of websites and applications used. Marked differences were also found in terms of demographic profile, offending history and socialisation for each radicalisation pathway group, along with assessed levels of commitment, willingness and capability to perpetrate violent extremist acts. This study adds to the existing literature attempting to understand and explore the role of the Internet in radicalisation pathways and extremist offending, where most studies have relied upon case information from open source media. Strengths, limitations, future directions for research and implications for practice are discussed.

Keywords: Online radicalisation; Radicalisation pathways; Internet; Online extremism; Extremism Risk Guidance (ERG22+)

3.1. Introduction

The terrorist attacks of 11 September 2001 happened to coincide with the rapid expansion of the Internet and digital technologies into all aspects of society and our everyday lives. The Internet has made it easier to find people and create networks amongst like-minded individuals across national borders. The Internet has also lowered the threshold for individuals to engage in 'risky' behaviour as it may be employed to conceal users' identities (Stevens & Neumann, 2009). As society has embraced the Internet, the potential opportunity for those wanting to use the Internet for terrorist purposes has also grown.

Since 9/11, the concept of radicalisation has been increasingly used to explain engagement and participation in terrorism (Neumann, 2013). There is significant debate within the academic literature around the role of the Internet in processes of radicalisation and extremist offending however. Whilst some remain sceptical as to whether the Internet plays a significant role, many researchers, practitioners, policymakers and members of the public are becoming increasingly concerned about the easy availability of violent extremist and terrorist content online. Awan, Hoskins and O'Loughlin (2011) argued that due to factors such as low cost, easy access, speed, anonymity, size, de-centralisation, global connectivity and lack of regulation, the Internet has played an important role in radicalisation. This includes through the dissemination of extremist messages, creation of a virtual ideological community, raising of funds, communication between members of terrorist organisations and the radicalisation and recruitment of vulnerable individuals and new members (Schmid, 2013).

The role of the Internet in processes of radicalisation has remained a difficult area to establish. In recent years, practitioners, policymakers and the academic community have started examining how the Internet influences radicalisation processes. However, knowledge gaps remain around the specific contribution of the Internet to radicalisation as well as the ways in which the Internet facilitates extremist offending. In particular, academics are still grappling with the question of to what extent the Internet can act as a replacement for physical interactions and if online networks are able to have the same influences upon an individual as real-world social and kinship networks.

The core aim of this research study is to explore the role of the Internet in radicalisation processes for those convicted of extremist offences and gain a greater understanding of how Internet use may have contributed to offences committed. In a field lacking a strong empirical underpinning, another core aim is to provide a significant data-driven contribution to this area, being one of only a handful of studies to have utilised closed-source data from a unique data source of specialist assessment reports. These were completed for individuals convicted of extremist offences in the UK or for those where there has been sufficient concern around potential engagement with an extremist group, cause

or ideology. The remainder of this section will outline the difficulties in attempts to define a number of key concepts within this area, before summarising the existing literature relating to the role of the Internet in processes of radicalisation and extremist offending, including the gaps, inconsistencies and controversies. Finally, the contribution of this empirical study and the specific research questions will be outlined.

3.1.1. Defining key concepts

One of the central challenges when conducting research in this area relates to a lack of agreement and definitional issues of a number of key concepts. For example, there has never been a commonly agreed definition of 'terrorism', with attempts to find a satisfactory definition being described as akin to the search for the 'Holy Grail' (Perry, 2004). Others have suggested it is unlikely a universally accepted definition for 'terrorism' will ever be found (Shafritz, Gobbons & Scott, 1991). Richards (2014) stated that one of the primary obstacles to establishing an agreed definition of 'terrorism' has been the term's subjective application (or non-application) according to where one's interests lie, obscuring a more dispassionate and analytical approach. Silke (2019) also argued that the failure to find a widely acceptable definition of 'terrorism' is tied to the political use of the word.

Many studies have failed to define what is meant by 'extremism' or are vague as to whether this refers to an individual's opinions, actions, or both. Bouhana (2019) argued that 'extremism' is, by definition, a relational term, as what society perceives to be extremist is subject to change and can differ widely from one society to another. Bouhana (2019) highlighted that extremist actions are considered to contravene a set of formal (legal rules of conduct) and informal norms (social norms) within societies and therefore one way to reduce extremism to a useful concept is to define extremist acts as what is considered unlawful extremist behaviour in a given jurisdiction. For the purposes of this research study, the definition used is that proposed by the UK Government, where 'extremism' is defined as, "vocal or active opposition to fundamental British values, including democracy, the rule of law, individual liberty and mutual respect and tolerance of different faiths and beliefs" (Her Majesty's Government, 2015, p. 9).

Within this research study, extremist offending is defined as, "any offence committed in association with a group, cause, and/or ideology that propagates extremist views and actions and justifies the use of violence and other illegal conduct in pursuit of its objectives" (HM Prison and Probation Service, 2019, p. 8). This definition includes a range of behaviours not always directly related to the commission of an act of terrorism, but are still considered criminal, including glorifying or inciting terrorism or behaviours seen as preparatory to terrorism. This definition also incorporates both the offender population sentenced under Terrorism Legislation in England and Wales, along with

those convicted of offences under other legislation, but where the motivation was considered extremist (e.g. individuals convicted of offences such as murder, conspiracy to murder, conspiracy to cause an explosion, blackmail, conspiracy to cause damage to property etc.).

Another key concept that is often disputed but highly relevant to the present work is 'radicalisation'. Ever since this term started gaining popularity and was incorporated into policy in the mid to late 2000s (e.g., the launch of the counter-radicalisation policy, later known as Prevent, part of the Government's broader Contest counter-terrorism strategy),[6] many researchers consider it misleading and based on ill-founded assumptions. Some, including Neumann (2013), have even suggested that 'radicalisation' as a term should be discarded altogether. He described the term 'radicalisation' as inherently relational and value-laden, given that being 'radicalised' is intrinsically linked to whatever is the norm or central set of ideas at a given time in any given society. In support of this view, Schmid (2013) argued that, "Radicalisation, like terrorism, too often means different things to different people, sometimes based also on different political interests" (p. 19). Both Sedgewick (2010) and Crone (2016) have criticised the concept of 'radicalisation' for over-emphasising the individual and, to some extent, the ideology and the group, at the expense of wider political, economic and social "root causes".

There has been much debate as to whether 'radicalisation' has an inherent behavioural component, or concerns beliefs and attitudes only (Neumann, 2013). Many proposed definitions describe 'radicalisation' as a process by which an individual's beliefs become increasingly extreme. However, others have suggested that 'radicalisation' involves the adoption of both extremist ideas and violence. For example, Neumann and Rogers (2007) described 'radicalisation' as a process of "changes in attitude that lead towards sanctioning, and ultimately, the involvement in the use of violence for a political aim" (p. 11). Crone (2016) supports this view by arguing that whilst 'radicalisation' implies some kind of intellectual transformation, it also infers a transformation of physical capacities and skills acquisition to enable the perpetration of violence, developed through sustained experience with violence or through activist mentoring by someone with experience of committing violence or able to facilitate contacts with those in conflict areas. Despite the frequent implication that 'radicalisation' is a necessary precursor for violent extremism to occur, this has not been found to be the case (Bartlett & Miller, 2012; McCauley & Moskalenko, 2014). Schuurman and Taylor (2018) argued that empirical research has demonstrated that the majority of radical individuals

[6] 'Project CONTEST: The Government's Counter-Terrorism Strategy – Ninth Report of Session 2008–09'. House of Commons, Home Affairs Committee, June 2009, p. 3. http://www.publications.parliament.uk/pa/cm200809/cmselect/cmhaff/212/212.pdf

never turn their convictions into violent acts and even those who become terrorists are not necessarily or primarily motivated by their extremist beliefs.

Despite these criticisms, the longevity of the term 'radicalisation' can be explained in part by its perceived usefulness to counter-terrorism practitioners, to whom it appears to sum up an observable phenomenon in need of a name (Knudsen, 2018). As with the wider debate on 'radicalisation', there is also a lack of agreement on what constitutes 'online radicalisation' and how, if at all, it happens. For this reason, the influence of online interactions and propaganda on processes of radicalisation remains a highly contested topic. For this research study, the definition of 'radicalisation' used is that adopted by the UK Government, where it is defined as, "the process by which a person comes to support terrorism and extremist ideologies associated with terrorist groups" (Her Majesty's Government, 2015b, p. 21).

3.1.2. Review of existing literature

3.1.2.1. Introduction to extremist offending.

There are many different types of extremist offending, including that inspired by right wing, left wing and other political, social, religious or other ideological-related causes. The common theme within this spectrum of extremist action is that the aim of the unlawful behaviour is to further ideological-based objectives.

Research has generally found that no single profile exists that applies to those who have committed extremist offences, with differences found in relation to age, sex, educational achievements, upbringing, mental health, nationality, ethnicity and personal background (Borum, 2004; Horgan, 2003; McCormick, 2003; Silke, 2014). Those who have committed extremist offences are generally considered as 'normal' functioning with a commitment to a specific ideology and willingness to behave in an unlawful manner to further their goals. Some individuals have been described as leaders, whilst others are described as followers or even criminal opportunists (Council of Europe Handbook, 2016).

Researchers have identified and started exploring the heterogeneity of involvement processes. Not only do individuals become involved in extremist offending for a variety of reasons, but also 'involvement' itself can take a multitude of forms (Horgan, Shortland, Abbasciano & Walsh, 2016; Nesser, 2010). This was supported by Gill and Horgan (2013) who found most participants in terrorist groups were involved in non-violent acts, including fund-raising, recruitment, propaganda and logistics, as opposed to violent acts, such as planting bombs or shooting people. In another study, Horgan et al. (2016) found that the majority of the 183 individuals who were convicted for terrorist offences in the UK between 1995 and 2012 and associated with the global jihadist movement had

committed the offence of providing (or attempting to provide) material support, with less than half involved in an attack and even fewer attempting to execute one. This highlights one of the limitations of much of the research in this area, where the focus has tended to be on those who have committed terrorist acts rather than those involved in non-violent extremist activity. Individuals are often found to have engaged in Internet-based extremist activities, which can result in convictions and attract custodial sentences, but are considered one step removed from the violent terrorist acts that have been the focus of the majority of past research (Radicalisation Awareness Network - RAN Working Group, 2016).

3.1.2.2. The role of the Internet in radicalisation

There is growing concern that the widespread use of the Internet is potentially increasing the risk of radicalisation, particularly if people are able to 'self-radicalise' without encouragement or input from others in an offline setting. The Internet has been described as a dangerous shortcut to radicalisation as it provides "a cheap and effective way to communicate, bond and network with like-minded movement members" (Koehler, 2014, p. 118). According to Conway (2016), today's Internet not only allows for dissemination and consumption of extremist material in a one-way broadcast from producer to consumer, but also enables high levels of online social interaction by individuals around this material.

Within the literature, a central debate has been whether the Internet plays a causal or facilitative role in the radicalisation process. Some studies have emphasised the significance of the Internet (Gray & Head, 2009; Stenersen, 2008), whilst others have suggested it does not play a prominent role and real-world relationships remain a necessary part of the radicalisation process (Koehler, 2014; Sageman, 2008). Recently, most academics have become increasingly wary of making causal connections between an individual's online involvement and their mobilisation in the cause of violent ideologies and movements, with emphasis tending to be placed on the Internet's facilitating and catalysing qualities instead (Benson, 2014; Meleagrou-Hitchens & Kaderbhai, 2017). However, despite this growing consensus, a small number of cases exist that appear to 'buck the trend', where individuals appear to have self-radicalised online without real-life connections to others. One high-profile example often cited in the literature is that of Roshonara Choudhry, who attempted to murder her local Labour MP Stephen Timms for supporting the Iraq war. Ms Choudhry is often reported to have self-radicalised by watching hours of online jihadi videos and lectures by the American preacher Anwar al-Awlaki in 2010 (Gill & Corner, 2015; Hussain & Saltman, 2014).

Whilst it comes as no surprise that the Internet is seen as contributing to radicalisation processes, further research is required to more clearly establish its role. There is currently at least broad

consensus that the Internet alone is not a cause of radicalisation, but has the potential to act as a facilitator and catalyst for an individual's trajectory towards committing extremist acts. Whilst there has been an increase of research in this topic area, the overall lack of empirical evidence has affected the strength of research and ability to draw convincing conclusions. Gill, Corner, Thornton and Conway (2015) suggested that one of the main issues within the literature, particularly relating to online radicalisation, is a general lack of data driven studies.

3.1.2.3. Theoretical explanations for online radicalisation

There has been an increasing recognition of the important interplay between individuals and their environments when explaining how radicalisation occurs. For example, Bouhana (2019) argued that being vulnerable to extremism is not simply a case of an individual being psychologically susceptible to moral influence, but is also about them being susceptible to sustained exposure to settings that enable extremist socialisation. According to Bouhana (2019), these settings, including terrorism-enabling settings online, typically only emerge in particular environments and under certain conditions. Further support comes from Smith, Blackwood and Thomas (2019) who emphasise the problems with primarily focusing on individual vulnerabilities and risk factors to explain how radicalisation occurs, suggesting instead that the social context in which interactions take place, or in other words, the intragroup processes, are fundamental to this process.

A number of theoretical explanations have attempted to explain how the Internet contributes to the radicalisation process. One example is Sageman (2004, 2008) who proposed a bottom-up theory where interactivity between online members gives participants an opportunity to be swayed by the ideological content and facilitates an "in-group love" that increases the likelihood of radicalisation occurring. An alternative explanation is that of Hoffman (2006), who proposed a top-down theory, placing the onus on the importance of hierarchy within terrorist organisations. Hoffman (2006) argued that extremist websites and the ideological elite play a key role in facilitating radicalisation through either online or offline methods. Conway and McInerney (2008) supported a synthesis of both positions. They described Sageman's theory as useful in explaining the initial entry for youths seeking extremist content, with the Internet playing a facilitative role in terms of providing online contact with like-minded others and connection to a movement, whilst Hoffman's top-down theory was useful in explaining how terrorist organisations actively target vulnerable youth.

Some researchers have proposed that the Internet contributes to radicalisation by intensifying and accelerating the process, where the speed and saturation of online communication leads to an accelerated radicalisation process as impressionable individuals find themselves exposed to increasingly extreme viewpoints. Pantucci (2011) supported this view, arguing that the Internet

provides individuals with the information they are looking for to confirm their beliefs. Schmidle (2009) highlighted the role of online chatrooms in particular as contributing to this accelerant effect, given that those developing an extremist mind-set can exchange their views with like-minded others at any time, day or night. However, studies aiming to explore whether the Internet accelerates radicalisation have reported inconclusive findings. One example is the study by Von Behr, Reding, Edwards and Gribbon (2013) who analysed direct interviews with 15 individuals, ten of whom were convicted of extremist offences in the UK and five who were part of the Channel programme, a UK government intervention targeting individuals identified as vulnerable to violent extremism by the Police. Von Behr et al. (2013) concluded it was difficult to establish whether the Internet had accelerated the radicalisation process, but suggested the evidence supported the Internet acting like an 'echo chamber', where individuals were able to find like-minded others who reflected back their views and further amplified them.

Another theory proposed is that social media platforms' personalisation algorithms may promote extremist material and contribute to radicalisation processes and trajectories towards terrorism. For those engaging with extreme content online, these algorithms could result in users being recommended further extreme content they would not have otherwise seen, whilst making alternative viewpoints harder to reach. This has been termed a 'filter bubble' effect (Pariser, 2011). Whilst there is a general lack of research studying the effects of personalisation algorithms on extremist content (Reed, Whittaker, Votta & Looney, 2019), some support for a filter bubble effect has been found for extreme right-wing videos on YouTube (O'Callaghan, Greene, Conway, Carthy & Cunningham, 2014) and Twitter's Who to Follow recommendation for users following Al-Qaeda affiliates (Berger, 2013).

3.1.2.4. The way in which the Internet is used

Several recent studies have examined the specific ways in which those who have committed extremist offences have used the Internet. Lone actor terrorists, broadly defined as those who perpetrate offences alone and are not part of a wider extremist group/organisation, have been the focus of a number of previous studies as Internet activity is found to be a significant feature and highly prevalent for many cases (Pantucci, Ellis & Chaplais, 2015). The Internet is seen as providing a surrogate community or 'support structure' for lone actor terrorists (Spaaij, 2012).

Gill, Horgan and Deckert (2014) attempted to measure the degree to which a sample of 119 lone actor terrorists had used the Internet and engaged in online activities. Information for each case was obtained by examining open-source news reports, sworn affidavits, and where possible, openly available first-hand accounts. The authors also reviewed relevant documents across online public

record depositories, biographies and all available scholarly articles. Specific variables were coded relating to sociodemographic information, antecedent event behaviours, event-specific behaviours and post-event behaviours. Within this study, Gill et al. (2014) focused primarily on two questions relating to online behaviour: 'Did the individual learn from virtual sources?' and 'Did the individual interact with co-ideologues online?' It was found that 35% of lone actor terrorists had used the Internet to interact with networks of like-minded political activists, while 46% used the Internet for didactic purposes related to their attacks.

Gill and Corner (2015) employed a similar methodology, but separated out a number of online facilitative (e.g. accessing extremist materials online, engaging with co-ideologues) and planned action behaviours (e.g. using the Internet in attack planning, target selection, overcoming obstacles) to explore Internet use among 119 lone actor terrorists in the UK and USA. Behaviours and traits of lone actor terrorists who either learned online or interacted with co-ideologues online were compared with those who had not engaged in such behaviours. Gill and Corner (2015) concluded that a growing trend existed amongst lone actors to make use of the Internet, thereby altering their means of radicalisation and attack learning. They also found that younger members were significantly more likely to engage in both online learning and online interaction. For the purposes of their research, Gill and Corner (2015) employed an inclusive definition for lone actors, with a sample including individual terrorists (with and without links to larger groups/organisations) and isolated dyads (pairs of individuals operating independently of a group). Of particular note was the finding that once lone actors became involved in either virtual interactions or face-to-face interactions with other co-ideologues, they then became significantly more likely to engage in the other types of interaction.

Other studies have relied upon analysing interviews with those convicted of terrorism offences to explore how they have used the Internet. Von Behr et al. (2013) had access to interviews with 15 radicalised individuals, including nine convicted under terrorism legislation in the UK. Other sources of data included police interviews and an examination of trial records and computer registries. Based on their findings, Von Behr et al. (2013) concluded that the Internet afforded more prospects for radicalisation as it was a "key source of information, communication and of propaganda for their extremist beliefs" for all cases within their sample (p. 12). Von Behr et al. (2013) also concluded that the Internet provided "greater opportunity than offline interactions to confirm existing beliefs" (p. 12). Koehler (2014) analysed interviews with former German right-wing extremists to investigate the role of the Internet in radicalisation processes. Support was found for the prominent role played by the Internet in terms of providing a more effective means of communication, anonymity and better networking opportunities. The Internet was also considered a major driving factor to establish and foster the development of communities that transmitted radical and violent ideologies and translated

these into political activism. However, it was of note that those interviewed indicated that they only felt truly part of a movement after attending rallies and meeting members in an offline space. Based on these findings, Koehler (2014) concluded that the Internet was a medium for information exchange, ideological development and training, therefore shaping and making possible the radicalisation process.

Gill, Corner, Thornton and Conway (2015) conducted a large-scale study involving 227 UK extremist offenders, including those who died in the commission of their offences and those who were subsequently convicted. Their findings largely confirmed those of previous studies in that widespread Internet use had not led to a rise in terrorism and that the Internet was a facilitative tool that enabled radicalisation, rather than radicalisation being dependent on it. Gill et al. (2015) found online behavioural differences when the sample was split by target type, ideological motivations and attack type, highlighting the importance of not viewing those radicalised or terrorists on an aggregate level. For example, lone actors were found to engage in online learning more frequently than group actors, which was considered a reflection of them lacking direct access to and exchange with skilled others. Those affiliated with an extreme right-wing ideology were also found to be more likely to learn and communicate online than violent jihadists. This was seen as either due to the structural unavailability of co-offenders in their vicinity or the increased likelihood of them being lone actors. Gill et al. (2015) found that cases where individuals had fully self-radicalised online were rare and face-to-face interactions were still key for the vast majority of cases within the sample.

Bastug et al. (2018) focused on the role of social media in the process of radicalisation, and whether and for what purposes extremists use social media after they become radicalised within a sample of fifty-one Canadian Islamist extremists. Within this study, data was obtained from a combination of both media and court reports. For thirty-two cases where radicalisation data were available, social media and the Internet played a role for twenty-one individuals. When comparing religious converts versus non-converts, it was found that at least half the converts became radicalised online. The data collected also showed that at least twenty-six extremists had used social media for terrorism-related activities after they became radicalised. The most common activities related to spreading extremist ideologies or encouraging terrorism, through posting extremist messages or sharing of extremist videos and statements through online accounts, and exchanging messages with other extremists, particularly those fighting in Syria. Bastug et al. (2018) concluded that social media platforms played a significant role in online radicalisation and were therefore “a very important radicalising agent” (p. 16). Of particular note was that social media was found to have more of an influence than other factors, including friend groups, family members and radical clerics.

Whilst these data-driven studies have provided valuable insights into ways in which those who have committed extremist offences have used the Internet, a number of important knowledge gaps remain. Whilst the study by Gill et al. (2015) involving UK extremist offenders has started to explore whether differences exist in the way those who adhere to different extremist ideologies use the Internet within their offending, further data-driven research in this area would be beneficial to either confirm or disprove their findings. Another knowledge gap relates to more clearly establishing the relevance of various online platforms and applications to the radicalisation process. Watkin and Whittaker (2017) have previously referred to an evolution in the way extremist groups have used the Internet, where members initially accessed extremist homepages/websites, but when these were shut down or infiltrated by security services, many transitioned to using mainstream social media and micro-blogging sites, including Facebook and Twitter. In response to governments and private industry adapting to this threat, members then migrated towards encrypted platforms, such as Telegram and Surespot, which offer similar features and capabilities of open platforms but with more security and privacy.

Other knowledge gaps relate to potential age and gender differences in the way those who have committed extremist offences have used the Internet. Previous research has demonstrated age and gender differences in terms of the types of online activities that users engage in. This is most pertinent in the case of social media, which have been described as a space dominated by ‘digital natives’ between the ages of 14 to 24 years old (Brown & Pearson, 2019). Branley (2015) also found that females are more likely to use social media to communicate with pre-existing friends, whilst males are more likely to use social media for information seeking, making new contacts and for entertainment purposes. One study suggesting age differences may exist is that by Nesser (2008) who investigated generational differences in European jihadists. He found the Internet served a more important resource for the younger generation, who were more impatient and reckless than their predecessors. However, exactly how these age and gender differences translate to those who have committed extremist offences remains unclear. Gaining a better understanding of the particular uses of the Internet for males and females, along with different age demographics, in terms of the specific websites and applications used, would likely assist current measures to prevent and counter extremism within communities.

3.1.2.5. Relationship between online learning and offline action

There is a growing body of literature investigating whether the Internet and in particular social media use may exert its influence beyond the online world and influence offline behaviour. The influence of social media has previously been considered in relation to a range of other types of risky

offline behaviours, such as unprotected sex and sex with strangers (Young & Jordan, 2013), excessive alcohol consumption (Moreno, Briner, Williams, Walker & Christakis, 2009), self-harm (Dunlop, More & Romer, 2011) and eating disorders (Bozekowski, Schenk, Wilson & Peebles, 2010). However, evidence appears mixed as to whether extremist online radicalisation and activity directly translates into extremist offences being committed offline.

Some have argued that online radicalisation is not the sole determining factor leading individuals to commit acts of violence for their cause, with physical real-world interaction and networks considered vital ingredients for this development to foster and propagate (Bergin, Osman, Ungerer & Yasin, 2009). Others have argued that the Internet is becoming an ever-increasing and important tool as a means to facilitate this process (Stevens & Neumann, 2009). A further consideration is the possibility of gender and age differences affecting the relationship between online learning and offline action. For example, past research has found that younger users may be more prone to negative influences of the Internet and social media (Topping, 2014), whilst there is some evidence to suggest that males are more likely to engage in risky behaviour than females (Browne & Hamilton-Giachritsis, 2005).

Branley and Covey (2017) have argued that Social Learning Theory (Bandura, 1977) offers an explanation as to why a relationship between social media use and risky behaviour may exist, in terms of the importance of exposure and internalisation of behaviour through observational learning (i.e. imitating what is seen) and instrumental learning (i.e. whether behaviour is reinforced through rewards or punishments from others). Relating this to extremist offending, if individuals are exposed to risky behaviour online through social media platforms and receive reactions from others that endorse risky behaviour, this may increase the likelihood of them engaging in that behaviour due to social learning. This also fits with the Theory of Planned Behaviour (Ajzen, 1991), which argues that peer influence can feed into normative beliefs and attitudes towards the behaviour, whilst facilitative peer influence could affect the individual's perceptions about their ability to conduct the behaviour. According to the theory, normative beliefs, attitudes and perceptions of efficacy all contribute to the intention of carrying out the behaviour.

Conway (2016) outlined the main arguments by those who consider the role of the Internet in radicalisation processes has been exaggerated and that online activity exerts little influence on offline behaviour. It has been suggested that online extremists are 'amateurs' in terms of restricting themselves to supporting and encouraging violent extremism online but pose little or no 'real-world' threat. Their online activity is viewed as a mechanism that helps dissipate their desire for violent action, rather than increasing any desire to act. A related argument is that those using the Internet to

declare a dedication or desire for violent action may be engaging in a form of online showboating, rather than having any real commitment or intention to engage in real-world violence.

Despite the growing body of literature exploring the influence of the Internet on offline behaviour generally, there remains significant knowledge gaps around the relationship between online radicalisation and level of risk of committing extremist offences in offline settings. This lack of knowledge could be inhibiting the identification and support offered to those vulnerable to online radicalisation, prior to becoming engaged with an extremist group, cause or ideology. A lack of understanding in this area could also be limiting the effectiveness of how those who have radicalised online and committed extremist offences are currently prioritised, assessed and managed in custody, along with the level of support offered to them to assist re-integration into the community.

3.1.2.6. Relevance of an online/offline distinction

It has increasingly been argued that the "threat posed by and the pursuit of so-called 'online radicalisation' and the online/offline distinction make little sense" (Hoskins & O'Loughlin, 2009, pp. 108-109). This is supported by Gill et al. (2015) who argued a distinction between online and offline radicalisation is a "false dichotomy" given "plotters regularly engage in activities in both domains" (p. 38). They suggested that conceptualising radicalisation in this way represented "two extremes of a spectrum that regularly provide prototypical examples in reality" (p. 38). Von Behr et al. (2013) shared this view following their analysis of interviews with 15 radicalised individuals, when concluding the Internet was not a substitute for in-person meetings but instead complemented in-person communication.

Rather than relying upon an online/offline distinction to differentiate between radicalisation pathways, research findings have indicated that a more fine-grained distinction is required. Gill, Corner, Thornton and Conway (2015) suggested a more appropriate dichotomy to online/offline would be interaction with others/no interaction with others. However, an alternative way of differentiating between radicalisation pathways includes separating those who have primarily radicalised online, from those who primarily radicalised offline and those subject to both online and offline influences. Reinares, Garcia-Calvo and Vicente (2017) utilised a similar way of differentiating between radicalisation pathways for 178 detainees in Spain who were suspected of activities relating to Jihadist terrorism between 2013 and 2016. They reported 35.3% of their sample were radicalised principally in an online environment, 24.4% in an offline environment and 40.3% in a mixed environment.

Differentiating between radicalisation pathways in this way will enable investigation into whether those individuals who have primarily radicalised online differ in terms of demographic variables, their use of the Internet and the types of extremist offences committed compared with those who have primarily radicalised offline or through a combination of online and offline influences. These findings are likely to assist online counter-terrorism measures by identifying which demographics and online activities are best targeted. Another important consideration is that it is currently unknown whether those who have primarily radicalised online are more or less committed to an extremist group, cause or ideology, have higher or lower levels of intent, or are more or less capable of committing violent extremist offences compared with those who primarily radicalised offline or through both online and offline influences. This could have implications for the way in which individuals convicted of extremist offences, but radicalised via different pathways, are most effectively assessed and rehabilitated whilst in custody and upon release into the community.

3.1.3. This study's main contribution to the area

Researchers have generally acknowledged the need for further rigorous, empirical research to test assertions about radicalisation and the role of the Internet (e.g. von Behr et al., 2013). The majority of data-driven studies in this area have relied upon open source data to draw conclusions. However, these studies have limitations including questions around the accuracy of reporting when using open sources, particularly as only limited information on extremist cases is generally made available within the public domain. Other studies have relied upon a limited number of case studies and based selection on the phenomenon of interest being present, resulting in difficulties when attempting to generalise findings to a wider population. Other than several notable exceptions (e.g. Gill et al., 2015; Koehler, 2014; Von Behr et al., 2013), the reasons for the lack of data-driven research, particularly those using primary source data, is that gaining access to those convicted of terrorist offences (under UK Terrorism legislation) or those identified as extremists (by the police and multi-agency partners) is extremely difficult. Furthermore, accessing information relating to these individuals held by the police, prison service or courts can be labour-intensive and logistically very difficult.

Conway (2016) made six suggestions to support the progression of research on the role of the Internet in violent extremism and terrorism. These related to areas considered yet to be adequately addressed. The suggestions included (1) widening the range of types of violent online extremism being studied beyond violent jihadis (this was also a recommendation by Schuurman, 2019 after reviewing gaps and trends in terrorism research across the years 2007-2016); (2) engaging in more comparative research, not just across ideologies, but also groups, countries, languages, and social media platforms; (3) deepening analyses to include interviewing and virtual ethnographic approaches; (4) up-scaling or

improving capacity to undertake "big data" collection and analysis; (5) outreaching beyond terrorism studies to become acquainted with, for example, the Internet studies literature and engaging in interdisciplinary research with, for example, computer scientists; and (6) paying more attention to gender as a factor in violent online extremism.

This present work will address a number of previous criticisms of research in this area and respond to suggestions by Conway (2016). This will be achieved by accessing a unique dataset consisting of a large number of specialist assessment reports completed by professionals with access to a number of restricted information sources, along with first-hand experience of interviewing and working with those convicted of extremist offences. Using this dataset, this empirical study will involve creating a comprehensive database of all individuals convicted of extremist offences in the UK who were subject to a Structured Risk Guidance (SRG) or Extremism Risk Guidance (ERG22+) (National Offender Management Service, 2011) assessment between October 2010 and December 2017. Relevant data was obtained for all cases from information obtained within the SRG and ERG22+ assessments. By utilising a standardised data source available for what is essentially the entire UK extremist offender population for the period 2010-2017, this project aims to make novel contributions to understanding the role of the Internet in radicalisation processes and to add to a literature base seen as lacking a strong empirical underpinning. Those individuals convicted of extremist offences of both a violent and non-violent nature include those affiliated with and influenced by a range of causes and ideologies, with both males and females represented, many of whom were considered radicalised.

A note on the history of the SRG and ERG22+ is needed before moving forward. The SRG was developed first in 2009 by Her Majesty's Prison and Probation Service (HMPPS formerly the National Offender Management Service (NOMS)). The development of the SRG was informed by the literature on risk assessment and terrorism, by case work with those convicted under terrorist legislation and by discussion with international peers. This led to the identification of 21 factors considered to be common pathway influences, which were then collated into formal guidelines to assist with the preparation of individual formulations of risk and need. Following a pilot of the SRG across custody and community settings, an independent evaluation was conducted by the National Centre for Social Research (Webster, Kerr & Tompkins, 2010), where it was concluded the SRG offered a promising method of assessing convicted extremist offenders and those 'at risk' of being drawn into terrorism. Recommendations following this evaluation led to the streamlining of some factors and the addition of others, clarification around the stages of assessment and further practice guidance being provided to assessors. The resultant changes, along with the growing body of casework evidence, led to the development of the ERG22+.

Since September 2011, the ERG22+ has been used throughout prisons and probation services in England and Wales to assess all individuals convicted and sentenced under Terrorism Act (TACT) legislation (National Offender Management Service, 2017). The constructs underlying extremism within the ERG22+ are drawn from the social psychological literature, specifically themes of socialisation and social identity, combined with psychologically described features of motivation and intent (Powis, Randhawa & Bishopp, 2019). The ERG22+ adopts a structured professional judgement approach and analyses the personal and contextual factors and circumstances that contributed to an individual's engagement in an extremist group, cause and/or ideology, and offending. It is utilised as a risk management tool, rather than an assessment that measures level of risk as the evidence around extremist offending is not sufficiently developed and the base rate for such activities too low to allow accurate prediction of risk of offending.

Whilst the ERG22+ was developed based on interviews and experiences with primarily Al-Qaeda inspired offenders, it is recommended for use with individuals with any ideological reference, of any gender, and on lone actors and group actors alike. Lloyd and Dean (2015) described the offender population targeted by the ERG22+ as "Any offence committed in association with a group, cause or ideology that propagates extremist views and justifies the use of violence and other illegal conduct in pursuit of its objectives" (p. 41). Therefore, as well as those who have committed violent extremist offences, the ERG22+ can also be utilised with individuals who have committed a range of non-violent extremist offences, such as encouragement of terrorism (including indirect encouragement), disseminating terrorist publications, preparing terrorist acts, giving and receiving training for terrorism and attendance at a place used for terrorist training.

The ERG22+ assessment contributes to decisions relating to, among other things, a prisoner's security categorisation, bail, release and suitability for targeted intervention programmes. An ERG22+ assessor should be a trained Forensic Psychologist or experienced Probation Officer and is required to have attended a two-day training event dedicated to its use (Lloyd & Dean, 2015). Although the assessor seeks co-operation with the participant, this is not always granted and is not a necessity. The ERG22+ consists of 22 factors that are theoretically related to extremist offending, with scope to add more case-specific factors if relevant. Each factor is given a rating based on the presence of each factor in each case and an overall evaluation is undertaken across three domains: level of engagement, intent and capability. Two sets of ratings are generally provided to reflect the time the individual committed their offence and when the assessment is being conducted.

Despite the widespread use of the ERG22+ in England and Wales, the structure of the assessment has received some attention and criticism. Whilst the ERG22+ factors are not intended to capture the

full political and societal context of an individual's radicalisation, Knudsen (2018) argued the current reliance on these indicators by counter-terrorism in England and Wales made the limited explicit incorporation of political and societal context problematic. Herzog-Evans (2019) was also critical of the ERG22+ for its lack of inclusion of cognitive inflexibility as a factor or the construct of need for closure. Herzog-Evans (2019) suggested a need for closure might be particularly relevant for lower threshold populations who have yet to act upon their beliefs. However, these criticisms may reflect a degree of unfamiliarity with the ERG22+ and the way this assessment is applied in practice. For example, whilst the 22 factors are unlikely to capture the full political and societal context, ERG22+ assessors are encouraged to consider wider contextual circumstances when formulating how individuals become drawn into terrorism, bringing a level of political, cultural and situational awareness to the process (HMPPS Extremism Risk Guidance Manual, 2019). The structure of the ERG22+ also allows for the inclusion of additional factors outside of the 22 if considered relevant.

A recent study by Powis et al. (2019) examined the construct validity and structural properties of the ERG22+ to inform the development of measurement scales. The findings suggested the ERG22+ offered promise as a framework for assessment using a structured professional judgement approach but would benefit from further development and refinement. At present, the ERG22+ continues to be utilised as a means of structuring the identification and assessment of risk and needs for those who have committed extremist offences in the UK. It is also among the best data currently available to support research into those convicted of extremist offences.

3.1.4. Research aims and questions

If it is assumed that there are different ways in which those who commit extremist offences can be radicalised, including online radicalisation for some, it would appear likely that this happens in association with a number of other case characteristics. There are concerns specific to online radicalisation, such as the covert nature, difficulties in detection and potential to facilitate lone actor terrorism. There is also currently a lack of data-driven research exploring the role of the Internet in radicalisation processes. It is therefore important to explore whether systematic associations exist between radicalisation pathways and online activity, offender demographics, offence characteristics and ideological context.

It is unclear whether certain online activities and recruitment strategies are more strongly associated with online radicalisation. Furthermore, it has yet to be established whether males, females, particular age groups, or those inspired by specific ideologies are more likely to have radicalised in an online setting. Previous research has suggested that use of the Internet is particularly prevalent for lone actor cases (Pantucci, Ellis & Chaplais, 2015; Spaaij, 2012), but what is less clear is

how this compares with other radicalisation pathway groups given the widespread use of the Internet in today's society. Other questions that remain unanswered include whether online radicalisation typically results in violent extremist action offline or whether offences are more likely to be of a virtualised nature. Furthermore, clarification is required to establish whether online radicalisation is associated with higher or lower levels of engagement, intent and capability to commit extremist offences resulting in serious and significant harm compared with other radicalisation pathways, and whether an individual's age, gender, degree of social connection with other extremists offline and chosen ideology/cause will have a bearing on this.

In order to investigate if any of these associations exist, the data source of SRG and ERG22+ reports, containing information-rich accounts of the personal and contextual factors and circumstances that contributed to an individuals' engagement in an extremist group, cause and/or ideology, will be used to construct a dataset by coding for case characteristics related to radicalisation pathway and any detail of online engagement. Once this has been completed for all cases, this study will aim to address the following research questions:

1. Has the Internet altered the means by which radicalisation takes place for those convicted of extremist offences?
2. Does the radicalisation pathway influence the way in which those convicted of extremist offences use the Internet?
3. Are differences apparent in offender demographics and offence-type variables when radicalisation pathways are compared?
4. What impact does the radicalisation pathway have on levels of commitment, willingness and capability of offenders to perpetrate violent extremist acts? Are there sub-group differences regarding age, gender, degree of social connection and ideology specifically?

3.2. Methodology

3.2.1. Sample

The data source accessed through the Ministry of Justice Research and Evaluation team consisted of 269 specialist assessment reports. These included 267 Extremism Risk Guidance (ERG22+) assessment reports and two Structured Risk Guidance (SRG) assessment reports (the predecessor to the ERG22+). All reports had been completed on individuals who were convicted of extremist offences in the UK or where there were sufficient concerns around the individual's potential engagement with an extremist group, cause or ideology to warrant an assessment.

The 269 specialist assessment reports included all that were available to the Ministry of Justice Research and Evaluation team that were completed between October 2010 and December 2017. All reports were authored by either a Registered Psychologist or qualified Probation Officer who had undertaken the same two-day national training to learn how to conduct the assessment. The average length of reports was 20 pages, with the longest consisting of 146 pages and shortest only four pages. Of the 269 reports, 207 (77%) individuals who were the subject of the report had consented to be interviewed to inform the assessment, whilst the other 62 (23%) individuals had declined the opportunity to be interviewed.

3.2.2. Ethical Approval

In order to facilitate the sharing of the specialist assessment reports between the Ministry of Justice Research and Evaluation team and School of Social Sciences at Nottingham Trent University, a Data Sharing Agreement (DSA) was drafted and signed by representatives of both parties in December 2017. The research study received ethical approval from the College Research Ethics Committee at Nottingham Trent University in July 2018. In order to gain ethical approval, specific consideration was required regarding ways of managing the risk of distress and vicarious trauma through regular supervision and sharing personal reactions. This was due to the proposed methodology involving accessing and reviewing data of a distressing and concerning nature. Given the professional background of the lead researcher and the expertise of supporting academics, the risk was deemed manageable. The National Research Committee (NRC) also granted approval to conduct this research in August 2018. This was important as the data related to individuals who had been convicted of offences and incarcerated in the UK.

3.2.3. Procedure

The 269 specialist assessment reports were manually reviewed to facilitate the development of a comprehensive coded data set. This review process involved examining each report and extracting

new variables by coding for a range of information relevant to answering the research questions identified. At the same time, a comprehensive codebook was developed that included definitions for each of the variables of interest and provided instructions and examples of how to apply the coding frame consistently.

The process of developing and verifying the coding system was consistent with that used by other researchers (e.g. Mereno, Egan & Brockman, 2011; Weston et al., 2001). One coder was initially tasked with coding all variables of interest from the dataset. To ensure inter-rater reliability and ease of use of the coding frame, two other coders[7] were asked to independently code all variables of interest for three test cases. As part of an iterative process, all three coders then collaboratively reviewed the coding of the three test cases and where differences in coding were apparent, these were resolved though discussion and by all coders examining the report together and reaching a consensus.

For each case within the dataset, new variables relating to Internet activities/behaviours, demographic and offence-type information were extracted from the data source. Other variables included those specific to the ERG22+ assessment, including overall 'engagement,' 'intent' and 'capability' ratings to commit extremist offences for individuals at the time of the index offence. All variables of interest are detailed in the Measures section.

3.2.4. Measures

The first variable of interest related to the type of prison-based extremist identified by Silke (2014). This was important to differentiate between not only those individuals who were considered to have been radicalised and those who were not, but also those considered radicalised prior to committing the index offence and those who radicalised whilst in custody:

Type of prison-based extremist – This variable related specifically to the four prison-based extremist typologies identified by Silke (2014). Categories included: 'Radicalised extremist,' considered to be an individual who entered prison already holding extremist views and who had engaged in extremist actions in the outside world; 'Affiliate,' an individual who had been convicted of involvement in extremism or terrorism, but with good reasons to suggest they were not radicalised when they did so; 'Prison Recruit,' described by Silke (2014) as 'ordinary decent' individuals who had been radicalised within prison, possibly as a result of contact with extremist prisoners; and 'Vulnerable,' described by

[7] These additional coders were supervisors and university lecturers, with ongoing involvement in the research project and familiarity with quantitative coding procedures.

Silke (2014) as 'ordinary decent' individuals who, while not yet radicalised, may be assessed as vulnerable to joining the 'spectacular few' in the right circumstances.

The second variable of interest related to the radicalisation pathway undertaken by individuals. This was important to identify those cases where Internet use was relevant to the radicalisation process and those where Internet use was not relevant:

***Primary method of radicalisation* –** This variable related to identifying the primary method of radicalisation based on evidence contained within the ERG22+ or SRG report. Categories included 'Internet' for those who primarily radicalised online, 'Face to face' for those who primarily radicalised offline, and 'Both' for cases where both online and offline influences were considered significant. If the radicalisation pathway was unclear from information contained within the report, 'Not clear' was used.

As was the case in previous studies (see Gill & Corner, 2015; Gill, Horgan & Deckert, 2014), information was coded relating to Internet activities and behaviours commonly associated with online radicalisation. For example, this included whether individuals had learnt from online sources or interacted with co-ideologues online (see Gill, Horgan & Deckert, 2014). More disaggregated behaviours were also coded for, including whether individuals had disseminated their own extremist propaganda or whether they had provided material support online (see Gill & Corner, 2015). Other variables of interest included whether an individual was an active or passive Internet user and the types of websites/applications used. This was in response to suggestions within the academic literature of an evolution in how extremist offenders had used the Internet over time (Watkin & Whittaker, 2017).

The following Internet activity/behaviour variables were coded dichotomously (e.g., the response was either a 'Yes' or 'No evidence'), unless stated otherwise:

***Learnt from online sources* -** For cases where Internet use was relevant, this variable related to whether there was evidence an individual had learnt from online sources.

***Interact with co-ideologues online* -** For cases where Internet use was relevant, this variable related to whether there was evidence an individual had communicated with co-ideologues online.

Generate their own extremist propaganda online - For cases where Internet use was relevant, this variable related to whether there was evidence an individual had generated their own extremist propaganda online. Examples included if an individual had designed their own extremist image and posted this online or posted comments of an extremist nature online. However, if they had posted a link to extremist material on another platform that others had generated, this would not be included.

Provision of material support online – For cases where Internet use was relevant, this variable related to whether an individual had been involved in the provision of material support online. Examples included if an individual had donated funds or sent equipment to support another co-ideologue.

Active or passive Internet user – For cases where Internet use was relevant, this variable related to whether an individual was an active or passive Internet user and these were the response options. Active users were defined as those who had created or contributed to extremist online content (e.g. posting materials/videos online, writing online comments or engaging in online conversation on social network sites). Passive users were defined as those who had only consumed extremist online content (e.g., reading online comments or viewing online videos).

Access to specific extremist websites/homepages - This variable related to whether an individual had accessed specific extremist websites or home pages online. Examples included if an individual had set up their own website to promote extremist ideology or published details of animal testing companies on an animal rights activist website. However, if they had accessed extremist content online but only through open social media platforms, this would not be included.

Use of open social media platforms/applications - This variable related to whether an individual had used open social media applications or platforms online. Open social media applications or platforms are those where the intended standard use is generally made for increased openness and wider sharing or distribution of content to others (e.g. Facebook, Twitter and YouTube)

Use of E-mail/standard chat applications – This variable related to whether an individual had used e-mail/standard chat applications online. E-mail/standard chat applications are those where the intended standard use is generally for more restricted/targeted communication to others (e.g. E-mail, Skype and MSN messenger).

Use of encrypted applications - This variable related to whether an individual had used encrypted applications online (e.g. Telegram, Viber and WhatsApp).

In order to obtain demographic and offence type information for all cases within the dataset, the following variables were created by applying the coding scheme:

Age - This variable related to the age of an individual at time of sentencing, with categories of 'Up to (and including) 25' and 'Over 25'. These two categories were selected as research has found those under 25 are considered prime targets for recruitment due to an increased susceptibility to extremist messages, due to their impressionability and desire to find their place in the world. Also, the prefrontal cortex, involved in planning, decision-making and social behaviour and judgement is not typically developed until someone reaches their mid-twenties (Turner, 2018).

Gender - This variable related to the gender of an individual, with categories of 'Male' and 'Female'.

Place of birth – This variable related to the place of birth of an individual, with categories of 'UK' and 'Non-UK'.

Convicted offending history - This variable related to whether an individual has previous convictions. If an individual has no prior convictions, but has previous cautions or has been the subject of prior Police call-outs this would not be counted as the focus is specifically on prior convictions.

Presence of mental illness/Personality Disorder – This variable related to whether an individual had mental health difficulties and/or personality disorder as scored from the corresponding factor within the ERG22+ assessment.

Violent or non-violent – This variable related to whether an individual is violent or non-violent based on the nature of their index offence. This was included to distinguish between those who simply espoused radical beliefs and those who were prepared to commit acts of extremist-related violence. For the purposes of coding, a strict definition of 'Violent' was used: those convicted of any act which constituted, or any potential act which, if carried out would constitute, Murder, Attempted Murder, Manslaughter, Assault, and/or real injury to another, and/or cause serious and significant structural damage. Therefore, the 'Violent' sub-category included some individuals who were arrested prior to having conducted an act of violence, but were convicted on the basis there was sufficient evidence to suggest they would have conducted the act if they had not been disrupted. Individuals who had knowingly exhibited non-violent behaviours that could facilitate violence conducted by others (e.g. by disseminating extremist materials online) would fall within the 'Non-violent' sub-category.

Role in event – This variable related to the role taken by an individual within the index offence. This was included given past research (see Horgan et al., 2016) has emphasised the importance of identifying the 'roles' people held as involvement in terrorism can encompass complex, multiple, diverse, and often overlapping activities. Categories included 'Attacker,' where an individual had either committed an extremist attack themselves on another person or property, or there is sufficient evidence (based on their conviction) they would have done had they not been arrested/disrupted prior to such; 'Traveller,' where an individual had either travelled to other countries to pursue extremist goals, or there is sufficient evidence (based on their conviction) they would have done had they not been arrested/disrupted prior to such; 'Financer,' where an individual had provided financial support either to others with extremist views or to an extremist group/organisation; and 'Facilitator', where an individual had provided direct or indirect support (other than financial) to others with extremist views or to an extremist group/organisation. This also included those individuals who may

have provided some level of direct support to others (e.g. supporting others involved in extremist activity) or those who provided indirect support through inspiring others through their actions (e.g. through disseminating extremist material online).

Degree of social connection – This variable related to an individual's degree of social connection with other extremists in an offline setting during the lead up and around the time of the index offence. Categories included 'Lone,' 'Small cell' (2-3 people) and 'Group.'

Ideology - This variable related to the specific ideology supported by an individual, with categories of 'Islamist Extremist,' 'Extreme Right Wing,' 'Political'[8] and 'Animal Rights'.

In terms of variables specific to the ERG22+ assessment, the overall rating for engagement, intent and capability was recorded for individuals from either the ERG22+ scoring grid attached to each report or where referenced within the body of the report. All three variables were coded based on the corresponding overall rating provided within the ERG22+ assessment:

Overall engagement rating – This variable related to the summary score for 'engagement', based on the scoring of 13 engagement items forming part of the ERG22+ assessment. This scale is not summative, so the number of individual engagement factors endorsed does not correspond with the strength of the individual's overall level of engagement. Instead, this is an overall judgement by the assessor (in terms of Low, Medium or High) to reflect the individual's level of engagement to the extremist group/cause or ideology at the time of offending.

Overall intent rating – This variable related to the summary score for 'intent', based on the scoring of 6 intent items forming part of the ERG22+ assessment. This scale is not summative, so the number of individual intent factors endorsed does not correspond with the strength of the individual's overall level of intent. Instead, this is an overall judgement by the assessor (in terms of Low, Medium or High) to reflect the individual's level of intent to commit extremist offences likely to cause serious and significant harm at the time of offending.

Overall capability rating - This variable related to the summary score for 'capability', based on the scoring of 3 capability items forming part of the ERG22+ assessment. This scale is not summative, so the number of individual capability factors endorsed does not correspond with the strength of the individual's overall level of capability. Instead, this is an overall judgement by the assessor (in terms

[8] 'Political' is a category that has been used by the Ministry of Justice when conducting extremism pathway research to reflect a number of individuals described as anti-establishment or supporting a far-left ideology (e.g. individuals who want to overthrow the current political state and/or target symbols of authority).

of Minimal, Some or Significant) to reflect the individual's level of capability to commit extremist offences likely to cause serious and significant harm at the time of offending.

3.2.5. Analysis

A quantitative research design was utilised which involved analysis of coded information for individuals within the dataset. As the focus was on the ways in which the Internet was used in the radicalisation process and offending of extremist offenders, the analysis concentrated on those considered to be 'Radicalised Extremists' of the four prison-based extremist typologies identified by Silke (2014). This equated to 248 of the 269 individuals within the dataset.

The primary aim of the research study was to compare different radicalisation pathway groups to extremist offending, particularly those individuals where use of the Internet was relevant to their pathway, with those where Internet use was not considered relevant. As previously mentioned, where sufficient evidence to reliably determine the pathway group existed, cases were coded as either those who primarily radicalised online, those who primarily radicalised offline, or those where both online and offline influences were significant. These pathway groups were first compared in relation to their prominence over time and then subsequent analyses comparing these pathway groups were clustered to focus specifically on the research questions outlined.

Having presented relative frequencies and percentages for variables of interest for all pathway groups identified, Pearson's chi-squared tests[9] were conducted where possible to establish whether significant relationships were found between pathway group membership and variables of interest. A series of odds ratios were also reported where significant relationships existed. Multinomial logistic regression analysis[10] was used to test whether any of the coded Internet activity/behaviour variables could predict pathway group membership, and which were the strongest predictors for 'Radicalised Extremists' within the dataset. A Kruskal-Wallis[11] test was used to establish whether any statistically significant differences existed between pathway groups in relation to overall engagement, intent and capability ratings from the ERG22+ assessment.

[9] Pearson's chi-squared test is a statistical test applied to sets of categorical data to evaluate how likely it is that any observed difference between the sets arose by chance.

[10] Multinomial logistic regression is a predictive analysis, used to explain the relationship between one nominal dependent variable and one or more independent variables.

[11] The Kruskal-Wallis test is a rank-based nonparametric test, used to determine if statistically significant differences exist between two or more groups of an independent variable on a continuous or ordinal dependent variable.

3.3. Results

The analysis will focus exclusively on the 'Radicalised extremists' within the dataset to establish whether they can reliably be split into distinct groups based on primary method of radicalisation. As outlined in the Method, 'Radicalised extremists' are defined as those individuals considered to have entered prison already holding extremist views and who have engaged in extremist actions in the outside world (Silke, 2014). By focusing on 'Radicalised extremists', this enables the role of the Internet to be established in both the radicalisation process and offending of these individuals, in contrast to 'Affiliates', who are convicted of extremist offences but are not considered to have radicalised, 'Prison Recruits' who are considered to have radicalised in prison with no Internet access, and 'Vulnerables', seen as those who have not yet radicalised.

In order to do this, individuals considered to have been primarily radicalised online based on the SRG and ERG22+ reports (Internet group) will be compared with two other radicalisation pathway groups. First, those considered as having been primarily radicalised offline (Face to face group). Second, those considered to have radicalised through a combination of online and offline influences (Both). Of the 248 Radicalised extremists within the dataset, the primary method of radicalisation was not clearly reported in 13 cases, so these were excluded, leaving 235 cases to be included within the following analysis. Of the 235 cases on which the analysis was conducted, there were 29 individuals within the 'Internet' group, 93 within the 'Face to face' group and 113 in the 'Both' group.

Table 1. Frequencies and percentages of basic demographics for the 235 cases included within the analysis

		Frequency	Percentage
Gender	Male	211	89.8%
	Female	24	10.2%
Age (at time of sentencing)	Up to and including 25	99	42.1%
	Over 25	136	57.9%
Place of birth*	UK	163	72.8%
	Non-UK	61	27.2%
Ideology/cause	Animal Rights	16	6.8%
	Extreme Right Wing	25	10.6%
	Islamist Extremist	179	76.2%
	Political	15	6.4%

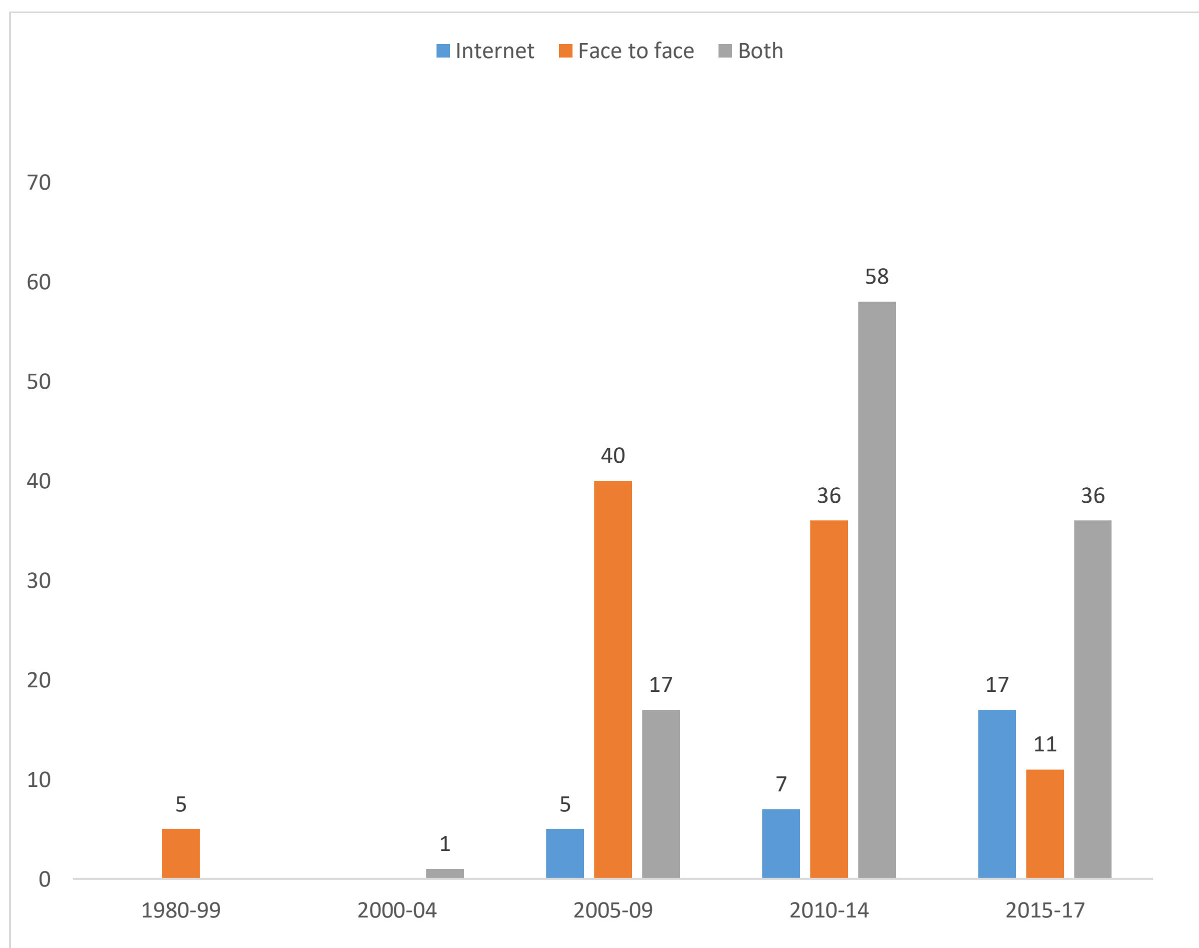
*Based on 224 cases as place of birth could not be identified in 11 cases

Of the 235 cases included, 211 (90%) were male, whilst 24 (10%) were female. In terms of age, 99 cases (42%) were 25 years old and under, whilst 136 cases (58%) fell in the 'Over 25' age category. A total of 163 were born in the UK (73%), whilst 61 (27%) were born outside of the UK. In relation to ideology/cause, 179 were Islamist Extremists (76%), 25 were Extreme Right Wing (11%), 16 were Animal Rights (7%) and the remaining 15 cases were Political (6%) (see Table 1).

3.3.1. RQ1: Has the Internet altered the means by which radicalisation takes place for those convicted of extremist offences?

The following analysis relevant to RQ1 will investigate whether use of the Internet and online radicalisation is on the rise. This will be established by looking at the number of individuals considered to have been primarily radicalised online, primarily radicalised offline and radicalised through a combination of online and offline influences over time, based on individuals' sentencing dates.

Figure 1. Frequency count of primary method of radicalisation for 'Radicalised Extremists' within the dataset over time

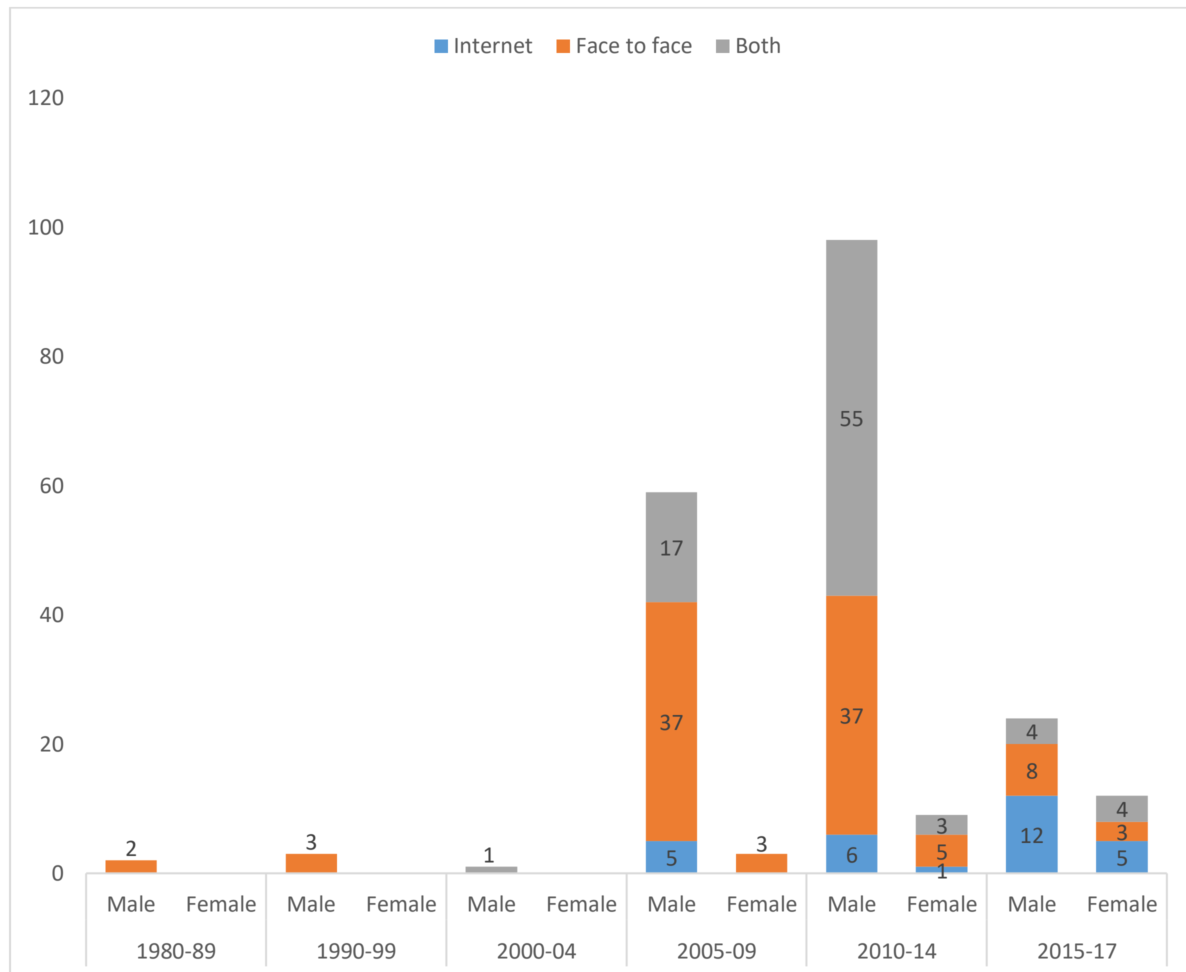


There has been an increase in the number of individuals who primarily radicalised online since 2005. Numbers of cases have increased from five in 2005-09, to seven in 2010-14, and then to 17 in 2015-17. For those radicalised through a combination of online and offline influences, there has also been a general increase in numbers since 2005, from 17 cases in 2005-09, to 58 in 2010-14 and 36 in 2015-17 (Figure 1). Taken together, those who primarily radicalised online and those who radicalised through a combination of online and offline influences equated to 35% of cases in 2005-09, 65% of cases in 2010-14, and 83% of cases in 2015-17. This reflects an increase of 48 percentage points over time of cases where the role of the Internet was relevant within the radicalisation pathway.

In contrast, a reduction is evident in the number of cases who primarily radicalised offline since 2005. This number peaked at 40 in 2005-09, dropped to 36 in 2010-14, and reduced further to 11 in 2015-17 (Figure 1). Those who primarily radicalised offline equated to 65% of cases in 2005-09, 35% of cases in 2010-14, and 17% of cases in 2015-17. This reflects a decrease of 48 percentage points over time. These findings clearly demonstrate that the relevance of online radicalisation and the use of the Internet within the context of extremist offending has dramatically increased in the time period since 2005. This finding supports that of Gill et al., (2017) who also found a marked increase in prevalence of Internet use over time within a sample of 223 convicted UK-based terrorists.

Having found that the Internet is playing an increasingly prominent role within radicalisation pathways more generally, the next part of the analysis will separate cases by gender to investigate whether a similar pattern is observed for both males and females.

Figure 2. Frequency count of primary method of radicalisation for 'Radicalised Extremists' over time when split by gender



When focusing on males, there has been an increase in the number of individuals primarily radicalised online since 2005, from five cases in 2005-09, to six cases in 2010-14, to 12 cases in 2015-17. For males radicalised through a combination of online and offline influences, there is also evidence of an increase, particularly from 2005-09 with 17 cases and 2010-14 with 55 cases (see Figure 2). Taken together, those who primarily radicalised online and those who radicalised through a combination of online and offline influences equated to 37% of cases in 2005-09, 62% of cases in 2010-14, and 67% of cases in 2015-17. This reflects an increase of 30 percentage points over time of cases where the role of the Internet was relevant within the radicalisation pathway.

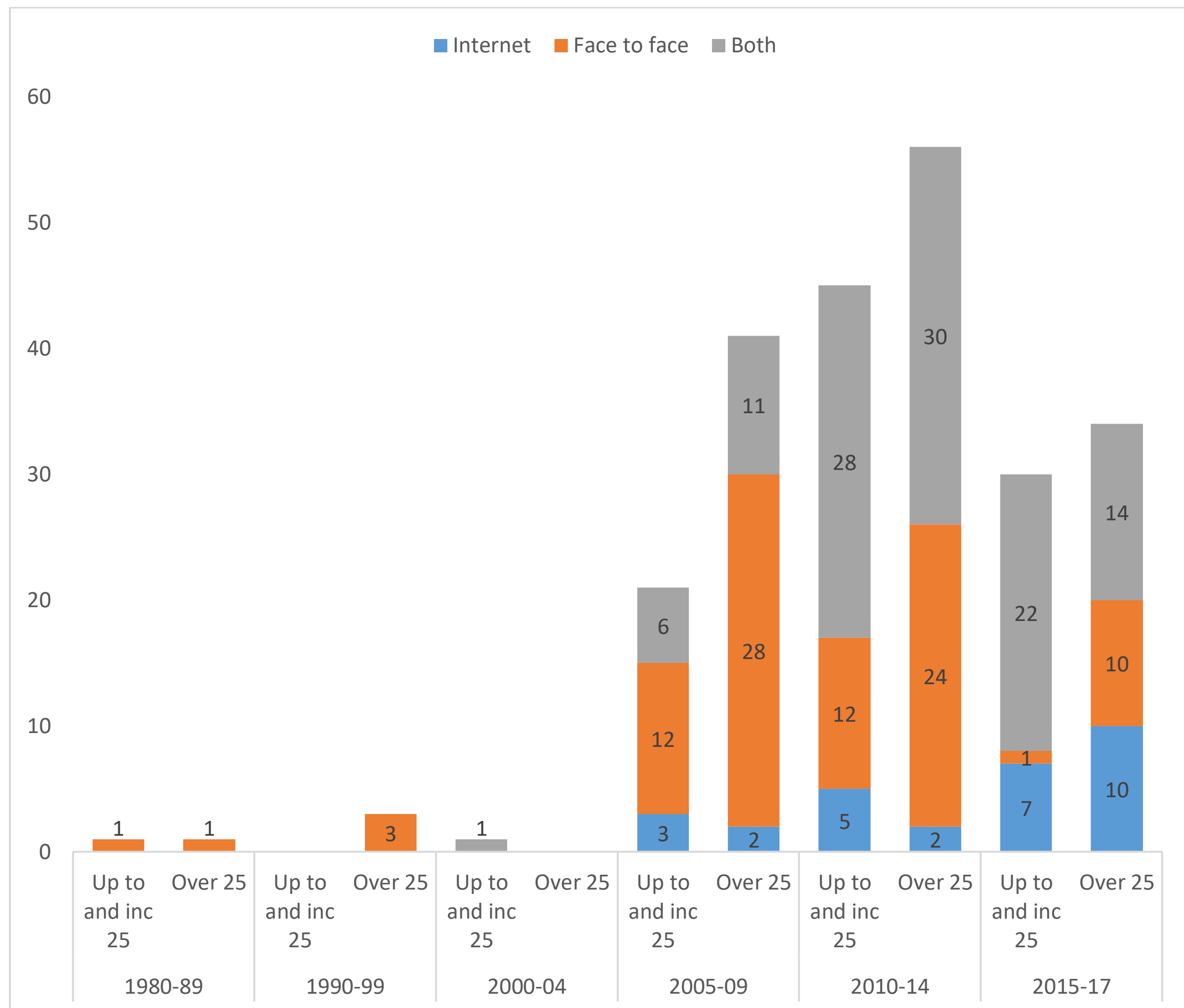
There has been an increase in the number of females primarily radicalised online since 2005, from no cases in 2005-09, to one case in 2010-14, to five cases in 2015-17. For females radicalised through a combination of online and offline influences, there is also evidence of an increase, with no cases in 2005-09, to three cases in 2010-14 and four cases in 2015-17 (see Figure 2). Taken together, those

who primarily radicalised online and those who radicalised through a combination of online and offline influences equated to 0% of cases in 2005-09, 44% of cases in 2010-14, and 75% of cases in 2015-17. This reflects an increase of 75 percentage points over time of cases where the role of the Internet was relevant within the radicalisation pathway.

Whilst there is evidence of the Internet playing an increasingly prominent role over time for both males and females, this is particularly marked for females. When providing possible explanations for this finding, it is useful to consider the ideology breakdown for females who are considered 'Radicalised Extremists'. Of the 24 females, the majority were Islamist Extremist (67%), whilst the remaining cases were Animal Rights activists (21%) and Political extremists (12%). There were no Extreme Right Wing female offenders represented within the dataset. The relevance of the Internet for females is not surprising, especially for those considered Islamist Extremists and particularly during the years 2015-17, as this was shortly after Daesh declared the creation of a caliphate in 2014. Pearson and Winterbotham (2017) reported that females were explicitly targeted for recruitment by Daesh around this time, with women making up a significant demographic of those travelling or attempting to travel to Syria and Iraq. Daesh women were also considered to be particularly active online, with their radicalisation generally less visible than for men (Pearson & Winterbotham, 2017). This difference in visibility is said to resonate with traditional, cultural gender norms and expectations, which restrict women's access to the public space. So whilst it is possible for men to be recruited through face to face contact on the street or in mosques, the recruitment of women is said to generally take place online, in the private sphere. For women in particular, the Internet has played a key role in lowering the threshold for their engagement and involvement with Islamist extremist groups.

Having established that the Internet is playing an increasingly prominent role within radicalisation pathways for males and females, the next part of the analysis will investigate whether a similar pattern is observed for those aged 25 and under, along with those aged over 25 at time of sentencing.

Figure 3. Frequency count of primary method of radicalisation for 'Radicalised Extremists' within the dataset over time when split by age at time of sentencing



When looking at the younger age group (those aged up to and including 25 at time of sentencing), there has been an increase in the number of individuals primarily radicalised online since 2005, from three cases in 2005-09, to five cases in 2010-14, to seven cases in 2015-17. For those radicalised through a combination of online and offline influences, there is also evidence of an increase, from six cases in 2005-09, to 28 cases in 2010-14, and 22 cases in 2015-17 (see Figure 3). Taken together, those who primarily radicalised online and those who radicalised through a combination of online and offline influences equated to 43% of cases in 2005-09, 73% of cases in 2010-14, and 97% of cases in 2015-17. This reflects an increase of 54 percentage points over time of cases where the role of the Internet was relevant within the radicalisation pathway.

There has been an increase in the number of individuals aged over 25 who were primarily radicalised online since 2005, from two cases in 2005-09, to two cases in 2010-14, then to 10 cases in

2015-17. For those aged over 25 who were radicalised through a combination of online and offline influences, there is also some evidence of an increase, with 11 cases in 2005-09, 30 cases in 2010-14, and 14 cases in 2015-17 (see Figure 3). Taken together, those who primarily radicalised online and those who radicalised through a combination of online and offline influences equated to 32% of cases in 2005-09, 56% of cases in 2010-14, and 71% of cases in 2015-17. This reflects an increase of 39 percentage points over time of cases where the role of the Internet was relevant within the radicalisation pathway.

Whilst an increase has been observed in the role of the Internet over time for both age groups, Internet use was more prevalent for the younger age group from 2005 onwards. This supports the findings of Gill and Corner (2015) that younger individuals are more likely to engage in virtual learning and virtual interaction with others than older individuals. This also supports the findings by Nesser (2008), who concluded that the Internet served a more important resource for the younger generation when investigating generational differences in European jihadists. It is particularly noteworthy that the Internet was relevant in the radicalisation pathway for nearly all those in the younger age group who were sentenced in 2015-17 (97%). Within this age group, 82% of individuals were Islamist Extremists. One potential explanation for such a high percentage of cases where Internet use was relevant is that since 2014, Daesh's recruitment strategy has involved actively targeting young people in the online space. Conway (2006) described online content by Daesh as likely to appeal to youth as it is presented in a way that is "familiar, interactive and 'cool', displaying many of the signs of everyday youth online culture albeit with a violent jihadist twist" (p. 86).

3.3.2. RQ2: Does the radicalisation pathway influence the way in which those convicted of extremist offences use the Internet?

The following analysis relevant to RQ2 will investigate whether the three radicalisation pathway groups can reliably be split into distinct groups based on six Internet activity/behaviour variables. These variables include whether individuals have learnt from online sources, interacted with co-ideologues online, disseminated their own extremist propaganda, provided online material support to others, whether they were active or passive Internet users and the types of websites/applications utilised.

3.3.2.1. Learnt from online sources

All three radicalisation pathway groups were compared in relation to whether individuals had learnt from online sources.

Table 2. Percentages and relative frequencies when 'learnt from online sources' was compared across primary method of radicalisation

		Internet (n = 29)	Face to face (n = 93)	Both (n = 113)
Learnt from online sources	Yes	93.1% (27/29)	16.1% (15/93)	99.1% (112/113)
	No evidence	6.9% (2/29)	83.9% (78/93)	0.9% (1/113)

Both percentages and relative frequencies displayed in cells

For those who primarily radicalised online and through a combination of online and offline influences, the vast majority learnt from online sources (93% and 99% respectively). For those who primarily radicalised offline, in only 16% of cases was there evidence of individuals having learnt from online sources (see Table 2).

A significant relationship was found between whether cases had learnt from online sources and radicalisation pathway group membership ($\chi^2 = 166.67$, $p < .01$). Odds ratios[12] were calculated, indicating that those who primarily radicalised online were 70.20 times more likely to have learnt from online sources than those who primarily radicalised offline, whilst those who radicalised through

[12] OR = (a × d) / (b × c), where a, b, c, and d are elements from the 2 × 2 chi-square contingency table.

a combination of online and offline influences were 582.40 times more likely to have learnt from online sources than those primarily radicalised offline.

3.3.2.2. Interaction with co-ideologues online

All three radicalisation pathway groups were compared in relation to whether individuals had interacted with other co-ideologues online.

Table 3. Percentages and relative frequencies when 'interact with co-ideologues online' was compared across primary method of radicalisation

		Internet (n = 29)	Face to face (n = 93)	Both (n = 113)
Interact with co-ideologues online	Yes	75.9% (22/29)	18.3% (17/93)	48.7% (55/113)
	No evidence	24.1% (7/29)	81.7% (76/93)	51.3% (58/113)

Both percentages and relative frequencies displayed in cells

For those who primarily radicalised online, the majority had interacted with other co-ideologues online (76%). For those who radicalised through a combination of online and offline influences, approximately half had interacted with co-ideologues online (49%). For those who primarily radicalised offline, in only 18% of cases was there evidence of individuals having interacted with other co-ideologues online (see Table 3).

A significant relationship was found between whether individuals had interacted with other co-ideologues online and radicalisation pathway group membership ($\chi^2 = 37.36$, $p < .01$). Those who primarily radicalised online were 14.05 times more likely to have interacted with co-ideologues online than those who primarily radicalised offline, whilst those radicalised through a combination of online and offline influences were 4.24 times more likely to have interacted with co-ideologues online than those primarily radicalised offline.

3.3.2.3. Dissemination of own extremist propaganda

All three radicalisation pathway groups were compared in relation to whether individuals had disseminated their own extremist propaganda online.

Table 4. Percentages and relative frequencies when 'disseminate own extremist propaganda online' was compared across primary method of radicalisation

		Internet (n = 29)	Face to face (n = 93)	Both (n = 113)
Disseminate own extremist propaganda	Yes	62.1% (18/29)	11.8% (11/93)	31.9% (36/113)
	No evidence	37.9% (11/29)	88.2% (82/93)	68.1% (77/113)

Both percentages and relative frequencies displayed in cells

Of those who primarily radicalised online, 62% of cases had either disseminated or generated their own extremist propaganda online. For those who primarily radicalised offline and those who radicalised by a combination of online and offline influences, 12% and 32% of individuals had disseminated or generated their own extremist propaganda (see Table 4).

A significant relationship was found between whether individuals had generated their own extremist propaganda online and radicalisation pathway group membership ($\chi^2 = 29.81$, $p < .01$). Those who primarily radicalised online were 12.20 times more likely to have generated their own extremist propaganda on the Internet than those who primarily radicalised offline. Those who radicalised through a combination of online and offline influences were 3.49 times more likely to have generated their own extremist propaganda on the Internet than those who primarily radicalised offline.

3.3.2.4. Providing online material support to others

All three radicalisation pathway groups were compared in relation to whether individuals had provided online material support to others.

Table 5. Percentages and relative frequencies when 'provision of material support online' was compared across primary method of radicalisation

		Internet (n = 29)	Face to face (n = 93)	Both (n = 113)
Provision of material support online	Yes	10.3% (3/29)	4.3% (4/93)	14.2% (16/113)
	No evidence	89.7% (26/29)	95.7% (89/93)	85.8% (97/113)

Both percentages and relative frequencies displayed in cells

For those who primarily radicalised online and through a combination of online and offline influences, 10% and 14% of cases respectively had provided online material support to others. For those who primarily radicalised offline, provision of online material support online was only evident in 4% of cases (see Table 5). No significant relationship was found between whether individuals had provided online material support and primary method of radicalisation.

3.3.2.5. Active or passive Internet users

All three radicalisation pathway groups were compared in relation to whether individuals were active or passive Internet users.

Table 6. Percentages and relative frequencies when 'active or passive Internet user' was compared across primary method of radicalisation

	Internet (n = 29)	Face to face (n = 93)	Both (n = 113)
Active	79.3% (23/29)	25.8% (24/93)	64.0% (61/113)
Passive	20.7% (6/29)	16.1% (15/93)	46.0% (52/113)
N/A	0.0% (0/29)	58.1% (54/93)	0.0% (0/113)

Both percentages and relative frequencies displayed in cells

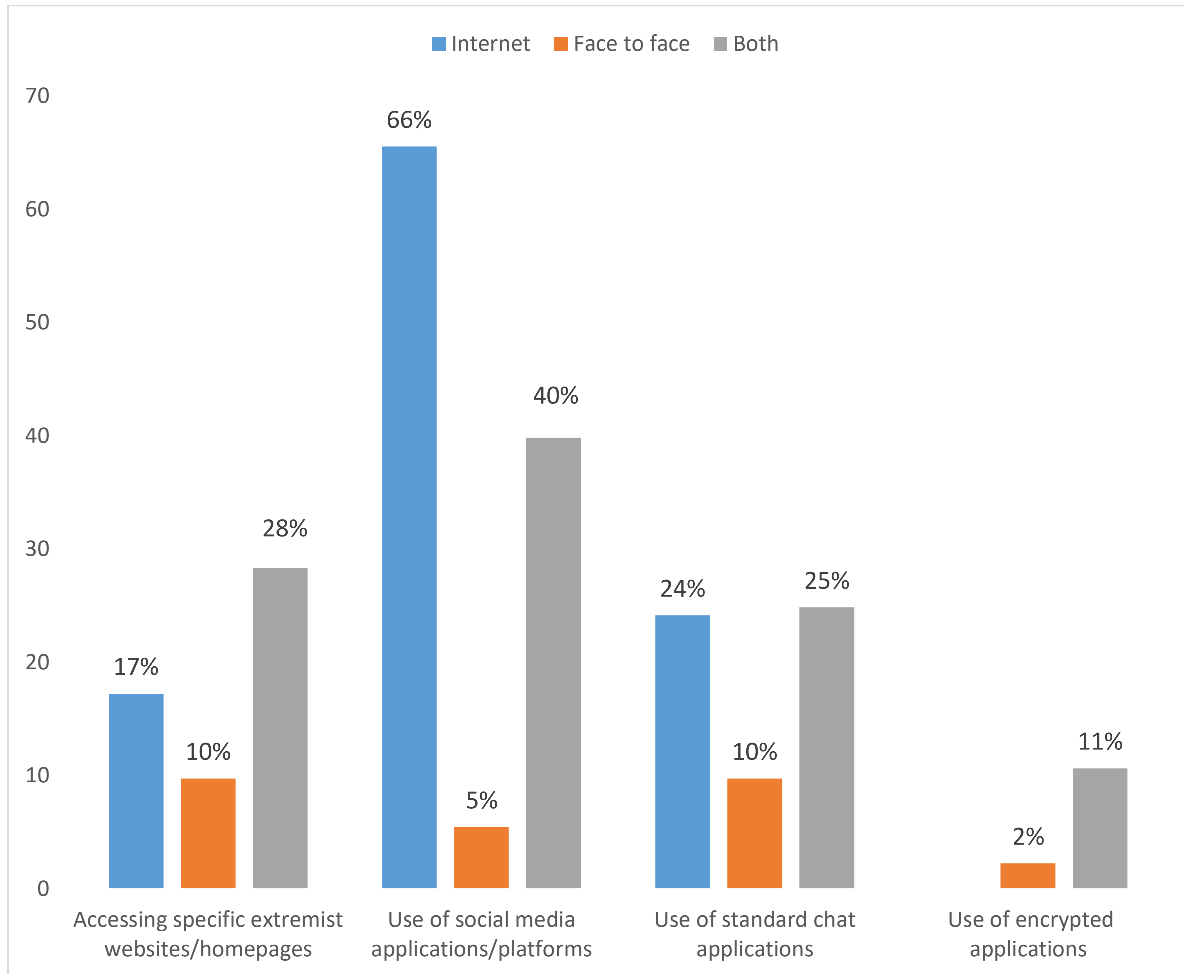
For those who primarily radicalised online and those who radicalised through a combination of online and offline influences, the majority of cases were active Internet users (79% and 64% respectively). For those who primarily radicalised offline, Internet use was only relevant in a minority of cases, but of those, active use was more common than passive use (see Table 6).

A significant relationship was found between whether individuals were active or passive Internet users and radicalisation pathway group membership ($\chi^2 = 6.22$, $p < .05$). Those who primarily radicalised online were 2.40 times more likely to have been an active Internet user than those who primarily radicalised offline (but had used the Internet in the course of their extremist offending). Those who radicalised through a combination of online and offline influences were 1.36 times more likely to have been an active Internet user than those who primarily radicalised offline (but had used the Internet in the course of their extremist offending).

3.3.2.6. Types of websites/applications used

In the next part of the analysis, all three radicalisation pathway groups were compared in relation to the types of websites/applications used.

Figure 4. Percentages of the types of websites or applications used across primary method of radicalisation



Across all radicalisation pathway groups, a minority of cases had accessed specific extremist websites/homepages online. However, this was found to be most common for those who radicalised through a combination of online and offline influences (28%). A significant relationship was found when accessing specific extremist websites/homepages was compared with radicalisation pathway group membership ($\chi^2 = 11.38, p < .01$). Those who primarily radicalised online were 1.94 times more likely to have accessed specific extremist websites/home pages than those who primarily radicalised offline. Those radicalised through a combination of online and offline influences were 3.69 times more likely to have accessed specific extremist websites/home pages than those who primarily radicalised offline.

Use of social media applications/platforms was most common for those who primarily radicalised online (66%). It was found that 40% of those who radicalised through a combination of online and offline influences had used social media applications/platforms, whilst this was relevant for only 5%

of those who primarily radicalised offline. This high level of prominence of open social media use supports the assertions of Scrivens and Conway (2019) that social media channels have proved useful for sharing extremist propaganda and networking. This finding also supports those of Bastug et al. (2018) following a study of fifty-one Canadian Islamist extremists, where social media platforms were considered to be particularly influential, playing a significant role in online radicalisation and regarded as "a very important radicalising agent" (p. 16). A significant relationship was found when use of social media applications/platforms was compared with radicalisation pathway group membership (χ^2 = 50.04, $p < .01$). Those who primarily radicalised online were 33.44 times more likely to have used social media platforms/applications than those who primarily radicalised offline. Those who radicalised through a combination of online and offline influences were 11.65 times more likely to have used social media platforms/applications than those who primarily radicalised offline.

Use of standard chat applications was relevant for only a minority of cases who primarily radicalised online and through a combination of online and offline influences (24% and 25% respectively). For those who primarily radicalised offline, in only 10% of cases was there evidence of individuals having used standard chat applications. A significant relationship was found when use of standard chat applications was compared with radicalisation pathway group membership (χ^2 = 8.28, $p < .05$). Those who primarily radicalised online were 2.97 times more likely to have used standard chat applications than those who primarily radicalised offline, whilst those radicalised through a combination of online and offline influences were 3.07 times more likely to have used standard chat applications than those who primarily radicalised offline.

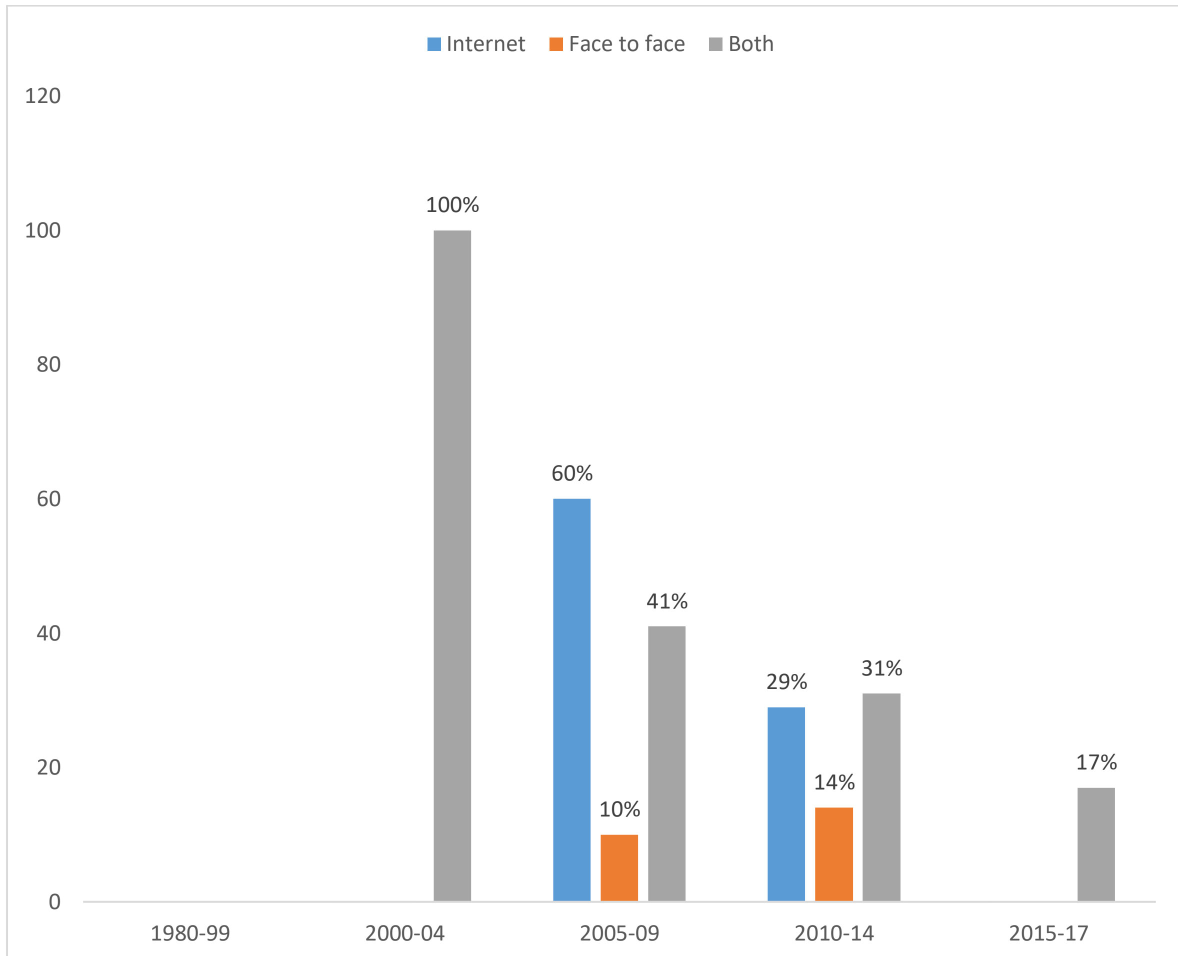
Use of encrypted applications was only relevant for those who radicalised through a combination of online and offline influences and those who primarily radicalised offline, but this was only in the minority of cases (11% and 2% respectively). Surprisingly, no cases who were considered to have primarily radicalised online were reported as having used encrypted applications (see Figure 4), although it is known that extremists, particularly those supporting Daesh, have migrated towards the use of encrypted applications such as Telegram, described as the platform of choice for pro-Daesh accounts (Scrivens & Conway, 2019). This did not occur in large numbers, however, until the disruption of pro-Daesh accounts by major social media companies (e.g. Facebook, Twitter and YouTube) forced many extremists off these platforms. For Twitter specifically, a platform particularly favoured by Daesh and its supporters, disruption efforts took place across 2016-17. Therefore, this may account for the lack of evidence of use of encrypted applications generally across radicalisation pathway groups, but especially by those who primarily radicalised online, as the dataset only includes those convicted and then subject to an SRG/ERG22+ assessment prior to the end of 2017. It may also be the case that ERG22+ assessors were generally less familiar with online encrypted applications,

compared with open social media platforms and standard chat applications, and so may not have recorded these Internet behaviours even if they were discussed by the offender during interview. A significant relationship was found when use of encrypted applications was compared with radicalisation pathway group membership ($\chi^2 = 8.63$, $p < .05$). Those radicalised through a combination of online and offline influences were 10.81 times more likely to have used encrypted online applications than those who primarily radicalised offline.

3.3.2.7. Changes in the types of websites/applications used over time

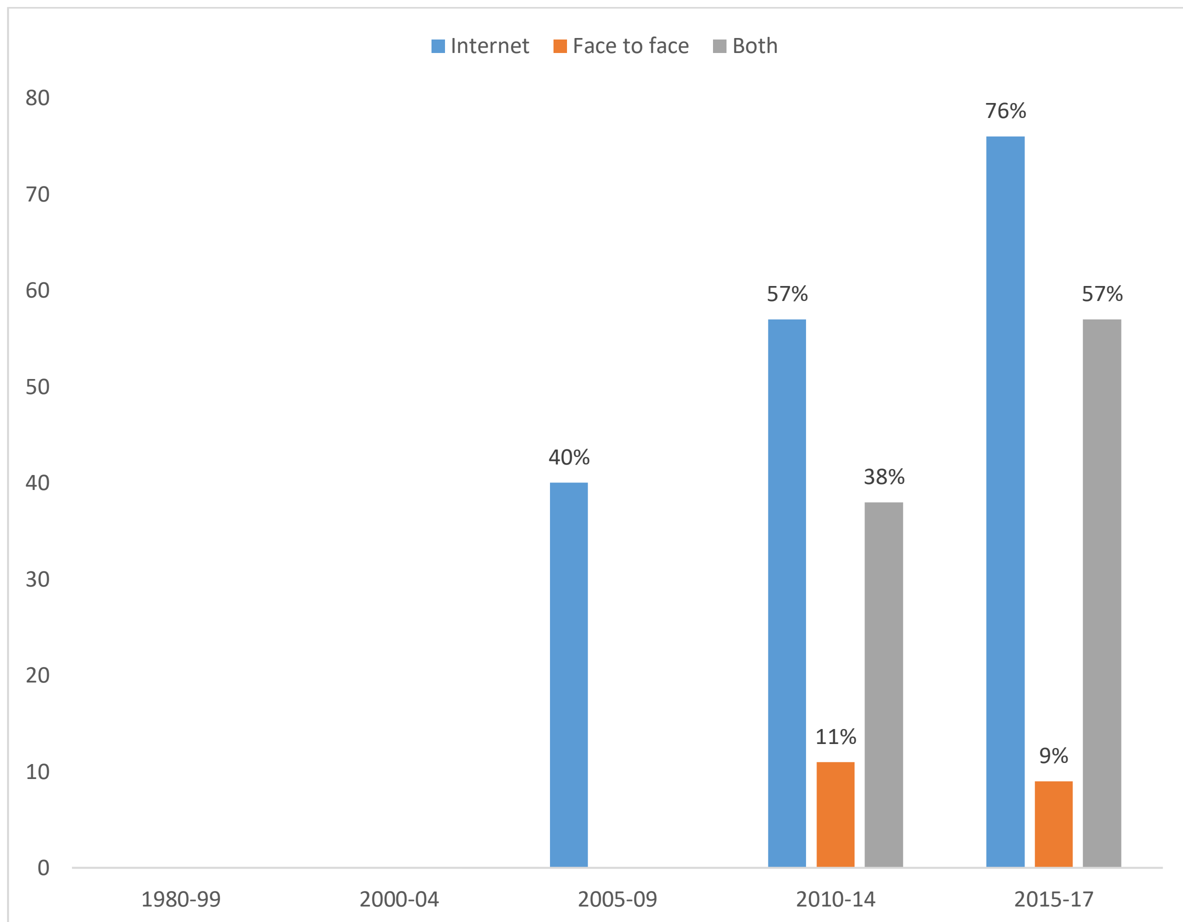
The analysis then focused on whether the types of websites/applications used by members of each radicalisation pathway group had changed with the passage of time. This was considered important in light of reference in the literature to an evolution in how extremist groups have used the Internet in recent years, with a shift from accessing their own websites, to using mainstream social media and micro-blogging sites, to then migrating towards encrypted platforms for increased security and privacy (Watkin & Whittaker, 2017).

Figure 5. Percentages of cases who accessed specific extremist websites/homepages across primary method of radicalisation



There has been a reduction in the number of cases accessing specific extremist websites/ homepages over time for those who primarily radicalised online and those who radicalised through a combination of online and offline influences. For those who primarily radicalised online, 60% of cases had accessed such websites of those sentenced in 2005-9, only 29% of cases of those sentenced in 2010-14, and no cases of those sentenced in 2015-17. For those radicalised through a combination of online and offline influences, 100% of cases sentenced in 2000-04 had accessed specific extremist websites/homepages, compared with only 41% of those sentenced in 2005-09. This reduced to 31% of cases for those sentenced in 2010-14 and only 17% of those sentenced in 2015-17. For those who primarily radicalised offline, the percentage of cases accessing specific extremist websites/ homepages was 10% for those sentenced in 2005-09 and 14% for those sentenced in 2010-14. However, there were no cases of those sentenced in 2015-17 (see Figure 5).

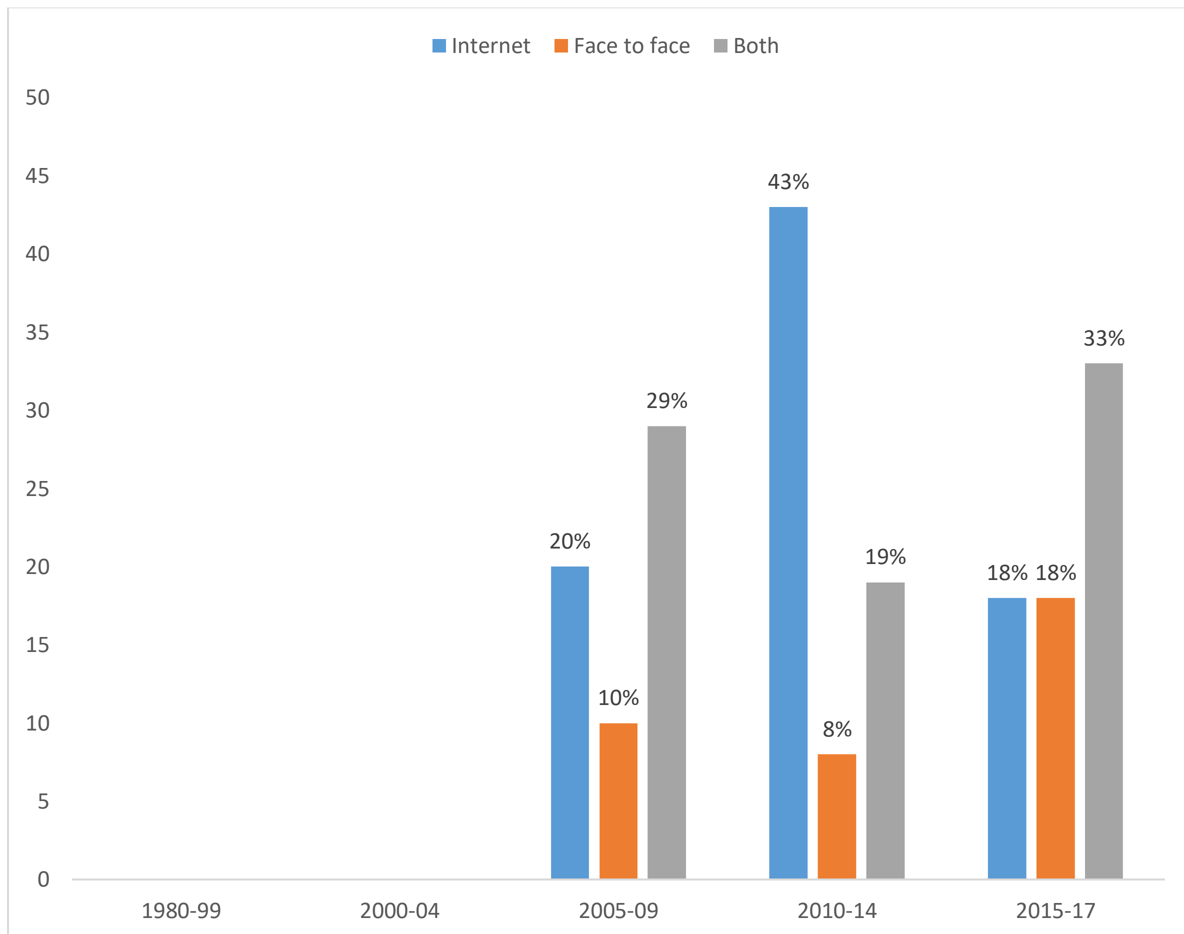
Figure 6. Percentages of cases who used social media applications/platforms across primary method of radicalisation



For those who primarily radicalised online, there has been an increase in use of social media applications/platforms over time. For those cases sentenced in 2005-09, 40% had used social media applications/platforms, increasing to 57% of cases sentenced in 2010-14 and 76% for those sentenced in 2015-17. An increase in use of social media applications/platforms was also found for those radicalised through a combination of online and offline influences, with 38% of cases sentenced in 2010-14 and 57% of cases sentenced in 2015-17. It was found that the proportion of those using social media applications/platforms remained fairly consistent for those primarily radicalised offline, with 11% sentenced in 2010-14 and 9% of cases sentenced in 2015-17 (see Figure 6). So, for those individuals where Internet use was relevant to the radicalisation process and their offending, use of social media platforms/applications is becoming increasingly important. This is noteworthy in that it highlights that much online extremist activity is taking place on applications and platforms that are both familiar to and used regularly by members of the general public. This counters any notion that

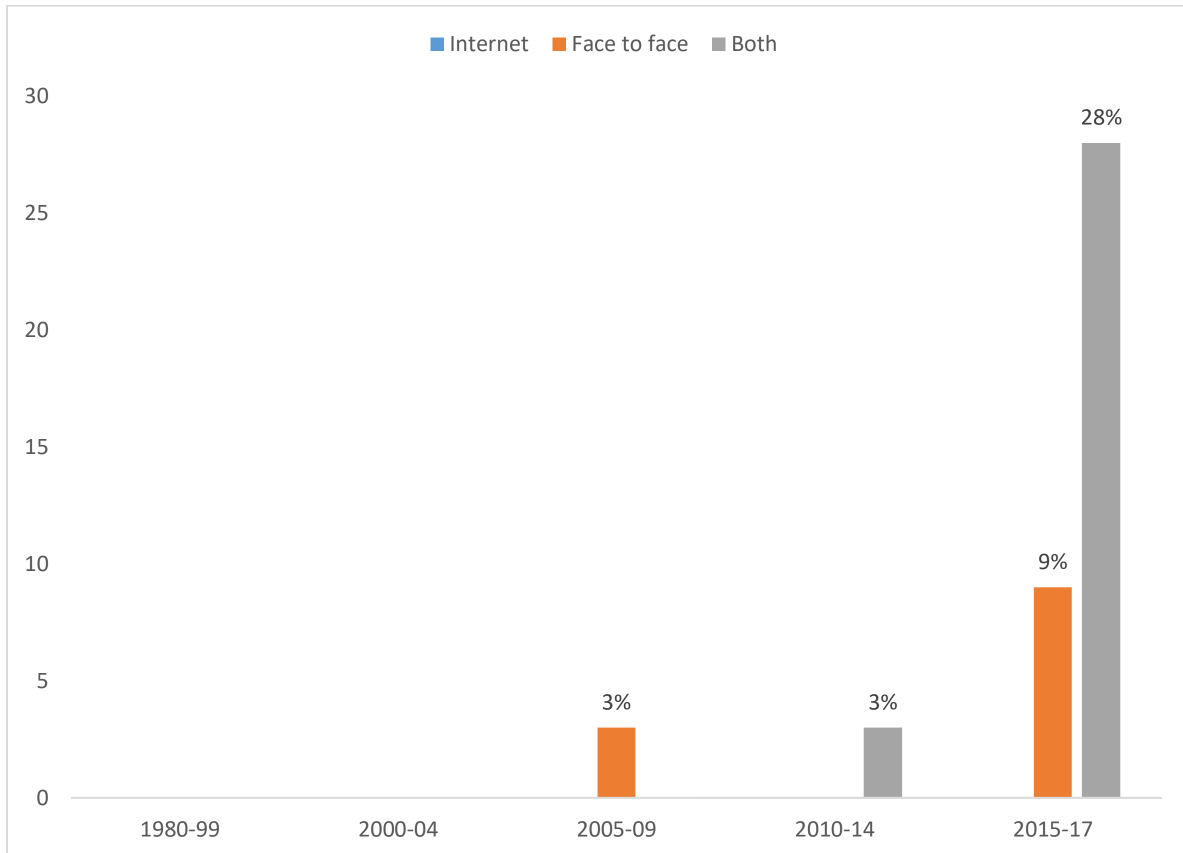
online extremist activity takes place in hidden or restricted areas of the Internet only, such as the dark web.

Figure 7. Percentages of cases who used standard chat applications across primary method of radicalisation



Whilst the use of standard chat applications has fluctuated across time for all three radicalisation pathway groups, trends indicating a slight increase in use were only evident for two of the groups. Use of standard chat applications peaked for those sentenced in 2015-17, for those who radicalised through a combination of online and offline influences, and those who primarily radicalised offline (33% and 18% respectively). For those who primarily radicalised online, use of standard chat applications peaked for those sentenced in 2010-14 (43%) (see Figure 7).

Figure 8. Percentages of cases who used encrypted applications across primary method of radicalisation



For those who radicalised through a combination of online and offline influences, there has been a marked increase in the proportion of cases using encrypted applications. This rose from 3% of cases sentenced in 2010-14, to 28% of cases sentenced in 2015-17. This marked increase in use of encrypted applications for members of this pathway group sentenced between 2015-17 fits with when the disruption of pro-Daesh accounts was taking place by major social media companies, forcing many extremists off these platforms and towards encrypted applications, with increased security and privacy (Watkin & Whittaker, 2017). There is some indication of an increase in use of encrypted applications for those who primarily radicalised offline, with this being relevant in only 3% of cases sentenced in 2005-09, no cases sentenced in 2010-14, but then rising to 9% of cases sentenced in 2015-17. For those who primarily radicalised online, there is a lack of evidence of encrypted applications being used, regardless of when cases were sentenced (see Figure 8). Potential reasons for the lack of evidence of use of encrypted applications by those who primarily radicalised online have previously been outlined.

3.3.2.8. Internet activities as predictors of radicalisation pathway group membership

In order to identify which of the above Internet activities were the strongest predictors to differentiate between radicalisation pathway groups, a Multinomial Logistic Regression analysis was conducted. The only variable discounted from the analysis was that of 'Active or passive Internet user' as the N/A response option made this variable unsuitable for the analysis. This left eight variables as predictors (listed in Table 7 below). The reference category for the outcome variable were those who primarily radicalised offline and the other two categories (those who primarily radicalised online and those who radicalised through a combination of online and offline influences) were compared to this group.

It was found that adding all the predictors to a model that contained only the intercept significantly improved the fit between model and data: χ^2 (16, N = 235) = 95.54, Nagelkerke R^2 = .762, $p < .001$. Furthermore, it was found that 84.3% of the 235 cases were correctly predicted using the final regression model. The regression model was more successful in predicting radicalisation through a combination of online and offline influences (94.7%) than radicalisation primarily offline (83.9%) or primarily online (44.8%).

Table 7. Predictors' unique contributions in the Multinomial Logistic Regression (N = 235)

Predictor	Chi-Square	df	p
Learnt from online sources	150.429	2	.000*
Interact with co-ideologues online	3.500	2	.174
Generate own extremist propaganda online	3.155	2	.207
Provision of material support	2.689	2	.261
Access specific extremist websites/home pages	3.141	2	.208
Use of open social media applications/platforms	10.607	2	.005*
Use of standard chat applications	.789	2	.674
Use of encrypted applications	10.863	2	.004*

*Indicates significance at the $p < .01$ level

Significant unique contributions were made by three Internet activity variables when predicting radicalisation pathway group membership. These three variables were whether individuals had

learnt from online sources, used open social media applications/platforms and used encrypted applications (see Table 7).

When comparing those who primarily radicalised offline with those who primarily radicalised online, it was found that only two predictor variables could differentiate between these two groups. These were whether individuals had learnt from online sources ($p < 0.01$) and whether they had used open social media applications/platforms ($p < 0.01$). When comparing those who primarily radicalised offline with those who radicalised through a combination of online and offline influences, it was again found that whether individuals had learnt from online sources ($p < 0.01$) and used open social media applications/platforms ($p < 0.05$) were the only predictor variables that could differentiate between these two radicalisation pathway groups.

3.3.2.9. Summary of whether the radicalisation pathway influences the way those convicted of extremist offences use the Internet

The three radicalisation pathway groups appear markedly different in terms of Internet activities/ behaviours that members have engaged in. Those who primarily radicalised online were more likely to have been active Internet users who accessed the online space for learning, disseminating extremist content and communicating with like-minded others, particularly through use of open social media applications/platforms than those who primarily radicalised offline. The strongest predictors to differentiate these two radicalisation pathway groups were whether individuals had learnt from online sources and whether they had used open social media applications/platforms.

Those who radicalised through a combination of online and offline influences were significantly more likely to be active Internet users than those who primarily radicalised offline. Online learning was particularly prevalent within this pathway group and half the cases were found to have engaged in communication with like-minded others. There was evidence of a range of websites/applications having been used for extremist purposes, including accessing extremist webpages/homepages, along with utilising open social media platforms, standard chat applications and encrypted software. As was the case when comparing those who primarily radicalised online with those who primarily radicalised offline, the strongest predictors to differentiate these two radicalisation pathway groups were whether individuals had learnt from online sources and whether they had used open social media applications/platforms.

Whilst those who primarily radicalised online and through a combination of online and offline influences were similar in terms of evidence of some Internet activities (e.g. similar proportions of

cases having learnt from online sources, provided online material support to others and use of standard chat applications), they differed in other aspects. For example, for those who primarily radicalised online, a higher proportion were found to have interacted with like-minded others online, disseminated their own extremist propaganda and made use of open social media applications/platforms. In contrast to the other two radicalisation pathway groups, those who primarily radicalised offline were found to use the Internet less often for extremist purposes. However, it was interesting to note that 16% were still found to have learnt from online sources, 18% had interacted with other co-ideologues online, 12% had disseminated their own extremist material online and as many as 42% were considered to have been either passive or active Internet users. This highlights that even for those considered to have primarily radicalised offline, a significant minority are still using the Internet for extremist purposes.

Changes over time were evident in relation to the types of websites and applications used by members of each pathway group. There has been a reduction in the number of offenders accessing specific extremist websites and homepages, particularly for those who primarily radicalised online and through a combination of online and offline influences. Whilst use of standard chat applications has fluctuated across time for all three radicalisation pathway groups, there was only slight evidence of an increase in use for those radicalised through a combination of online and offline influences and those who primarily radicalised offline. There was evidence suggesting an increase in use of social media platforms/applications for those who primarily radicalised online and those radicalised through a combination of online and offline influences. An increase in use of encrypted applications was found for those radicalised through a combination of online and offline influences in particular, but also to a lesser extent for those primarily radicalised offline.

3.3.3. RQ3: Are differences apparent in offender demographics and offence-type variables when radicalisation pathways are compared?

Having investigated the extent to which 'Radicalised extremists' within the dataset can be split into three distinct radicalisation pathway groups based on internet activity/behaviours, the following analysis relevant to RQ3 will investigate whether these groups differ in terms of demographic and offence-type variables.

3.3.3.1. Offender demographics

All three radicalisation pathway groups were compared in relation to age at sentencing, gender, place of birth, prior offending history and presence of mental illness/personality disorder.

Table 8. Percentages and relative frequencies when 'age at time of sentencing', 'gender', 'place of birth', 'convicted offending history' and 'presence of mental illness/personality disorder' were compared across primary method of radicalisation

		Internet (n = 29)	Face to face (n = 93)	Both (n = 113)
Age at sentencing	Up to + including 25	51.7% (15/29)	28.0% (26/93)	51.3% (58/113)
	Over 25	48.3% (14/29)	72.0% (67/93)	48.7% (55/113)
Gender	Male	79.3% (23/29)	88.2% (82/93)	93.8% (106/113)
	Female	20.7% (6/29)	11.8% (11/93)	6.2% (7/113)
Place of birth*	UK	77.8% (21/27)	71.6% (63/88)	72.5% (79/109)
	Non-UK	22.2% (6/27)	28.4% (25/88)	27.5% (30/109)
Prior offending history**	Yes	27.6% (8/29)	51.1% (47/92)	29.5% (33/112)
	No	72.4% (21/29)	48.9% (45/92)	70.5% (79/112)
Presence of mental illness/personality disorder***	Strongly present	25.0% (7/28)	5.4% (5/93)	6.5% (7/108)
	Partly present	3.6% (1/28)	5.4% (5/93)	10.2% (11/108)
	Not present	71.4% (20/28)	89.2% (83/93)	83.3% (90/108)

Both percentages and relative frequencies displayed in cells

* Place of birth could not be determined for 11 of the 235 cases so these were excluded

** Prior offending history could not be determined for 2 of the 235 cases so these were excluded

*** Presence of mental illness/personality disorder could not be determined for 6 of the 235 cases so these were excluded

There was close to an even split between those in the younger age category ('Up to and including 25') and older age category ('Over 25') for those who primarily radicalised online and those radicalised through a combination of online and offline influences. For cases who primarily radicalised offline, the majority were in the older age category ('Over 25') when sentenced for the index offence (72%) (see Table 8). A significant relationship was found between age and primary method of radicalisation for 'Radicalised Extremists' within the dataset ($\chi^2 = 12.68$, $p < .01$). Those who primarily radicalised online were 2.76 times more likely to have been in the younger age category ('Up to and including 25') than those who primarily radicalised offline, whilst those who radicalised through a combination of online and offline influences were 2.72 times more likely to have been in the younger age category ('Up to and including 25') than those who primarily radicalised offline.

A lower proportion of males (79%), but higher proportion of females (21%) were primarily radicalised online when compared with those who primarily radicalised offline and those radicalised through a combination of online and offline influences (see Table 8). However, no significant relationship was found between gender and primary method of radicalisation for 'Radicalised Extremists' within the dataset.

Across all three radicalisation pathway groups, the majority of cases were born in the UK. In addition, a similar proportion of cases were born in the UK, compared with those born outside of the UK (78%, 72% and 73% for the Internet, Face to face and Both groups respectively) (see Table 8). However, no significant relationship was found between place of birth and primary method of radicalisation for 'Radicalised Extremists' within the dataset.

The majority of cases who primarily radicalised online did not have prior offending history before committing the index offence (72%). A similar proportion was found for those who radicalised through a combination of online and offline influences (71%). For those who primarily radicalised offline, close to an even split was found as to whether cases had a convicted offending history prior to the index offence or not (51% and 49% respectively) (see Table 8). A significant relationship was found between convicted offending history and primary method of radicalisation for 'Radicalised Extremists' within the dataset ($\chi^2 = 9.44$, $p < .01$). Those who primarily radicalised offline were 2.74 times more likely to have a convicted offending history than those who primarily radicalised online, and 2.50 times more likely than those radicalised through a combination of online and offline influences.

For those who primarily radicalised online, the presence of mental illness or personality disorder appears more significant than for the other two radicalisation pathway groups. For those who primarily radicalised online, the presence of mental illness/personality disorder was assessed as strongly present in 25% of cases and partly present in a further 4% of cases. In comparison, for those

who primarily radicalised offline, the presence of mental illness/personality disorder was assessed as strongly present in only 5% of cases and partly present in a further 5% of cases. For those radicalised through a combination of online and offline influences, the presence of mental illness/personality disorder was assessed as strongly present in 7% of cases and partly present in a further 10% of cases (see Table 8). Having collapsing categories to compare cases where mental illness/personality disorder was assessed as not present with those where mental illness/personality disorder was assessed as present to some extent (combining the Partly present and Strongly present categories), it was not possible to test for significant relationships as the requirements for using a Chi-Square test were not met.

3.3.3.2. Offence-type variables

All three radicalisation pathway groups were compared in relation to the ideology/cause, whether cases were violent or non-violent based on the index offence, role taken during the offence and degree of social connection to other extremists offline.

Table 9. Percentages and relative frequencies when 'violent/non-violent index offence', 'role in offence', 'degree of social connection' and 'ideology' were compared across primary method of radicalisation

		Internet (n = 29)	Face to face (n = 93)	Both (n = 113)
Violent/non-violent index offence	Violent	20.7% (6/29)	49.5% (46/93)	32.7% (37/113)
	Non-violent	79.3% (23/29)	50.5% (47/93)	67.3% (76/113)
Role in offence	Attacker	20.7% (6/29)	49.5% (46/93)	32.7% (37/113)
	All other roles	79.3% (23/29)	50.5% (47/93)	67.3% (76/113)
Degree of social connection*	Lone	63.0% (17/27)	3.2% (3/93)	6.2% (7/113)
	Small cell (2-3)	18.5% (5/27)	7.5% (7/93)	11.5% (13/113)
	Group	18.5% (5/27)	89.2% (83/93)	82.3% (93/113)
Ideology	Islamist Extremist	86.2% (25/29)	61.3% (57/93)	85.8% (97/113)
	All other ideologies	13.8% (4/29)	38.7% (36/93)	14.2% (16/113)

Both percentages and relative frequencies displayed in cells

* Degree of social connection could not be determined for 2 of the 235 cases so these were excluded

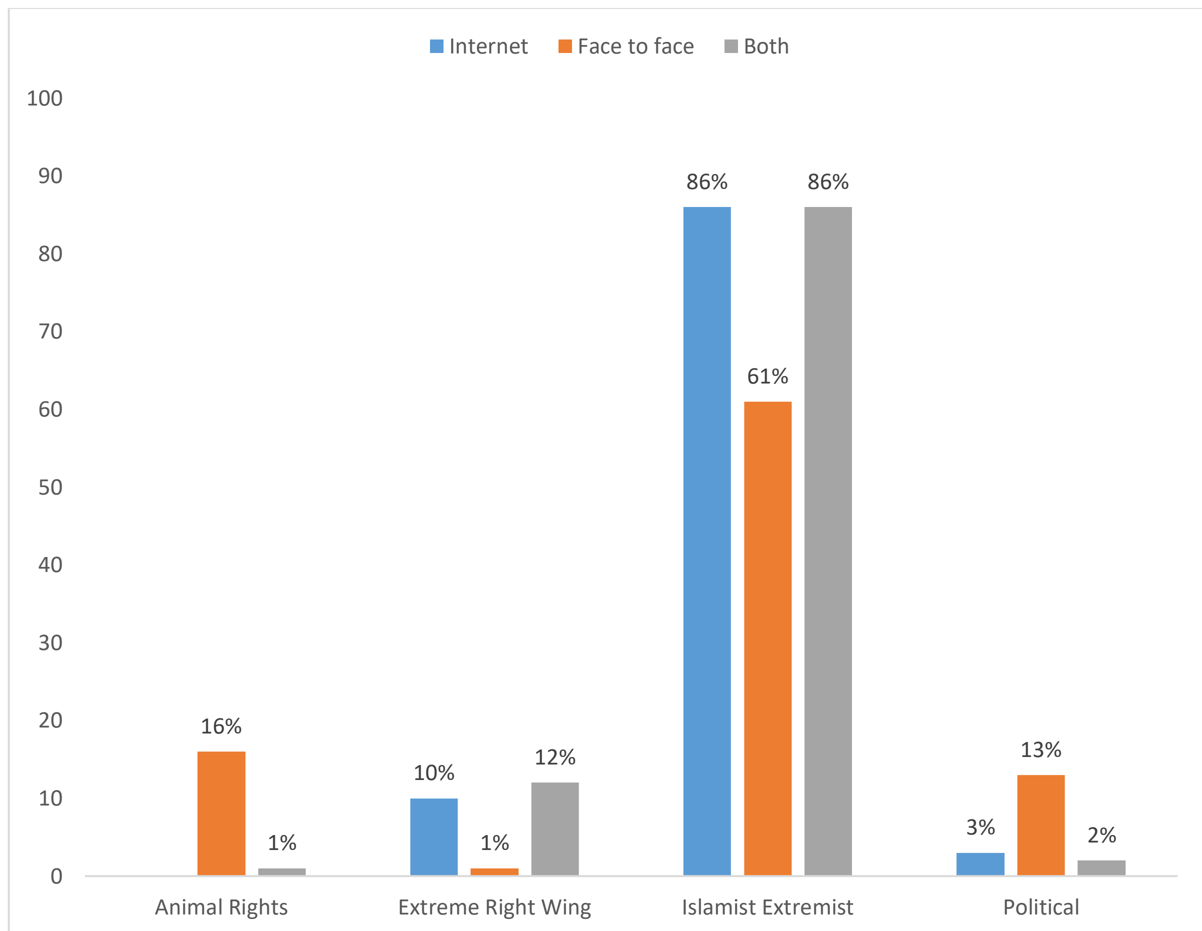
The majority of cases who primarily radicalised online were considered non-violent (79%). For those who radicalised through a combination of online and offline influences, a smaller majority were considered non-violent (67%). For those who primarily radicalised offline, approximately half were considered violent and half non-violent, based on the nature of the index offence (see Table 9). A significant relationship was found between violent/non-violent index offence and primary method of radicalisation for 'Radicalised Extremists' within the dataset ($\chi^2 = 10.21$, $p < .01$). Those who primarily radicalised offline were 3.75 times more likely to be considered violent than those who primarily radicalised online. Those who primarily radicalised offline were 2.01 times more likely to be considered violent than those radicalised through a combination of online and offline influences.

In terms of role taken when committing the index offence, cases were initially coded using four categories ('Attacker,' 'Traveller,' 'Financer' and 'Facilitator'). However, for the purpose of analysis, those identified as attackers were compared with all other roles. The most common role for those who primarily radicalised offline was an Attacker, with half the cases having committed a violent extremist attack themselves on another person or property, or there was sufficient evidence they would have done so had they not been arrested/disrupted (50%). A lower proportion of those radicalised through a combination of online and offline influences were considered an Attacker (33%), with the lowest proportion found for those who primarily radicalised online (21%) (see Table 9). A significant relationship was found between role in event and primary method of radicalisation for 'Radicalised Extremists' within the dataset ($\chi^2 = 10.21$, $p < .01$). Those who primarily radicalised offline were 3.75 times more likely to be an Attacker than those who primarily radicalised online, and 2.01 times more likely than those radicalised through a combination of online and offline influences.

The majority of cases who primarily radicalised online were considered to be socially isolated (63%). This was in contrast to those who primarily radicalised offline (3%) and through a combination of online and offline influences (6%). The majority of cases within both these radicalisation pathway groups were considered to be part of a group and had a higher degree of social connection in their life generally (see Table 9). After collapsing categories to compare Lone cases with those where group dynamics were important to some extent (i.e. combining Small cell and Group categories), it was not possible to test for significant relationships as the requirements for using a Chi-Square test were not met.

In terms of the ideology/cause to which cases subscribed, the four ideological categories coded for were 'Islamist Extremist,' 'Extreme Right Wing,' 'Animal Rights' and 'Political'.

Figure 9. Percentages when 'ideology' was compared across primary method of radicalisation



The majority of cases who primarily radicalised online were Islamist Extremist (86%), whilst the next most common ideology was Extreme Right Wing (10%). Of those who primarily radicalised offline, a smaller majority were found to be Islamist Extremists (61%), followed by Animal Rights activists (16%) and Political extremists (13%). For those cases considered to have primarily radicalised through a combination of online and offline influences, the majority were Islamist Extremists (86%), followed by Extreme Right Wing (12%) (see Figure 9).

As the majority of 'Radicalised Extremists' within the dataset were Islamist Extremists (76%, compared with 11% Extreme Right Wing, 7% Animal Rights activists and 6% Political extremists), each ideological category was considered separately to enable a cross-ideological analysis of radicalisation pathway group membership. Of the Animal Rights activists, the vast majority of cases were considered as having primarily radicalised offline (94%), with the remaining 6% seen as having radicalised through a combination of online and offline influences. Similarly, the vast majority of Political extremists were considered to have primarily radicalised offline (80%), with 13% having radicalised through a combination of online and offline influences and only 7% having primarily radicalised online. Of the

Extreme Right Wing cases, the majority radicalised through a combination of online and offline influences (52%), suggesting a more prominent role played by the Internet in most cases. Of the remaining cases, 36% were seen as having primarily radicalised offline and 12% having primarily radicalised online. Similarly, of the Islamist Extremists, the majority radicalised through a combination of online and offline influences (54%), again suggesting a greater online influence. Of the remaining cases, 32% had primarily radicalised offline and 14% had primarily radicalised online.

As the majority of 'Radicalised Extremists' were Islamist Extremists, this group was compared with all other ideologies to enable further analysis to be conducted. The majority of cases who primarily radicalised online or through a combination of online and offline influences were found to support an Islamist Extremist ideology (both 86%). For those who primarily radicalised offline, a smaller majority of 61% were found to support an Islamist Extremist ideology (see Table 9). A significant relationship was found between ideology and primary method of radicalisation for 'Radicalised Extremists' within the dataset ($\chi^2 = 18.78$, $p < .01$). Those who were considered to have primarily radicalised online were 3.95 times more likely to be an Islamist Extremist than those who primarily radicalised offline, whilst those who radicalised through a combination of online and offline influences were 3.83 times more likely to be an Islamist Extremist than those who primarily radicalised offline.

3.3.3.3. Summary of differences between radicalisation pathways of offender demographics and offence-type variables:

The three radicalisation pathway groups appear markedly different in terms of demographics, offending history and socialisation. Those who primarily radicalised online were the smallest group, but significantly more likely to be younger in age and support an Islamist Extremist ideology than those who primarily radicalised offline. Whilst the majority of cases were male, the highest percentage of radicalised females were found to have taken this pathway. This group were significantly less likely to have committed a violent extremist act than those who primarily radicalised offline, with fewer taking on the role of an attacker. These individuals were also found to have a limited offending history and were significantly less likely to have previous convictions than those who primarily radicalised offline. Members of this radicalisation pathway group were often considered socially isolated, with the majority committing extremist offences alone. In almost a third of cases, the presence of mental illness or personality disorder was identified.

Those who primarily radicalised offline were generally male and spanned a wider age range than those who primarily radicalised online, with the majority over 25 at the time of sentencing. Members of this pathway group supported a wider range of extremist ideologies, with a higher proportion

considered Political extremists or Animal Rights activists than other radicalisation pathway groups. Those who primarily radicalised offline were significantly more likely to have committed a violent index offence and to have taken the role of an attacker than other radicalisation pathway groups. Furthermore, those who primarily radicalised offline were significantly more likely to have a convicted offending history than those in other radicalisation pathway groups. Individuals were typically socially connected individuals, who committed their index offence as part of a group. It was rare to find mental illness and personality disorder as being relevant for cases in this pathway group.

Those who radicalised through a combination of online and offline influences were the largest group and were often found to fall between the other two radicalisation pathway groups with regards to demographic and offence-type variables. Members of this pathway group were nearly always male, fairly young in age, but significantly younger than those who primarily radicalised offline. They were significantly more likely to support an Islamist Extremist ideology than those who primarily radicalised offline. As was the case with those who primarily radicalised online, those radicalised through a combination of online and offline influences were significantly less likely to have committed a violent index offence and have a convicted offending history than those who primarily radicalised offline. The majority of members of this pathway group were socially connected individuals and committed the index offence as members of a group. Whilst mental illness and personality disorder were less common than those who primarily radicalised online, it was slightly more prevalent than for those who primarily radicalised offline.

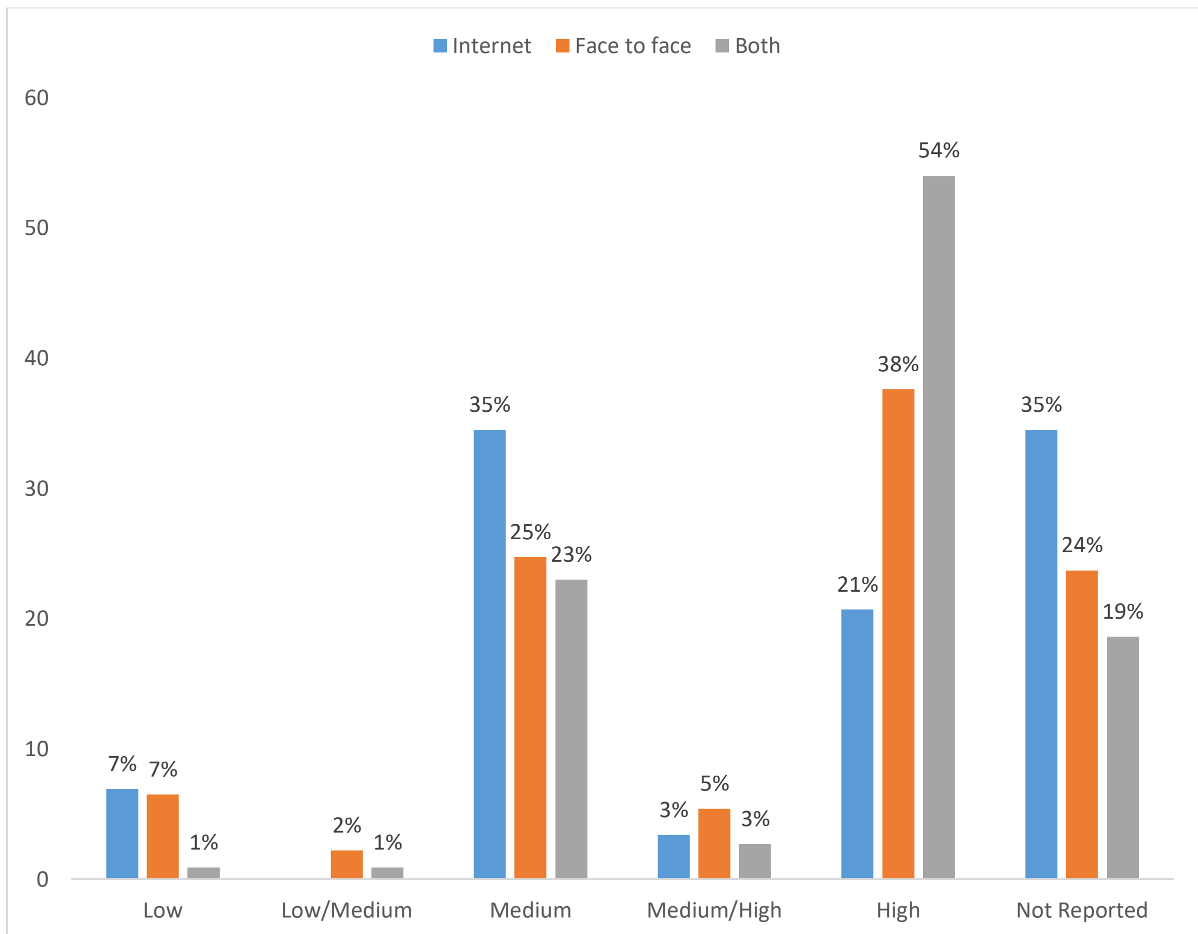
3.3.4. RQ4: What impact does radicalisation pathway have on levels of commitment, willingness and capability of offenders to perpetrate violent extremist acts? Are there sub-group differences regarding age, gender degree of social connection and ideology specifically?

Having established that the radicalisation pathway groups differ in relation to their Internet activities and behaviours, along with demographic and offence-related variables, the following analysis relevant to RQ4 will investigate whether these groups differ in overall level of engagement, intent and capability to commit violent extremist offences as assessed at the time of offending within ERG22+ reports. A Kruskal-Wallis test was used to establish whether any statistically significant differences existed between pathway groups in relation to overall engagement, intent and capability ratings from the ERG22+ assessment.

3.3.4.1. Overall engagement ratings

All three radicalisation pathway groups were first compared in relation to the overall engagement ratings of group members based on the ERG22+ assessment. Engagement as assessed within the ERG22+ captures the level to which an individual is engaged with an extremist group, cause or ideology, and motivated to offend on their behalf.

Figure 10. Percentages of overall ERG22+ engagement levels for primary method of radicalisation



For those who primarily radicalised online, most cases were assessed as presenting with a Medium level of overall engagement at the time of offending (35%), with only 21% of cases assigned a clear High rating. This was in contrast to those who primarily radicalised offline or through a combination of online and offline influences, where the majority of cases were assessed as High (38% and 54% respectively) (see Figure 10). This suggests that not only are those individuals who primarily radicalised online less engaged than other pathway group members, but also that those radicalised through a combination of online and offline influences were considered the most engaged with an extremist group, cause or ideology. One possible interpretation of this finding is that those subject to

both online and offline influences were exposed to higher levels of radicalising content and for a longer duration than those from other pathway groups, resulting in higher overall levels of engagement with an extremist group, cause or ideology. Alternatively, these ratings may reflect the general views of ERG22+ assessors that those primarily radicalised online are to some degree less risky and less engaged than those who have made offline extremist connections, given there are greater barriers to overcome for an individual to take extremist activity into the offline domain.

Overall engagement ratings were available for 182 of the 'Radicalised Extremists' within the dataset. By removing cases where overall engagement ratings were not reported, the next part of the analysis compared radicalisation pathway groups in terms of overall engagement ratings on the ERG22+ to test for a significant relationship.

A significant relationship was found between overall engagement ratings on the ERG22+ and primary method of radicalisation for 'Radicalised Extremists' within the dataset ($H = 10.68$, $df = 2$, $p < .01$), with a mean rank engagement score of 68.16 for those primarily radicalised online, 84.51 for those primarily radicalised offline and 101.71 for those radicalised through a combination of online and offline influences. Dunn's pairwise tests[13] were conducted for the three pairs of radicalisation pathway groups. A significant difference was found between those who primarily radicalised online and those radicalised through a combination of online and offline influences ($p < .05$, adjusted using the Bonferroni correction). No significant differences were found between other pairs.

When separating cases by age, of the 75 individuals in the 'Up to and including 25' age category with overall engagement ratings, a significant relationship was found between overall engagement ratings and primary method of radicalisation ($H = 6.78$, $df = 2$, $p < .05$). However, no significant relationship was found for the 107 cases in the 'Over 25' age category with overall engagement ratings.

When separating cases by gender, of the 163 males with overall Engagement ratings, a significant relationship was found between overall engagement ratings and primary method of radicalisation ($H = 8.68$, $df = 2$, $p < .05$). However, no significant relationship was found for the 19 females with overall engagement ratings.

When separating cases by degree of social connection, no significant relationship was found for the 19 cases identified as lone actors with overall engagement ratings. However, of the 163 individuals identified as either small cell or group actors, a significant relationship was found between overall

[13] Dunn's Pairwise Test is a post-hoc non parametric test. If a significant difference is found following a Kruskal-Wallis H test, the Dunn's Pairwise Test can be used to establish which means are significant from the others by conducting multiple pairwise comparisons.

engagement ratings and primary method of radicalisation ($H = 6.88$, $df = 2$, $p < .05$). Dunn's pairwise tests were conducted for the three pairs of radicalisation pathway groups, but no significant differences were found (when significance values were adjusted using the Bonferroni correction[14]).

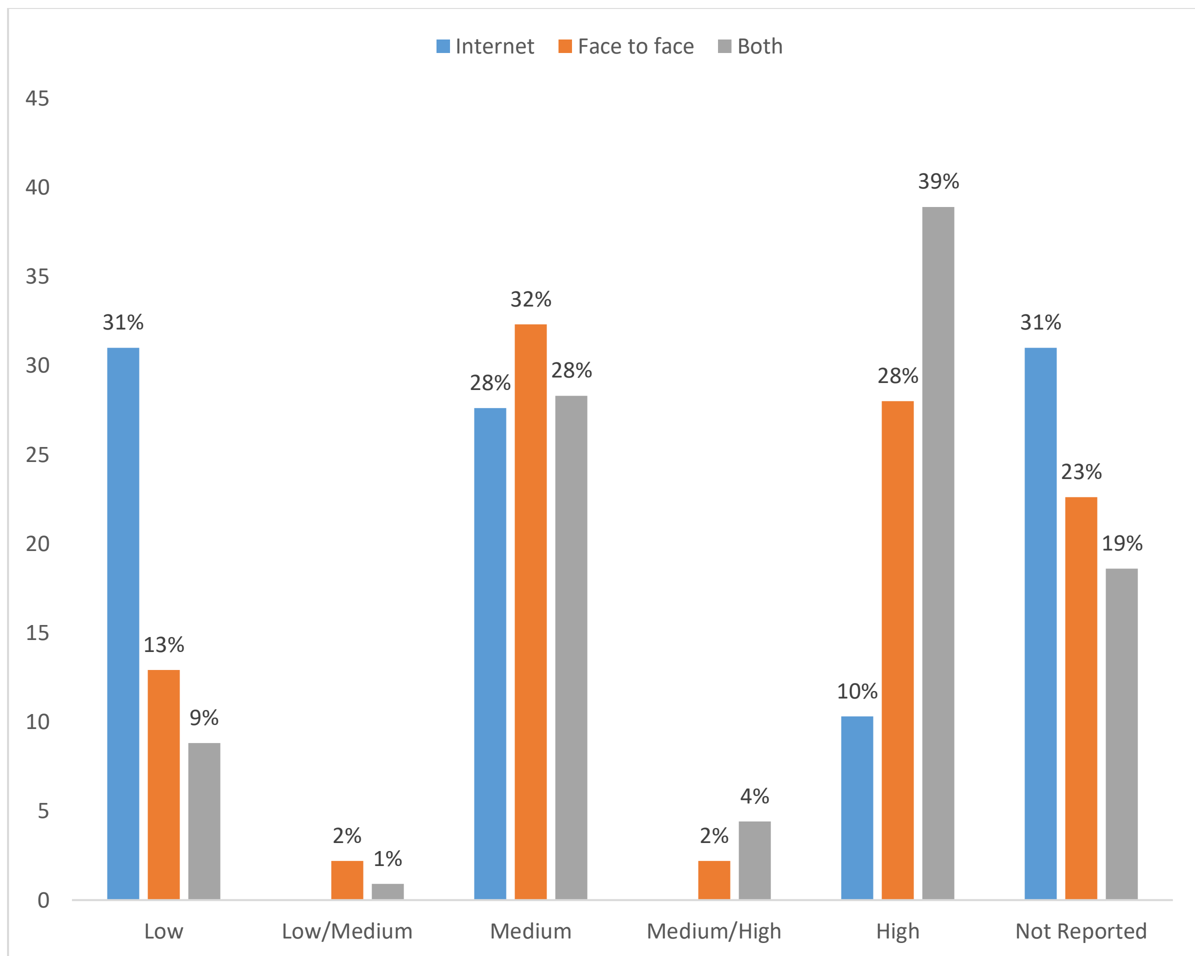
When separating cases by ideology, of the 138 cases identified as Islamist Extremists with overall engagement ratings, a significant relationship was found between overall engagement ratings and primary method of radicalisation ($H = 12.63$, $df = 2$, $p < .01$). Pairwise comparisons found a significant difference between those who primarily radicalised online and those radicalised through a combination of online and offline influences based on overall engagement ratings ($p < 0.01$, adjusted using the Bonferroni correction). A significant difference was also found between those who primarily radicalised offline and those radicalised through a combination of online and offline influences ($p < 0.05$, adjusted using the Bonferroni correction). No other significant differences were found between pairs. Of the 44 cases supporting all other ideologies with overall engagement ratings, no significant differences were found between overall engagement ratings and primary method of radicalisation.

3.3.4.2. Overall intent ratings

All three radicalisation pathway groups were then compared in relation to the overall intent ratings of group members based on the ERG22+ assessment. Intent as assessed within the ERG22+ refers to the intent of an individual to offend and cause harm on behalf of an extremist cause.

[14] The Bonferroni correction is a multiple-comparison correction used when several dependent or independent statistical tests are being performed simultaneously.

Figure 11. Percentages of overall ERG22+ intent levels for primary method of radicalisation



For those who primarily radicalised online, most cases were assessed as presenting a Low level of overall intent at time of offending (31%), with only 10% assigned a clear High rating. This is in contrast to those who primarily radicalised offline, where the majority of cases (32%) were assessed as presenting a Medium level of overall intent with 28% of cases being assigned a High rating. For those radicalised through a combination of online and offline influences, the majority of cases were assessed as presenting with a High level of intent (39%), with 28% assessed as Medium, and only 9% assessed as Low (see Figure 11). This suggests that those who primarily radicalised online were considered as having lower levels of intent to offend and cause harm compared with those primarily radicalised offline and those radicalised through a combination of online and offline influences. In addition, those radicalised by a combination of online and offline influences were assessed as having the highest levels of intent to offend and cause harm. In line with the interpretations offered in relation to the overall engagement ratings, if those individuals influenced by both online and offline influences were exposed to higher levels of radicalising content and for a longer duration than those from other pathway groups, it would follow that this would increase the likelihood of a hardening of intent to commit

violent action on behalf of an extremist group, cause or ideology. Again, if these overall intent ratings also reflect the general views of ERG22+ assessors that those primarily radicalised online are to some degree less risky and less engaged than those who have made offline extremist connections, this could also offer an explanation as to the differences in overall intent ratings found within this study. These differences in overall Intent ratings may also reflect the percentage of cases who were 'Attackers' within each pathway group. Only 21% of cases for those primarily radicalised online were considered to be 'Attackers', which supports this pathway group having the lowest overall Intent ratings, whilst 33% of those radicalised through a combination of online and offline influences were considered to be 'Attackers,' reflecting the highest overall Intent ratings.

Overall intent ratings were available for 184 of the 'Radicalised Extremists' within the dataset. By removing cases where an overall intent rating was not reported, the next part of the analysis compared radicalisation pathway groups by overall intent ratings on the ERG22+ to test for a significant relationship.

A significant relationship was found between the overall level of intent ratings on the ERG22+ and the primary method of radicalisation for 'Radicalised Extremists' within the dataset ($H = 14.38$, $df = 2$, $p < .01$), with a mean rank Intent score of 57.20 for the Internet group, 88.99 for the Face to face group and 102.92 for the Both group. Dunn's pairwise tests were conducted for the three pairs of radicalisation pathway groups. A significant difference was found between those who primarily radicalised online and those radicalised through a combination of online and offline influences ($p < 0.01$, adjusted using the Bonferroni correction). A significant difference was also found between those primarily radicalised online and those primarily radicalised offline ($p < 0.05$, adjusted using the Bonferroni correction). No other significant differences were found between pairs.

When separating cases by age, of the 77 individuals in the 'Up to and including 25' age category with overall intent ratings, a significant relationship was found between overall intent ratings and primary method of radicalisation ($H = 10.02$, $df = 2$, $p < .05$). No significant relationship was found for the 107 individuals in the 'Over 25' age category with overall intent ratings.

When separating cases by gender, of the 165 males with overall intent ratings, a significant relationship was found between overall intent ratings and primary method of radicalisation ($H = 12.36$, $df = 2$, $p < .01$). No significant relationship was found for the 19 females with overall intent ratings.

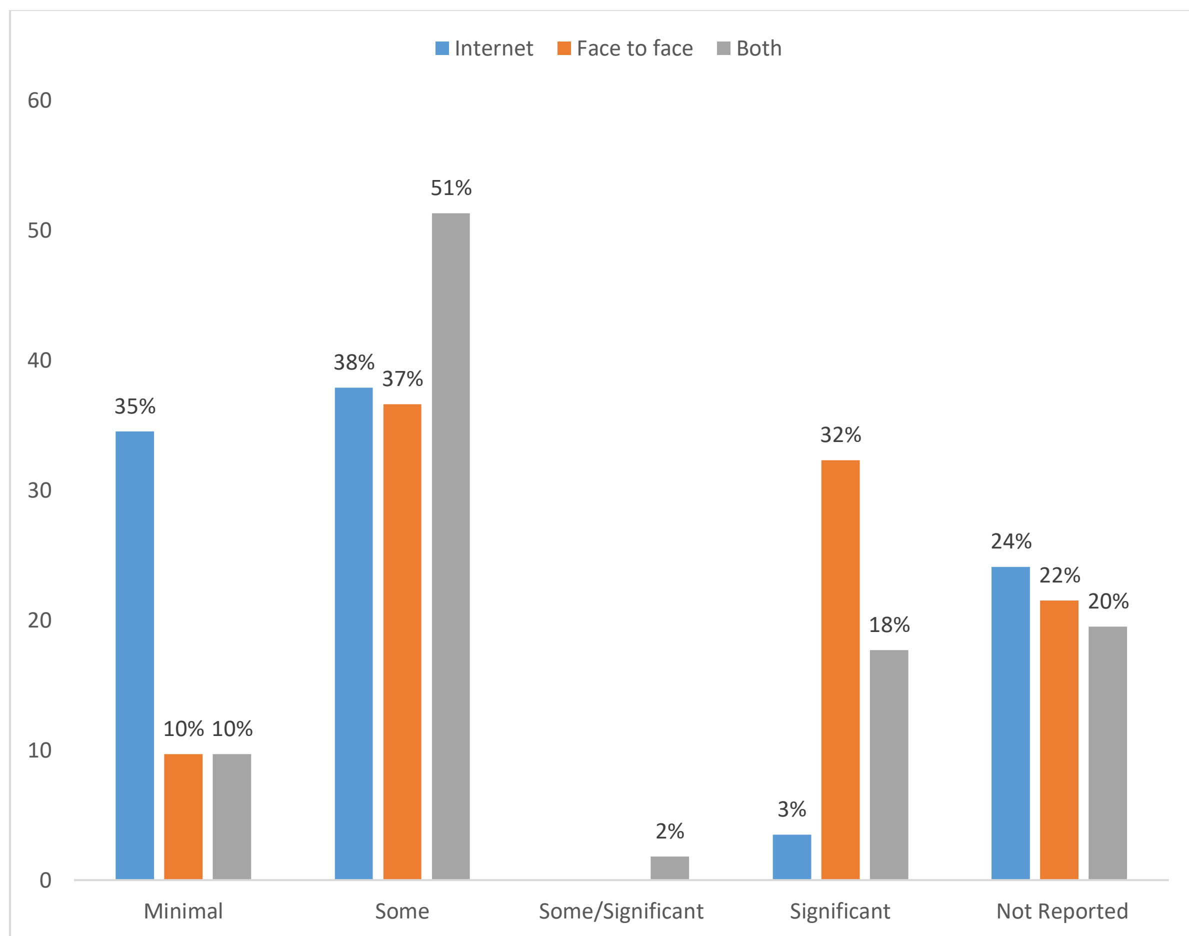
When separating cases by degree of social connection, no significant relationship was found for the 21 cases identified as lone actors with overall intent ratings. No significant relationship was found for the 163 individuals identified as either small cell or group actors with overall intent ratings.

When separating cases by ideology, of the 140 cases identified as Islamist Extremists with overall intent ratings, a significant relationship was found between overall intent ratings and primary method of radicalisation ($H = 13.70$, $df = 2$, $p < .01$). Pairwise comparisons led to a significant difference being found between those who primarily radicalised online and those who radicalised through a combination of online and offline influences ($p < 0.01$, adjusted using the Bonferroni correction) based on overall intent ratings. No significant differences were found between other pairs. Of the 44 cases supporting all other ideologies with overall intent ratings, no significant differences were found between overall intent ratings and primary method of radicalisation.

3.3.4.3. Overall capability ratings

All three radicalisation pathway groups were compared in relation to overall capability ratings of group members based on the ERG22+ assessment. Capability as assessed within the ERG22+ refers to an individual's capability to carry out an extremist offence, particularly acts that cause serious and significant harm.

Figure 12. Percentages of ERG22+ overall capability levels for primary method of radicalisation



For those who primarily radicalised online, most cases were assessed as presenting with a Low level or Some level of overall capability (35% and 38% respectively). This is in contrast to those who primarily radicalised offline, where the majority were assessed as having either Some or Significant levels of capability (37% and 32% respectively). Those radicalised through both online and offline influences fell in between those from other radicalisation pathway groups, with the vast majority of cases assessed as presenting with Some level of capability (51%) (see Figure 12). This suggests that not only are those who primarily radicalised online considered to have lower levels of capability compared with other radicalisation pathway groups, but also that those who primarily radicalised offline are the most capable to carry out an extremist offence likely to cause serious and significant harm. One possible explanation for this finding is that ERG22+ assessors may view those who primarily radicalised online as generally less risky and therefore lacking capability to commit extremist offences causing serious or significant harm due to their lack of offline contacts. Whilst these individuals may be viewed as willing to access extremist content and to communicate with other extremists online, report authors may regard these behaviours as some way removed from committing serious extremist

violence offline. In contrast, ERG22+ assessors may view the presence of offline contacts as an important indicator of risk and key to providing individuals who primarily radicalised offline with the capability to commit violent action through assisting with planning, along with the ability to pool skills, knowledge and funds.

Overall capability ratings were available for 186 of the 'Radicalised Extremists' within the dataset. By removing cases where an overall capability rating was not reported, the next part of the analysis will compare radicalisation pathway groups based on overall capability ratings on the ERG22+ to test for a significant relationship.

A significant relationship was found between overall level of capability ratings on the ERG22+ and the three radicalisation pathway groups for 'Radicalised Extremists' within the dataset ($H = 18.84$, $p < .01$), with a mean rank capability score of 55.36 for the Internet group, 92.48 for the Both group and 106.27 for the Face to face group. Dunn's pairwise tests were conducted for the three pairs of radicalisation pathway groups. A significant difference was found between those who primarily radicalised online and those radicalised through a combination of online and offline influences based on overall capability ratings ($p < 0.01$, adjusted using the Bonferroni correction). A significant difference was also found between those who primarily radicalised online and those who primarily radicalised offline based on overall capability ratings ($p < 0.01$, adjusted using the Bonferroni correction). No other significant differences were found between pairs.

When separating cases by age, a significant relationship was found between overall capability ratings and primary method of radicalisation for individuals in the 'Over 25' age category ($H = 16.30$, $df = 2$, $p < .001$). Pairwise comparisons resulted in a significant difference being found between those who primarily radicalised online and those who radicalised through a combination of online and offline influences based on overall capability ratings ($p < 0.05$, adjusted using the Bonferroni correction). A significant difference was also found between those who primarily radicalised online and those who primarily radicalised offline based on overall capability ratings ($p < 0.001$, adjusted using the Bonferroni correction). No significant relationships were found for the 77 individuals in the 'Up to and including 25' age category with overall capability ratings.

When separating cases by gender, of the 167 males with overall capability ratings, a significant relationship was found between overall capability ratings and primary method of radicalisation ($H = 17.29$, $df = 2$, $p < .001$). Pairwise comparisons resulted in significant differences being found between those who primarily radicalised online and those radicalised through a combination of online and offline influences based on overall capability ratings ($p < 0.01$, adjusted using the Bonferroni correction). Significant differences were also found between those who primarily radicalised online

and those who primarily radicalised offline based on overall capability ratings ($p < 0.001$, adjusted using the Bonferroni correction). No significant relationships were found for the 19 females with overall capability ratings.

When separating cases by degree of social connection, of the 21 cases identified as lone actors with overall capability ratings, a significant relationship was found between overall capability ratings and primary method of radicalisation ($H = 8.97$, $df = 2$, $p < .05$). Pairwise comparisons resulted in a significant difference being found between those who primarily radicalised online and those radicalised through a combination of online and offline influences based on overall capability ratings ($p < 0.05$, adjusted using the Bonferroni correction). Of the 165 individuals identified as either small cell or group actors with overall capability ratings, a significant relationship was found between overall capability ratings and primary method of radicalisation ($H = 9.02$, $df = 2$, $p < .05$). Pairwise comparisons led to a significant difference being found between those who primarily radicalised online and those who primarily radicalised offline ($p < 0.05$, adjusted using the Bonferroni correction) based on overall capability ratings. No significant differences were found between other pairs.

When separating cases by ideology, of the 141 cases identified as Islamist Extremists with overall capability ratings, a significant relationship was found between overall capability ratings and primary method of radicalisation ($H = 9.46$, $df = 2$, $p < .01$). Pairwise comparisons led to a significant difference being found between those who primarily radicalised online and those who primarily radicalised offline based on overall capability ratings ($p < 0.05$, adjusted using the Bonferroni correction). A significant difference was also found between those who primarily radicalised online and those who radicalised through a combination of online and offline influences based on overall capability ratings ($p < 0.05$, adjusted using the Bonferroni correction). No significant differences were found between other pairs. Of the 45 cases supporting all other ideologies with overall capability ratings, a significant relationship was found between overall capability ratings and primary method of radicalisation ($H = 7.23$, $df = 2$, $p < .05$). Pairwise comparisons led to a significant difference being found between those who primarily radicalised online and those who primarily radicalised offline based on overall capability ratings ($p < 0.05$, adjusted using the Bonferroni correction). No other significant differences were found between pairs.

3.3.4.4. Summary relating to the impact of radicalisation pathway on overall levels of commitment, willingness and capability to perpetrate violent extremist acts

Significant differences were found between the three radicalisation pathway groups in terms of overall engagement, intent and capability ratings on the ERG22+. Those who primarily radicalised

online were found to have the lowest overall levels of engagement, intent and capability compared with the other radicalisation pathway groups, whilst those who radicalised through a combination of online and offline influences were found to have the highest overall levels of engagement and intent. The highest overall levels of capability were found for those who primarily radicalised offline.

In terms of the significant differences in overall engagement ratings between radicalisation pathway groups, additional sub-group analysis showed these differences remained for males, younger individuals, those considered socially connected to others and those subscribing to an Islamist Extremist ideology. For overall intent ratings, sub-group analysis showed that significant differences remained for males, younger individuals and those subscribing to an Islamist Extremist ideology. In terms of the significant differences in overall capability ratings between radicalisation pathway groups, additional sub-group analysis showed these differences remained for males, older individuals, those considered socially isolated, those considered socially connected to others, those subscribing to an Islamist Extremist ideology and those supporting an alternative ideology.

3.4. Discussion

The discussion that follows will aim to address the research questions outlined within the Introduction section by drawing out five key findings from this original research study (labelled as 3.4.1-3.4.5 below). For each key finding, explanations will be offered as to how these fit with the existing body of literature in this area. Some of the wider implications of the findings will then be discussed, with nine recommendations proposed for future counter-terrorism policy and practice. Finally, some future directions for research in this area are outlined.

3.4.1. Role of the Internet in altering means of radicalisation

The Internet does appear to be taking an increasingly prominent role in radicalisation processes for those who commit extremist offences. Since 2005, it was found that increasing numbers of individuals were considered as having been subject to online radicalisation, whilst over the same period, a reduction was observed in the number of individuals who were radicalised primarily though offline influences and face-to-face contact with others. This suggests that in the same way the Internet has brought extensive changes to peoples' lives and revolutionised the way we communicate with each other, it is also changing the method by which radicalisation occurs.

So in answer to the first research question, the findings of this study provide support for the view that the Internet has altered individuals' means of radicalisation (Gill et al., 2015) and that the Internet now plays an important role as a tool for radicalisation (Aly, 2010; O'Rourke, 2007; Tucker, 2010). This finding also supports the suggestion that the Internet creates more opportunities for individuals to become radicalised (von Behr et al., 2013), a view presented within the UK Government's recent Online Harms White Paper that "…online content remains a feature of contemporary radicalisation" (UK Home Office, 2019, p. 12). Based on the findings of this study, there has been an increase in prominence of the Internet over time for males and females, along with younger and older individuals, but this was found to be particularly marked for females and the younger generation.

Despite this increasing prominence of the Internet in radicalisation processes, offline influences were found to feature at least to some extent in radicalisation processes for the majority of cases. The radicalisation pathway group with the most members were those individuals considered to have radicalised through a combination of online and offline influences (48%), in contrast to those considered to have primarily radicalised online, who were the smallest group (12%). This provides support for the assertion by Gill et al. (2015) that a distinction between online and offline radicalisation is a "false dichotomy" and that "plotters regularly engage in activities in both domains" (p. 38).

3.4.2. Differences in online activity between pathway groups

In response to the second research question, the findings suggest that the radicalisation pathway does influence the way in which those convicted of extremist offences use the Internet. The strongest predictors to differentiate between those where Internet use was significant in their radicalisation pathway (including those primarily radicalised online and those radicalised through online and offline influences) and those who primarily radicalised offline included whether an individual had learnt from online sources, accessed specific extremist websites/home pages, used open social media applications/platforms and used encrypted applications. In contrast to the other radicalisation pathway groups, those who primarily radicalised offline were found to use the Internet less often for extremist purposes. However, even for individuals considered to have primarily radicalised offline, a significant minority (42%) were found to have used the Internet for extremist purposes, again highlighting the growing influence of the Internet on radicalisation pathways and extremist offending.

When comparing those individuals who primarily radicalised online with those who radicalised through a combination of online and offline influences, similarities were found in terms of their Internet activity. However, these groups could still be differentiated as a higher proportion of those who primarily radicalised online interacted with like-minded others via the Internet, disseminated their own extremist propaganda and made use of social media applications/platforms. This may reflect the fact that those who primarily radicalised online are more socially isolated offline and therefore rely upon an online community to a greater extent, particularly through using online social media. This is supported by the finding that of the 27 lone actor 'Radicalised Extremists' within the dataset where the radicalisation pathway could be established, the majority had primarily radicalised online (63%). This is in keeping with findings from previous research that Internet activity is highly prevalent for lone actors (Pantucci, Ellis & Chaplais, 2015), enabling social ties to be established even when individuals are socially isolated in real life (Zeman, Bren & Urban, 2017). The Internet is typically used by lone actors as a source of inspiration, how-to-advice or as a way of connecting with like-minded others, providing them with a surrogate community or 'support structure' (Spaaji, 2012).

3.4.3. Changes in Internet activity over time

Another important finding relates to evidence of change in terms of the types of websites, platforms and applications used by those who have committed extremist offences. Particularly for those considered to have primarily radicalised online and through a combination of online and offline influences, there was evidence of a reduction in use of specific extremist websites and homepages, and an increase in the use of social media platforms/applications from 2005 onwards. There was also evidence of an increase in use of online encrypted applications around 2015-17, but was only really

apparent for those who radicalised through a combination of online and offline influences. This increase coincides with the time when disruption by major social media companies, such as Facebook, Twitter and YouTube, forced many extremists off their platforms and led to increased use of encrypted applications.

These findings provide empirical support for the suggestion by Watkin and Whittaker (2017) that over recent years, extremist groups have migrated from accessing extremist websites to having a presence on open social media platforms, then transitioning to use of encrypted applications, in response to the reaction of security services. This comes as no surprise as it would appear extremists and extremist groups have adapted the way they use the Internet to take advantage of what technology can offer. The UK Government's recent Online Harms White Paper states that extremist propaganda "...are not only restricted to the largest, best-known services, but are prevalent across the internet" (UK Home Office, 2009, p.12). Furthermore, it was reported that, "Terrorist groups and their supporters constantly diversify their reliance on the online services they use to host their material online" (p. 12). The findings from this study support the notion that the most effective way to combat this adaptive threat would be to have a consistent cross-platform response, utilising new technology to rapidly detect and remove terrorist content, alongside preventing the re-upload of such content.

Of interest was that whilst some fluctuation was noted across time in the use of standard chat applications such as e-mail and messenger services for all three radicalisation pathway groups, an overall increase was most evident for those who radicalised through a combination of online and offline influences and those who primarily radicalised offline. This indicates that standard chat applications continue to play a prominent role in how extremists communicate with one another using the Internet, which largely mirrors the central role that e-mail and messenger services continue to play in everyday online communication. The increased prominence of use of social media platforms/applications found within this study provides support for the findings by Bastug et al. (2018) that social media networking platforms are "a very important radicalising agent" (p. 16) based on their study of fifty-one Canadian Islamist extremists. It is important to highlight that the increased use of social media platforms in particular demonstrates that those radicalised and subsequently convicted of extremist offences are regularly making use of open applications that are generally familiar to and regularly utilised by members of the public, as opposed to hidden websites or difficult to access parts of the Internet (e.g. the dark web). For this reason, social media and technology companies must take some responsibility in efforts to prevent online radicalisation by blocking the dissemination of extremist content on their platforms and protecting users from harmful online content.

3.4.4. Profile and vulnerability factors of pathway group members

In response to the third research question, the radicalisation pathway groups identified appear markedly different in terms of demographics, offending history and socialisation. This finding supports previous research that has found that no single profile exists that applies to those who have committed extremist offences (Borum, 2004; Horgan, 2003; McCormick, 2003; Silke, 2014).

Based on the findings of this empirical study, those who are particularly vulnerable to online radicalisation are younger males and females, who are socially isolated, with a limited offending history and show a greater likelihood to suffer from some form of mental health or personality disorder. The most likely ideological cause is Islamist extremism. The type of extremist offending is typically non-violent, with comparatively few considered to be attackers, and offences were generally committed alone. In contrast, those considered most likely to radicalise offline are older males, socially connected, with a prior offending history, including convictions for violence. It appears to be far less common for mental health and personality difficulties to feature for individuals who primarily radicalise in an offline setting. Following this offline radicalisation pathway is more likely to result in support for a wider range of ideologies and causes, beyond that of Islamist extremism. These individuals are most likely to be attackers, committing violent extremist offences and when doing so, operating as part of a group.

Those who radicalised through a combination of online and offline influences were often found to fall between the other two pathway groups in terms of demographic and offence-type variables. Members were typically male, comparatively young in age and more likely to support an Islamist extremist ideology than those who primarily radicalised offline. In common with those who primarily radicalised online, they are less likely to have committed a violent index offence and have an offending history, including past convictions for violence, than those who primarily radicalised offline. However, similar to those who primarily radicalised offline, these individuals were often socially connected and committed offences as part of a group. Whilst mental illness and personality difficulties were less common than for those who primarily radicalised online, it was slightly more prevalent than for individuals who primarily radicalised offline.

Age differences in relation to radicalisation pathways were not particularly surprising given that previous studies have found a relationship between offender age and virtual activities. For example, Gill and Corner (2015) reported that younger individuals were significantly more likely to engage in Internet-related activities, such as virtual learning and virtual interaction with others, than older individuals. This was seen as reflecting simple routine activities, where younger individuals typically use the Internet for a greater number of hours a day and for a wider range of tasks (Teo, Lim & Lai,

1999). It would appear that many of the older individuals who typically radicalised offline did so prior to Internet use, and social media in particular, becoming so widespread and commonplace. This would account for why the Internet was found to generally play a lesser role in their radicalisation and method of offending. In relation to the finding that those with prior criminal histories and previous violence in particular were more likely to commit violent extremist offences, as was found for those who primarily radicalised offline, this association has previously been made in the literature (Gill & Corner, 2015).

The findings of this study provide useful insights into what are typical radicalisation pathways for those who support different extremist ideologies and causes. The finding that those who primarily radicalise online are most likely to support an Islamist extremist ideology supports the view that extremist organisations such as Daesh have favoured online recruitment, as this has been extremely effective in recruiting individuals from all parts of the world to join the group and support its cause (Turner, 2018). In addition, the findings from this study support previous research such as Gill and Corner (2015) who found that those espousing an Islamist extremist ideology were more likely to learn through virtual sources, whilst those motivated by single issues (including animal rights activists) were less likely to learn or interact virtually. Within this study, those supporting single-issue causes, such as animal rights, were generally found to have primarily radicalised offline. The most likely explanation for this is that animal rights activists tended to be older, with 80% falling within the 'over 25' age group. In addition, 87% had committed their offences and subsequently been convicted and sentenced prior to 2012, at a time when Internet use was not as prevalent in terms of its role in radicalisation processes. It is also possible that relevant Internet behaviours were missed as a result of the length of reports for animal rights activists being considerably shorter, with the average page length of reports for animal rights activists being 11, compared with 20 across all 269 cases. This tendency for the production of shorter reports may reflect animal rights activists being viewed by ERG22+ assessors as less of a risk than those supporting other extremist ideologies and causes.

When examining each ideological group, clear parallels were found between percentages of those belonging to each radicalisation pathway group for cases supporting either an Islamist Extremist or Extreme Right Wing ideology. In both ideological groups, just over half of cases had radicalised through a combination of online and offline influences, with around a third of cases primarily radicalised offline, and online for the remaining cases. This would indicate that counter-terrorism measures for those supporting such ideologies would need to target and monitor activities in both online and offline settings. In contrast, the vast majority of Political and Animal Rights extremists were considered to have primarily radicalised offline. Only a nominal number of Political and no Animal

Rights extremists had primarily radicalised online, suggesting a lesser role and influence of the Internet.

When considering the higher prevalence of mental illness and/or personality disorder found for those who primarily radicalised online, this may be accounted for by a higher proportion of lone actors within this pathway group, given higher rates of mental disorder have been found for lone actor rather than group actor terrorists (Corner & Gill, 2015; O'Driscoll, 2018). However, it is also worth considering there is likely to be a proportion of cases with undiagnosed mental health or personality disorder, particularly as it has previously been suggested the regularly stressful experience of 'being' a terrorist may lead to psychological suffering, due to the associated activities and lifestyle (Horgan, 2003).

3.4.5. Impact of radicalisation pathway on commitment, willingness and ability to act

The three radicalisation pathway groups differed in terms of their overall engagement, intent and capability ratings on the ERG22+, thereby addressing the fourth research question by establishing that the radicalisation pathway does have an impact on the levels of commitment, willingness and capability of offenders to perpetrate violent extremist acts.

Those who primarily radicalised online were found to have the lowest overall levels of engagement to commit future extremist offending. As the engagement domain refers to factors that may account for an individual's involvement and growing identification with an extremist group, cause and/or ideology, this indicates that those subject to online radicalisation become less involved or identify less than those who have taken other radicalisation pathways. This may reflect that some individuals who primarily radicalised online were apprehended at an earlier stage in the radicalisation process, after breaking the law by perhaps accessing or sharing extremist content online, but before making contact with others offline or taking violent action in an offline setting. In contrast, those exposed to both online and offline influences were found to have the highest level of engagement, suggesting perhaps that they were further along the radicalisation process, but also highlighting the significant role played by offline contact with other extremists in strengthening involvement and deepening a sense of identity with an extremist group, cause or ideology.

In terms of intent, those considered to have primarily radicalised online were found to have the lowest levels. The intent domain refers to those factors evidencing an individual's readiness to support and/or use illegal means, and/or violence to further the goals of an extremist group, cause or ideology. Once again, it would appear that contact with other extremists in an offline setting plays a crucial role in moving an individual from holding extremist views and taking an interest in a specific

group, cause or ideology, to having a desire to act on behalf of that group or cause. This is reflected by the finding that those who were subject to both online and offline influences were found to have the highest levels of intent. However, the combination effect of being exposed to extremist views in both an online and offline setting appears more powerful than exposure to offline influences alone, given that those primarily radicalised offline were found to have lower overall levels of intent than those radicalised through a combination of online and offline influences. One possible interpretation is that the more intense online socialising occurred for those radicalised through a combination of online and offline influences, as the more substantial online exchanges led to coordinating concerted offline action, even if only to arrange offline meetings with each other. It would follow that individuals receiving the highest level of exposure to extremist ideas would be those engaging with such content within both the online and offline domains. This high level of exposure is likely to increase the extent to which such ideas are reinforced and increase the likelihood of this leading to an individual over-identifying with an extremist group, cause or ideology. This may explain why members of this radicalisation pathway group had the highest engagement and intent ratings.

Policy makers and media commentators have regularly asserted that online media content can and does induce behavioural change. However, the findings of this study suggest a more nuanced picture, rejecting a simple explanation that online exposure to extremist materials will result in violence in a purely linear relationship. This is supported by other work on the transition between online and offline engagement, including Social Movement Theory (Wiktorowicz, 2005). This theory has been developed in the more general context of social activism and argues that informal ties and social networks play a vitally important part in the process of mobilisation. The theory also suggests that exceptionally 'risky' behaviours, such as engaging in extremist violence, is always likely to require social networks in order for the perceived cost/benefit calculation to tip in their favour. Furthermore, involvement in violent action needs to be preceded by a prolonged process of 'socialisation' in which perceptions of self-interest diminish and the value of group loyalties and personal ties increase (Wiktorowicz, 2004). This is supported by Sageman (2004) who argued that, "[f]or the type of allegiance that the jihad demands, there is no evidence that the Internet is persuasive enough by itself" (p. 163).

As with engagement and intent, those considered to have primarily radicalised online were found to have the lowest levels of capability. The capability domain refers to those factors that enable an individual to cause harm, offend or perpetrate violence on behalf of a group, cause and/or ideology. Those who primarily radicalised offline were found to have the highest overall levels of capability, suggesting the significance of offline contacts in providing individuals with the necessary knowledge, skills and networks to take violent action in support of an extremist group, cause or ideology.

In terms of an explanation for higher ratings across the domains of engagement, intent and capability for those who primarily radicalised offline and through a combination of online and offline influences, compared with those who primarily radicalised online, Christmann (2012) argued that face-to-face contact remains important to recruitment and the group dynamics that can drive radicalisation, especially that which leads to violence. A number of researchers have also suggested that being connected via social networks to a tightly-knit clique of like-minded others is of greater importance than embracing a specific ideology or exposure to extremist propaganda online (Meleagrou-Hitchens & Kaderbhai, 2017). This is explained through the process of socialisation, which leads to the gradual adoption of norms, ideologies and customs resulting from an individual's involvement with certain social groups (Wiktorowicz, 2005). Previous studies, such as Corner and Gill (2015), found that those individuals who engaged in Internet activities such as interacting virtually with co-ideologues, were less likely to carry out a violent attack, and those who engaged in learning through virtual sources were less likely to kill or injure others in the commission of their offending. One explanation offered by Gill (2012) is that groups tend to not only support the process of moral disengagement but also provide the necessary operational capabilities to carry out a terrorist attack. Therefore, in the absence of a group setting, violent extremist acts can be more difficult to commit for both practical and psychological reasons.

3.4.6. Strengths and limitations

Six key strengths are identified as relevant to this empirical study. The first is that this study has provided an opportunity to gain insight into the use of the Internet by those convicted of extremist offences in the UK using a unique data source not previously used for this purpose. It is clear from the findings that obtaining data from specialist assessment tools, such as the SRG/ERG22+, authored by professionals that have not only had access to a range of restricted documents, but also the opportunity to interview and learn about the experiences of extremist offenders first hand, serves to progress current knowledge in this area.

A second key strength is that by using the ERG22+ in particular as a data source, this provides access to assessment rating by professionals with expertise in the area of extremist offending. This includes ratings of how engaged or identified with an extremist group, cause or ideology an individual was at the time of their offending, their level of motivation or intent to commit violent extremist acts and capability to do so. Such ratings for those who have committed extremist offences has not previously been available to researchers studying the role of the Internet in radicalisation processes and extremist offending, offering fresh insights into this area.

Gill, Corner, Thornton and Conway (2015) have previously suggested that the research literature on online radicalisation is suffering from a general lack of data driven studies. With this in mind, a third key strength of this study is the data-driven approach taken to investigating the role of the Internet in radicalisation processes and offending of those convicted of extremist offences within the UK. The size of the dataset (consisting of 269 cases, of which 248 were considered to have radicalised prior to coming into custody) is considered a fourth key strength, as this essentially represented the entire UK extremist offender population in custody from 2010 to 2017, the period in which SRG/ERG22+ reports were included. This was in light of HMPPS policy stating that all individuals convicted of extremist offences should be subject to an ERG22+ assessment within 12 months of sentencing.

Within the 269 cases, there were individuals who were affiliated with and influenced by a range of causes and ideologies. There were also males and females of different ages, from a variety of backgrounds. Whilst the focus of several other data-driven studies has been specifically on lone actors (e.g. Gill & Corner, 2015; Gill, Horgan & Deckert, 2014), the cases within this dataset included those with varying degrees of social connectivity, such as lone actors, members of small cells and group actors. The variation in cases within the dataset is considered a fifth key strength and enabled this study to respond to a number of suggestions made by Conway (2016) for future research into online extremism and terrorism, notably a need to widen the range and type of violent online extremism beyond violent jihadis, to pay more attention to gender and to engage in more comparative research. Furthermore, whilst many studies have focused on those who have committed violent terrorist acts, a sixth key strength of this study was the inclusion of, and differentiation between, non-violent and violent extremist offenders based on the index offence. This was crucial given most individuals involved in terrorism are found to have committed non-violent acts (Gill & Horgan, 2013; Horgan et al., 2016).

Despite the six key strengths outlined, five limitations of the study have also been identified. First, it is recognised that directly interviewing those convicted of extremist offences or even professionals who are involved in the management of these cases would likely gain additional insights into the way in which the Internet has contributed to radicalisation processes and facilitated extremist offending, particularly given Internet use is, for most people, a private activity or pastime. Based on the research conducted in this area to date, it would appear we are still missing a more thorough triangulation of data to fully understand and explore the role of the Internet in radicalisation processes and extremist offending. The majority of research in this area has utilised case information from open source media. Following this original research study, we now also have data and a number of insights from specialist assessments tools, such as the SRG/ERG22+, administered by professionals with expertise relating to

individuals who have committed extremist offences. Whilst there has been a handful of studies relying upon direct interviews with those convicted of extremist offences (e.g. Koehler, 2014; Von Behr et al., 2013), additional interview data is likely to increase our knowledge and develop the evidence base further.

At such a time where further research has provided additional interview data from those convicted of extremist offending relating to their use of the Internet, it may be that we have then exhausted the data sources available to researchers and perhaps we will have reached the limits of available knowledge in this area. However, there remain significant challenges with adding more direct interview data. As highlighted by Whittaker (2019) when referring to the lack of interview data within research on violent extremism, "the reason for a lack of primary data stems from the seemingly insurmountable practical and ethical issues that pertain to researching dangerous, unwilling, and vulnerable actors" (p. 2-3).

A second limitation is that despite the large dataset utilised within this study, the focus was on a population of offenders, including those either residing in custody or released on licence. It is recognised that there are a number of individuals who have committed extremist offences in the UK, but do not feature within the data. These include those who died during the commission of their offences, were acquitted at trial and those who were never identified and/or apprehended by the police. Alongside this, it is likely there are others who are yet to commit extremist offences, but are on the way towards becoming radicalised and are close to offending in terms of the behaviours they are exhibiting.

A third limitation, relevant to the specific methodology chosen, included the difficulties in distinguishing between missing data and variables that could reliably be coded as not present. This was particularly evident when coding for evidence of a range of Internet activities and behaviours and was overcome by coding dichotomously using the options of 'Yes' and 'No evidence'. Given the purpose of the SRG/ERG22+ reports was not to provide detailed accounts of all Internet activity or behaviours engaged in by an individual, it is possible that some relevant online activities may not have been included within reports and therefore aspects of Internet use may have been missed. No data are perfect and it was found that the SRG/ERG22+ reports varied in length and detail from which data were obtained. This is considered a fourth limitation of this study and may provide another reason why some reports may not have covered online activities in detail, even where this was relevant. For example, even where Internet use was relevant, not all reports featured the level of detail of specifying frequency of Internet activity, types of websites, platforms or applications used, or the types of information accessed online. This was highlighted particularly through the lack of evidence of use of

encrypted applications across radicalisation pathway groups, but especially by those who primarily radicalised online, even though it is known that for Daesh, use of encrypted applications such as Telegram became the preferred platform around 2016-17, when disruption of pro-Daesh accounts by major social media companies were taking place (Scrivens & Conway, 2019).

Whittaker (2019) suggests that reliance on one data source when coding may compromise the validity of findings. However, this was considered less of an issue for this study as authors of the SRG/ERG22+ reports are encouraged to use a range of sources to gather information to complete the assessment (e.g. interviews with offenders where consent was provided, access to probation assessments, police information and Crown Prosecution Service documentation). That said, of all 269 specialist assessment reports, as many as 23% of individuals who were the subject of the reports had decided against participating in interviews to inform the assessment process. Therefore a fifth limitation is that it is likely some relevant information relating to the radicalisation pathway and Internet use may have been lost, particularly for individuals who decided against directly contributing to the completion of reports.

3.4.7. Future directions for research

In terms of future directions for research, four key recommendations are outlined. The first is to add additional cases to this existing dataset and analyse via the coding frame developed, as this research study only included cases where either an SRG or ERG22+ assessment had been completed prior to the end of December 2017. Aside from the obvious benefits of increasing the overall size of the dataset in terms of overall and cross-group analysis, it is also likely that a number of new insights will emerge given the rapid evolution in the way society is using the Internet, even over as short a period as two years.

The second recommendation is to conduct detailed qualitative analysis of a number of case studies within this dataset. This would provide a more in-depth analysis of the relevance of specific engagement, intent and capability factors for individuals within each radicalisation pathway group, and how these contributed to committing online or offline offences. Given there are 13 engagement factors, six intent factors and three capability factors within the ERG22+, with the flexibility to add additional factors if considered relevant, there is huge scope to provide further detailed analysis at either an individual or small group level. A number of specific sub-groups of interest could be investigated, for example Muslim converts, those who are only convicted of online extremist offences and those who have not been convicted of TACT offences, but been subject to an ERG22+ assessment due to sufficient concern they have radicalised whilst in custody. Another sub-group of interest includes female extremist offenders, particularly in light of the findings from this study of a particularly

marked increase for females in the role of the Internet over time. Whilst this study has included some analysis of females, particularly in relation to their radicalisation pathways, breakdown of ideologies and summary ratings of engagement, intent and capability on the ERG22+, further research is required in relation to their use of the Internet specifically and the relevance of individual factors from within the ERG22+ assessment. It is useful to highlight that the Ministry of Justice is currently conducting research on female pathways to extremist offending using data from the ERG22+, which should help to address some of these knowledge gaps.

It has previously been mentioned that obtaining additional interview data from those convicted of extremist offences relating to their online activities, or from professionals involved in case management, would be another step towards a more holistic triangulation of data to fully understand and explore the role of the Internet in radicalisation processes and extremist offending. Whilst it is recognised there are significant barriers to overcome, the third recommendation is to add primary data from interviews as this remains a goal for future research in this area.

Previous research has found that recidivism rates for those who commit extremist offences are low (Silke, 2004) and typically lower than for those convicted of other types of offences (Hodwitz, 2019). When extremist offenders do reoffend, offences tend to be minor violations, rather than serious further offences (Hodwitz, 2019). These findings were confirmed by official figures recently published, suggesting that only 3% of the total number of terrorist offenders (196) released since January 2013 have been convicted of a further terrorist offence (Dearden, 2020). These findings have resulted in questions being asked about the value of intensive post-release surveillance and monitoring of this offender group. However, it is currently unknown whether recidivism rates may differ depending on the radicalisation pathway taken by individuals. Given this knowledge gap, the fourth recommendation is for future research to explore this area, particularly in light of widespread public and media attention around recent and suspected terrorist attacks by convicted TACT offenders. These include the terrorist attack on London Bridge in November 2019 by Usman Khan whilst under supervision by the Probation Service following his release from custody approximately 12 months earlier (BBC News, 2019). Another example is the Streatham attacker, Sudesh Amman, who injured three people using a knife in February 2020 having been released from prison only a week earlier (BBC News, 2020a). There was also an alleged terrorist attack on prison staff involving bladed weapons by two prisoners, including convicted TACT offender Brusthom Ziamani, at HMP Whitemoor in January 2020 (BBC News, 2020b).

3.4.8. Implications/recommendations for policy and practice

Based on the findings from this study, nine key recommendations are proposed to inform counter-terrorism policy and practice. The findings indicate that the Internet has changed the means by which radicalisation occurs and suggest that increasing numbers of individuals subsequently convicted of extremist offences have been exposed to online radicalisation to some degree. Therefore, the first recommendation is for security services and counter-terrorism initiatives to continue targeting the Internet as a setting that enables extremist socialisation to occur. Furthermore, in light of the evolving way in which those who commit extremist offences are using the Internet, the second recommendation from this study is that efforts to counter online radicalisation, as argued by Stevens and Neumann (2009), should view new technologies and modes of interaction as an opportunity, rather than a threat. One example is to capitalise upon the collective power of Internet users to bring in new models of user-driven self-regulation, where users are encouraged to challenge and report undesirable extremist content online, with the aim of reducing the availability of extremist materials.

Another finding from this study is the important role that is still played by physical, face-to-face interactions within social networks. This was reflected by higher ratings across the domains of engagement, intent and capability for those who primarily radicalised offline and through a combination of online and offline influences. The highest engagement and intent ratings were assigned to those who were radicalised through a combination of online and offline influences, which may reflect that such individuals had a wider range of communicative skills and resources, access to materials, along with greater opportunities for ideological imprinting. This group were also the largest in number, which may reflect the increased opportunities for conflict with the law as extremist offences can be committed both online and with offline influences. The third recommendation and one with clear implications for future practice is that differences found in engagement, intent and capability ratings between radicalisation pathway groups should influence the way in which pathway group members are screened, risk assessed and managed in the future, along with the approaches taken whilst working with individuals during rehabilitation efforts within custodial and community settings.

In terms of those individuals who primarily radicalised online, this group was found to have the lowest engagement, intent and capability ratings based on ERG22+ assessments. It is important to highlight there are a wider range of activities that are now considered terrorism offences, many of which are considered non-violent and to represent a limited risk to wider society. Many of these 'lesser risk' offences occur within the online space, including fundraising, intention to travel, or possession or dissemination of extremist materials. The characteristics of those committing extremist

offences is also changing, in that the population is younger, more diverse and includes more women (Radicalisation Awareness Network, 2016).

One important implication of this finding is that individuals who primarily radicalise online, including lone actor terrorists (the majority of which fell within this radicalisation pathway group), may have been given an unduly prominent role and considered to pose a greater risk than is reflected in reality. Those who consider that the role of the Internet in radicalisation processes has been exaggerated and that online activity exerts little influence on offline behaviour have argued that online extremists are merely 'amateurs' and engage in a form of online showboating, rather than having any real commitment or intention to engage in real-world violence (Conway, 2016). There is some support for the notion that online extremists may lack commitment in the form of research exploring the phenomenon of 'moral grandstanding' on social media platforms (Grubbs, Warmke, Tosi, James & Campbell, 2019). 'Moral grandstanding' is said to take many forms, including public shaming, stating anyone with an opposing view is wrong or emotional displays when taking ideological positions. However, research has found it is the motivation behind comments that is important, with individuals seeking to gain status rather than express sincerely-held beliefs.

Whilst individuals who primarily radicalised online had the lowest engagement, intent and capability ratings, it should not be assumed they pose minimal risk or can be overlooked in terms of potential risk to society. It may be the case that these individuals pose more of a secondary risk through their increased networking and sharing of extremist materials online, which then has radicalising effects on others and potentially leads others to commit violent extremist offences. An alternative hypothesis is that the lower ratings on engagement, intent and capability for individuals who primarily radicalised online may reflect the fact they were arrested sooner. This may be a reflection of the lower threshold for committing extremist offences online or the result of increased attention given to these types of offences by the police and security services from 2014 to 2017, due to the specific threat they were facing from Daesh over this time period. Another potential explanation is that it could simply be the case that those who primarily radicalised online were apprehended earlier within the radicalisation process than members of other radicalisation pathway groups, particularly those influenced primarily by offline associates, where there was limited opportunity for the police or security services to monitor online activity. Had these individuals not been arrested, it is impossible to know with certainty what other types of further extremist activities would have been undertaken by them in either an online or an offline domain.

Despite these differing explanations, it appears that extremist offences and the individuals who commit them are growing in range and not all extremist offenders present the same risks to society.

For this reason, the fourth recommendation following this study is that responses to extremist offending are proportionate to avoid risks associated with excessive periods of detention or fuelling processes of radicalisation due to disproportionate measures. The importance of proportionality was also emphasised by the United Nations High Commissioner when reporting on best practices and lessons learned on how protecting and promoting human rights can help counter violent extremism (UN Human Rights Council, 2016). It is worth considering that due to the relatively low threshold for committing extremist online offences, many individuals convicted of extremist offences are now receiving short sentences and therefore there is often only a limited window in which to affect the process of change. If those who primarily radicalised online are typically less engaged with an extremist group, cause or ideology, along with having lower levels of intent for violent extremist action and lower levels of overall capability, it may be more appropriate to offer lower intensity interventions to rehabilitate these individuals and less stringent restrictions to reflect their lower risk status. In contrast, those subject to both online and offline influences, with the highest levels of engagement and intent ratings, are likely to require more intensive and higher-level interventions, along with more stringent restrictions and conditions upon their eventual release.

Another important consideration is that those who primarily radicalised online prior to arrest can then be subject to a form of post-offence offline radicalisation through association with other convicted extremist offenders within prison settings, particularly in establishments with high numbers of individuals convicted of TACT offences. Given the findings of this study, that those exposed to a combination of online and offline influences during the radicalisation process are typically the most engaged or identified with an extremist cause and have the highest levels of intent to commit violent extremist offences, the fifth recommendation relates to the need for careful consideration of how best to disperse individuals either vulnerable to or convicted of extremist offending throughout the custodial environment. This is all the more important given previous research suggests that individuals can progress through different roles during their involvement with extremist groups or causes (e.g. from providing material support to executing violence), and in doing so, becoming more or less risky over time (see Horgan et al., 2016).

In light of the findings from this study relating to differences in profile and vulnerability factors for those in each radicalisation pathway group, the sixth recommendation is for new online counter-terrorism measures to be designed to target younger users, appealing to both males and females. It is already known that young people are heavily influenced by the content they see online, with many young people obtaining information from Google and social media sites including Facebook, Instagram and Twitter (Gov.uk – Guidance Online Radicalisation, 2015). With consideration of gender, social media platforms in particular are considered vital in enabling women to network with other extremists

virtually, which has had a significant impact in light of the frequent lack of opportunities for females to be fully integrated into extremist groups in offline settings (Carvalho, 2014; Sanchez, 2014). There has been recent recognition in the potential value of youth participation in countering violent extremism, including their involvement in preventative measures, as well as delivery of deradicalisation programmes (Radicalisation Awareness Network, 2018). The added value is particularly relevant to the Internet, where young people are frequently the target audience and are generally more in tune with emerging technologies and more able to innovate than policy makers and other counter-terrorism stakeholders.

The seventh recommendation is that once vulnerable individuals have been identified online, it is important that the wider needs of the person are considered in addition to those interventions that may help address an increasingly extremist mind-set. Based on the findings of this study, many who appear vulnerable to online radicalisation may benefit from initiatives designed to increase their support network and being provided with social opportunities to reduce feelings of social isolation. This reflects the tendency of those who primarily radicalised online being socially isolated offline. They may also require referral to and support from specialist mental health and/or personality disorder services, given higher rates were found for members of this pathway group. Where there is evidence of an individual of concern having primarily offline associations and influences, security services and counter-terrorism agencies should be aware of a likely greater risk of violent extremist action, particularly with those who have a proven history of violent offending.

The process of undertaking this study and the findings have highlighted important considerations and potential training needs to support professionals when conducting ERG22+ assessments in the future. It is particularly important for ERG22+ assessors to have thorough and up-to-date knowledge around the role of the Internet in radicalisation processes and extremist offending. This is the eighth recommendation following completion of this study. At present, the latest ERG22+ manual (HMPPS Extremism Risk Guidance Manual, 2019) states that any knowledge of extremist offending or experience working with people who have committed extremist offences will be beneficial in completing this assessment within the 'user qualifications' section. However, given the increasingly prominent role of the Internet in how individuals are being radicalised, an awareness of the literature around Internet use by extremists is considered important, as is familiarity with the changes taking place in the way extremist offenders are using the online space (e.g. the types of platforms and applications favoured, how these platforms and applications work, and how they are being used). Having this knowledge should help with the development of a fuller understanding of how many individuals come to be engaged with an extremist group, cause or ideology, along with greater

knowledge around their capabilities for committing extremist offences in the future. It is also considered that ERG22+ assessors having a greater awareness of radicalisation pathways taken by individuals in relation to their exposure to online and/or offline influences and the impact this may have had on overall levels of engagement, intent and capability is likely to help mitigate the likelihood of over- or under-estimations of risk.

A ninth recommendation following completion of this study is for the length and level of detail included within ERG22+ reports to be kept under review by the HMPPS National Extremism Team. There was great variation in length and detail provided of the SRG/ERG22+ reports reviewed within the study, with the longest report consisting of 146 pages and the shortest being only four pages long. The average length of all 269 reports reviewed was 20 pages. Whilst some differences in the length of reports would be expected to reflect the variation in cases, particularly in terms of complexity and available information to inform an assessment, attempts to achieve a greater level of consistency are likely to be beneficial. The shortest reports may omit key details that assist with gaining a fuller understanding of an individual's pathway to extremist offending or factors that may need to be considered for risk management, whilst the most pertinent points may become lost to the reader in the most lengthy reports. It is acknowledged that the latest version of the ERG22+ user manual (HMPPS Extremism Risk Guidance Manual, 2019) has provided a report template and detailed assessor guidance for completing reports, which may help to address this consistency issue. However, given the high level of importance placed on these reports, it would be beneficial for ERG22+ reports to be kept under review and quality assured in the future.

3.5. Conclusion

The findings reported within the present study have not only provided valuable insights into the role of the Internet in radicalisation processes and extremist offending, but have also offered important insights relating to wider trajectories towards extremist offending more generally. This should help provide a wider evidence base to inform counter-terrorism policies and practices in the future.

It is clear that widespread use and availability of the Internet has altered the means by which radicalisation is taking place and now plays an important role in this process. Since 2005, the number of individuals subject to online radicalisation has increased, whilst there has been a reduction in the number of those who were primarily subject to radicalising influences in offline settings over the same time period. The typical profile of individuals following different radicalisation pathways differs, as does the way and extent to which they engage with the Internet as a tool for extremist purposes. Younger individuals and females in particular now have opportunities to engage with extremist groups and causes online in a way that was more difficult previously. It is also clear that the way in which those convicted of extremist offences are using the Internet is changing over time, demonstrating the constantly adapting threat of online radicalisation and the associated difficulties faced by counter-terrorism agencies and approaches.

Perhaps most significant of all is the finding that the radicalisation pathway taken appears to impact on the extent to which individuals engage or identify with an extremist group, cause or ideology, their level of intent to commit violence for the cause and also their capability of doing so. For the majority of cases, the radicalisation process is now a product of both online and offline influences, and whilst the role of the Internet is clearly growing in prominence, face-to-face human contact still plays an important role in driving deeper levels of radicalisation, and that which leads to a willingness to commit violent action. This suggests that the way in which we approach risk management and monitoring of those convicted of extremist offences should reflect these differences in terms of radicalisation pathway, rather than taking an overly punitive and one-size-fits-all approach.

Following completion of this large number data-driven study, and one using a unique dataset of specialist assessment reports by professionals working directly with those who have committed extremist offences, the findings largely accord with what is known from an existing literature base that has largely relied upon open source data or small number case studies to draw conclusions. Whilst a handful of previous studies have featured interviews with convicted extremist offenders in relation to their Internet use, further interviews with current or former extremists is likely to take us one-step closer to a more holistic triangulation of data, which can help researchers and policy-makers to obtain

a more complete understanding of the role of the Internet in radicalisation processes and extremist offending. One area identified that would benefit from further research around use of the Internet includes focus on a number of specific sub-groups of extremist offenders. This includes females, religious converts, those who are only convicted of online extremist offences and those not convicted of extremist offences but where concern exists around potential radicalisation.

Key recommendations based on the findings of this study to inform policy and practice include the need for security services and counter-terrorism initiatives to target the Internet as a setting that enables extremist socialisation to occur and view new technologies and modes of interaction as an opportunity in efforts to counter online radicalisation, rather than being seen as a threat. New counter-terrorism measures online should also be designed to target younger users, ensuring they appeal to both males and females. Once vulnerable individuals are identified, their wider needs also require careful consideration in addition to those interventions that may help address an increasingly extremist mind-set. The radicalisation pathway should be considered and influence the way in which individuals are screened, risk assessed and managed in the future, along with approaches taken in rehabilitation, to ensure responses to extremist offending are proportionate. Careful consideration is also required with decisions relating to the dispersal of those vulnerable to or convicted of extremist offending given the risks associated with post-offence offline radicalisation within the custodial environment. Specific to the completion of ERG22+ assessments, assessors should have thorough and up-to-date knowledge of literature relating to Internet use by extremists, along with an awareness of the changes taking place in terms of the platforms and applications used by those holding extremist views. Furthermore, the length and level of detail provided within ERG22+ reports should be kept under review to strive towards improved levels of consistency.

CHAPTER 4
THESIS CONCLUSION

THESIS CONCLUSION

This thesis has contributed two original pieces of work; a systematic literature review of pathways to lone actor terrorism and an empirical study exploring the role of the Internet in the radicalisation pathway and offending of individuals who have committed extremist offences. This thesis not only offers valuable insights into the way the Internet can contribute to radicalisation and facilitate extremist offending, but also offers important insights relating to wider trajectories towards extremist offending more generally.

The systematic review highlights the lack of clarity over definitions of lone actor terrorism, along with the emergence of typologies for differentiating between various forms of lone actor terrorists. An original contribution is made to the debate on pathways to lone actor terrorism by identifying six stages that shape lone actor behaviour, one of which includes the prominent role of the Internet for this sub-group of extremist offender. Similarities are also found between lone actor terrorists and other lone offender types, as well as a higher prevalence of mental health issues and personality disorders compared with group actors.

The empirical study illustrates the increasing relevance of online radicalisation and online activity within extremist offending, suggesting the Internet has altered the means by which radicalisation is now taking place. Increasing numbers of individuals convicted of extremist offences have been subject to online radicalisation since 2005, whilst at the same time, the number of individuals radicalised without being exposed to online influences appears to be reducing. The findings suggest that the way the Internet is used by those convicted of extremist offences is changing over time and a different profile of individual is now susceptible to radicalisation through the online space, with barriers to entry to committing extremist offences now significantly reduced for younger individuals and females in particular. The radicalisation pathway appears to impact on the extent to which individuals engage or identify with an extremist group, cause or ideology, their level of intent to commit violence for the cause and capability of doing so. It was found that for the majority of cases, face-to-face human contact remains crucial in driving deeper levels of radicalisation and that which leads to a willingness to commit violent action.

The insights gained from this thesis have the potential to make a significant contribution to the current literature, with the systematic review summarising current knowledge around lone actor pathways and the findings from the data-driven empirical study, drawn from a large number and unique data source not previously accessed. The insights from this thesis should also help inform counter-terrorism policy and practice in the future. The increasingly prominent role of the Internet and constantly adapting threat of online radicalisation reflects the difficulties faced by counter-

terrorism agencies and approaches in terms of staying informed of the most recent developments. The approach taken to risk management and monitoring of those vulnerable to or convicted of extremist offences should also reflect the significant differences found between radicalisation pathways, rather than an overly punitive and one-size-fits-all approach.

The following nine recommendations, identified during the course of completing this thesis, are presented as having the potential to inform counter-terrorism policy and practice in the future:

1. Security services and counter-terrorism initiatives should target the Internet as a setting where extremist socialisation can occur
2. In response to the evolving way in which those who commit extremist offences are using the Internet, new technologies and modes of interaction online should be viewed as an opportunity, rather than a threat to counter online radicalisation
3. Radicalisation pathways relating to the role of the Internet should influence how individuals are screened, risk assessed and managed in the future, along with approaches taken during rehabilitation efforts within custodial and community settings
4. Responses to extremist offending should be proportionate to avoid risks associated with excessive periods of detention or fuelling radicalisation through disproportionate measures
5. Careful consideration is required of how to disperse those vulnerable to or convicted of extremist offending within custody to avoid the risk of post-offence radicalisation taking place
6. New online counter-terrorism measures should target younger users and appeal to both males and females
7. Once vulnerable individuals have been identified online, their wider needs require consideration in addition to interventions designed to address an increasingly extremist mind-set
8. ERG22+ assessors should have up-to-date knowledge of literature around Internet use by extremists. They should also have awareness of the types of platforms/applications used, how they work, along with changes in Internet activities over time
9. The length and level of detail included within of ERG22+ reports should be kept under review to achieve a level of consistency

CHAPTER 5
INDIVIDUAL LEARNING PLAN (ILP)

Competence Development Record

Activity	Date(s)	RDF competence developed
Research skills and knowledge development • Self-directed reading/reading recommended by supervisory team • Attendance at Violence Prevention 2018 Annual Conference at University of Worcester • Attendance at Society of Terrorism Research Postgraduate Conference at Swansea University • Attendance at Rise of Terrorism talk at Cheltenham Festival • Discussion with prominent researchers within the terrorism field about my own research plans • Attendance at VOX-Pol biennial conference on Violent Extremism, Terrorism and the Internet at University of Amsterdam • Attendance at seminar at Gwent Police Headquarters entitled Caught in the Storm: Political Extremism and External Political Interference in the aftermath of critical incidents • Accessing support from Library Services for using RefWorks to assist with conducting a Systematic Literature Review • Attendance at TACT Practitioner Forum to receive a briefing by Police Special Branch on extremist trends in South Wales and across the UK • Self-directed reading for systematic literature review relating to pathways to lone actor terrorism • Attendance at HMPPS National Extremism Team Professional Practice Forum	2017-2020	A1, A2, A3, B1, B2, B3, D1, D2, D3

• Self-directed learning via the Researcher Development Gateway resource • Attendance at BPS Conference on Working Psychologically with Extremism and Terrorists • Attendance at Extremism SPOC Pathfinder Event • Attendance at Islamist Extremist ideology Event		
NTU workshop attendance and peer supervision • Attendance at Advanced Qualitative Research Methods workshop. • Attendance at Advanced Quantitative Research Methods workshop • Participation in group peer supervision • Attendance at Systematic Literature Review workshop • Attendance at Thesis Narrative Workshop for Forensic Psychology DPsych students • Attendance at NTU Thesis Completion and Viva Workshop • Attendance at Critical Writing/Writing for Publication Workshop	2017-2020	A1, A2, A3, B1, B2, B3, C1, C2, C3, D1, D2
Conference and academic presentations: • Presenting my research proposal to my supervisory team and Independent Assessor • Presentation of my research study at the NTU Social Sciences Research Conference • Presentation of my research study at the TACT Practitioner quarterly meeting in Wales • Presentation of systematic review for pathways to lone actor terrorism at the NTU Psychology research seminar	2017-2020	B3, D1, D2, D3

Teaching and Supervision • Preparation and delivery of annual lecture to MSc students at Cardiff Metropolitan University in relation to working with individuals who have committed extremist offences within a custodial setting (2017-2020) • Preparation and delivery of training on extremist offending and way of working with this client group to staff/practitioners at the Caswell Clinic medium secure hospital • Research and academic supervisor: for trainee psychologists	2017-2020	A1, A2, B3, D1, D2, D3
Research submissions/publications in progress • Submission of manuscript of systematic literature review to the Terrorism and Political Violence Journal	2020	B3, D2, D3

Reflective Report

Domain A – Knowledge and Intellectual Abilities

Application Stage – December 2017
My current knowledge consists of a basic understanding of some key concepts and issues relating to the radicalisation process for those who have committed extremist offences. This includes basic knowledge relating to the role of the Internet within this process. I have some knowledge of where I can obtain expert advice to assist with conducting research activities, such as seeking advice through my supervision team and pre-existing contacts through my employment with Her Majesty's Prison and Probation Service (HMPPS). My pre-existing contacts include a research psychologist working within the Research and Evaluation Team of the Ministry of Justice (MoJ), who specialises in conducting extremism research. Another contact is the lead psychologist working with those who have committed extremist offences within the High Security Estate (HSE). This individual is also an experienced researcher. Following background reading, I am aware of several research methodologies that have been applied to this area previously. Some studies have used thematic analysis to uncover themes within interviews, whilst others have analysed content of online materials. In the process of completing my research proposal, I identified several areas within the literature where I hope to make an original contribution to knowledge and sought feedback from others to access their insights. One example included asking the lead psychologist working with extremist offenders within the HSE where gaps existed in terms of the current understanding of the role of the Internet in the radicalisation process. I am able to summarise and critically evaluate research, including assessing the quality of primary and secondary research data. I am aware that any research I conduct relating to those who have committed extremist offences is limited through lack of access to primary data as extremist offenders are considered an overly researched group. I am also likely to find some sources of secondary data are not accessible due to documents being restricted access and limits on what information can go into the public domain. However, I consider that strengthening my independent and critical thinking skills are important development areas, as are developing my ability to formulate and apply solutions to research problems.

I am flexible and open to learning how to develop as a researching practitioner as I recognise I am currently inexperienced and would benefit from high levels of support and guidance at this stage of the process. I would particularly like to work on becoming more innovative in terms of developing new ways of working and improving my ability to defend research outcomes.
Current RDF Phase A1 Knowledge Base = **1** A2 Cognitive Abilities = **1** A3 Creativity = **0**

Interim Review – April 2018
Current Phase A1 Knowledge Base = **1** A2 Cognitive Abilities = **1** A3 Creativity = **1**
My supervisors and I discussed the benefits of regular literature discussions to increase knowledge and familiarity. This includes increasing familiarity with key figures in research relating to online radicalisation (e.g. Maura Conway, Peter Neumann). I plan to review a selection of journal articles by these authors and share key points with my supervisory team. I have also discussed with supervisors the benefits of increasing my familiarity with relevant theory, including attitude-behaviour consistency models. Such models explore whether attitudes held by individuals translate into behaviour and are often cited in relation to health behaviours (e.g. we all know what is healthy for us, but do not always behave accordingly). One theory highlighted by my supervisors was the Theory of Planned Behaviour, which makes distinctions between attitudes held more generally, the intention to commit acts and how this translates into behaviour. I have found it useful to discuss with my supervisors how to communicate that many concepts relevant to my study are heavily contested (e.g. radicalisation) as I recognise this as a potential limitation to my research. When addressing this issue, it will be important to demonstrate my awareness that many of the concepts are highly debated and to report that despite their contested nature, I will be using them throughout my thesis. When using contested concepts such as radicalisation, I was advised to use a working definition from a credible source and report this definition as one of the most accurate to define this process. I have increased my awareness of different research methodologies. For example, my supervisors and I considered the potential utility of text analysis tools as a way of identifying specific content from a high volume of data. We discussed that such tools could be useful for my research plans as

I have access to approximately 270 SRG/ERG22+ reports, each containing approximately 20 pages of text. Utilising a tool that can search for key words (e.g. 'online' and 'Internet') could potentially be useful. We discussed the advantages of text analysis tools, including identifying relevant information quickly from a large volume of text, but also the disadvantages that such tools would not identify social context and would miss nuances within the text. As my research questions are not yet defined, it was agreed my supervisors and I would engage in 'impressionistic reading' of an anonymised sample of reports. This would involve reviewing reports to see whether the data revealed anything simply by reading it and then meeting to see whether there was any common ground of ideas. I considered this a useful way of identifying a small set of potential research questions.

During supervision, it was identified that a mixed-methods design may be most appropriate given the data available as this would allow for quantitative analysis of coded information from all reports, along with a more detailed qualitative analysis of a small number of extremist sub-groups of interest. I started to explore the potential utility of knowledge extraction tools used with health records in the Medical field as a way of extracting relevant information from large quantities of unstructured text. This was a potentially useful and novel way of extracting relevant information relating to Internet use given the parallels between patient records and offender reports. Despite feeling a little overwhelmed initially as such an approach was unfamiliar to me, I was also excited about the potential to cross boundaries between disciplines and utilising a novel approach to studies relating to extremism and radicalisation. I recognise that being innovative and open to new ideas are important aspects to becoming an effective research practitioner.

Another significant reflection related to my concern upon discovering another study that appeared quite similar to my own research plans and whether my own research plans would be considered novel. Following a discussion with my supervisors, I have learnt that finding similar research can be considered positive (rather than negative) as it presents an opportunity to highlight any modifications or differences within the dataset or research methodology as being original and therefore adding to existing knowledge within the area.

My lead supervisor provided feedback on my initial scoring of the ILP in terms of my level of competence within the four domains. The feedback suggested my scoring tended to be on the conservative side, particularly for domains A and B, where I initially scored the majority of areas as 0. It was suggested my scoring had not reflected the knowledge I had gained through my full-time

employment and work I had undertaken whilst completing the initial research proposal and securing a place on the DPsych programme. The other feedback related to thinking creatively about how activities I recorded in the Competency Development Record may contribute to personal development in a number of areas. I had only noted one or two key areas of development for each activity, rather than considering that development in one area can often lead to development in other key areas relevant to becoming an effective researcher.

Annual Review – October 2018
Current Phase A1 Knowledge Base = **2** A2 Cognitive Abilities = **1** A3 Creativity = **2**
I have attended a number of seminars/conferences over recent months, including the Centre for Violence Prevention 2018 Annual Conference and the Society of Terrorism Research Postgraduate conference, both of which were good opportunities for networking and learning about other research being conducted within the field. I also attended the VOX-Pol biennial conference on Violent Extremism, Terrorism and the Internet at the University of Amsterdam, which again provided opportunities to develop my knowledge relating to extremist offending. One area I have increased my knowledge in is approaches to conducting a systematic literature review. Following the NTU workshop, I discussed a number of key issues of conducting a systematic review in the area of terrorism/extremism with my supervisors, including a general lack of data-driven studies and much of the literature being of poor quality. We also discussed several ideas around a topic for the review, included the effectiveness of assessment tools for extremist offenders, the role of the Internet in extremist offending or broadening the focus by looking at the Internet as a facilitator or causal factor of different types of offending, with extremist offending being one sub-group of interest. However, these ideas were decided against in favour of a systematic literature review relating to pathways to lone actor terrorism, as lone actors were a sub-category of interest within my research plans. During supervision, I have discussed issues relating to data coding. Having familiarised myself with Andrew Silke's work, I was aware he had identified four broad categories of those of concern in relation to terrorism and extremism within a prison context. This included 'Radical Extremists' (individuals who entered prison already holding extremist views and had engaged in extremist actions in the outside world), 'Affiliates' (those convicted of involvement in extremism or terrorism,

but did not appear to have been radicalised when they did so), ‘Prison Recruits’ (those considered to have been radicalised whilst in prison, possibly as a result of contact with extremist prisoners) and ‘Vulnerables’ (those that at the moment may not have been radicalised but were assessed as vulnerable to this in the right circumstances). This work was particularly relevant to my own research as I had noticed these differences in cases within my dataset, with a proportion considered not to have been radicalised. As my empirical study is focused on online radicalisation, I would be focusing on ‘Radicalised Extremists’ as this is the only group where use of the Internet may have contributed to the radicalisation process. For example, ‘Affiliates’ and ‘Vulnerables’ are not considered to have become radicalised, whilst ‘Prison Recruits’ are likely to have radicalised through face to face interactions as they should not have Internet access in custody.

Another coding issue was how to make a distinction between ‘violent’ and ‘non-violent’ extremist offenders. This was difficult as there were a number of offences that fell somewhere between these two categories. Examples included ‘Using threatening, abusive and insulting words to stir up racial hatred’, ‘Conspiracy to blackmail’ and where offenders have been convicted of attempts to travel and fight or attend training camps on behalf of an extremist group. I discussed the difficulties defining what type of offence is violent/non-violent with my supervisors before contacting a researcher who had written a paper on this issue. Following these discussions, I recognise the importance of being very clear about how I have defined an offence as violent/non-violent and the need to provide a justification for this. Other coding issues included difficulties establishing the degree of social connectedness of individuals to others holding extremist views in an offline setting (e.g. whether they were a lone actor, part of a small cell or member of a group). I was aware other researchers had been criticised for using what some considered an overly inclusive definition for lone actors (anyone who had committed their offence alone, regardless of any group affiliations or contact with others). Deciding upon clear definitions is important when coding the degree of social connection and I am aware these categories may be re-defined during the course of the research study, particularly when encountering an unusual case.

Following discussion with my supervisors, I recognise the importance of ensuring data coding is conducted in a way that can be translated into numbers, as this will ensure the quantitative analysis is easier to undertake. Furthermore, given the coding difficulties outlined, I have identified ways of ensuring consistency of coding. One way is to provide my supervisors with the coding frame I develop and request they code a percentage of the anonymised cases. This would allow me to compare their coding against my own to ensure consistency and appropriateness/ease of using the

codebook. Whilst some coding categories should be straightforward to code (e.g. age, gender), other coding categories may require a degree of interpretation (e.g. whether the index offence was violent or non-violent, whether the individual was acting alone or as part of a small cell or group). Therefore, I will need clear definitions to support future coding.

I contacted Paul Gill, a prominent researcher within the terrorism field, as his previous research involved developing a comprehensive database for lone actor terrorists. This was a useful opportunity to discuss my own research plans and learn about the challenges he experienced conducting research in this area. He advised I code in as disaggregated way as possible by coding specific behaviours, as this would enable me to be flexible in terms of what behaviours are included and not included within subsequent analysis. I was also advised to approach coding in a semi-structured way but remain flexible to code for other information if it becomes apparent that something important is not being captured. To illustrate this, he explained how he had only asked two questions of the initial cohort of lone actors in his early research; did they access extremist online sources and did they communicate with other co-ideologues online. He said in subsequent research, he widened the coding of Internet behaviours to explore whether individuals had engaged in a range of facilitative or planned action behaviours. I was also advised to code for other types of Internet-related behaviours, such as whether encrypted platforms were used, whether individuals generated their own extremist propaganda and whether open social media platforms were utilised (e.g. Twitter, Facebook and YouTube). He suggested this would support more detailed analysis and reflect the changing ways in which other studies have found those who have committed extremist offences are using the Internet.

We discussed some of the challenges within my research, such as the varying length and quality of SRG/ERG22+ reports and solutions to this, including controlling for this by recording the number of pages of each report, whether the offender contributed to the assessment through interview and recording the data density based on the richness of the report. Another point we discussed was ensuring all decisions regarding how categories are defined are clearly recorded and defensible. I recognise it will be important to justify these decisions, whilst acknowledging there may have been other ways to approach the research. It was recommended I select definitions for coding categories that 'theoretically make sense' so this could be justified to others if subject to criticism.

When discussing specific coding categories, we discussed how it is easier to code the presence of a particular variable, than to categorically say something is not present. I recognise the SRG/ERG22+

reports I am reviewing have been constructed for other purposes than my research and therefore may not refer to specific Internet behaviours even if relevant to the individual concerned. Another area discussed related to the category of lone actor as this is a particularly difficult category to code. I have reflected on the importance of deciding what phase of the process of committing extremist offences I would focus on when categorising whether someone was a lone actor or not. For example, if I were to focus on the radicalisation phase, it could be argued an individual is never really alone as they may interact with others online or engage with materials that others have put online. If I focused on the offending phase, I could consider someone a lone actor if they committed their offence alone. However, it can be difficult to categorise someone who has engaged in non-violent offending as a lone actor, such as those who have given financial support to extremist groups, as others are benefitting from their actions. Having reflected on this, I questioned whether a non-violent lone actor even exists. These are interesting reflections I will discuss with my supervisors.

Interim Review – April 2019

Current Phase
A1 Knowledge Base = **3**
A2 Cognitive Abilities = **2**
A3 Creativity = **2**

Recent supervision meetings have involved finalising the coding of the dataset and developing the codebook. I was aware through coding that some of the variables had a stronger component of subjectivity than others, such as whether individuals were considered violent or non-violent based on the nature of their offending. Another was whether it was possible to code someone as an 'Attacker' if their plan to commit a violent extremist offence had been foiled before committing the intended attack. When discussing this with my supervisors, we agreed there would be benefit in providing coding examples within the codebook for these variables in particular. These examples would most effectively be presented in the form of a short description illustrating potential boundaries between options. This would ensure my codebook is as comprehensive as possible.

During the coding process, one of the issues encountered was that some Internet activity for specific cases did not feature within the corresponding ERG22+ report, but was reported within other sources not included within my research study. One example was seeing a BBC news site article relating to two of the individuals within the dataset that mentioned they both communicated to each other through Telegram, an encrypted Internet application. When I checked my own coding for these two cases based on information from relevant ERG22+ reports, it was disappointing to find this information was not referred to or captured. This highlighted one of the limitations of relying

on one source of information, particularly as these reports were not written with the specific purpose of referring to all relevant Internet-related activity/behaviour. Having discussed this with my supervisors, I reflected on the importance of viewing my research as sitting next to, or complementing studies that have used open media sources to code Internet behaviours for extremist offenders. The benefits of using SRG/ERG22+ reports are that they are sufficiently standardised, in contrast to open media source reporting of cases that is generally unstandardised. I also considered that if some relevant Internet-related activity or behaviours were missed through relying on SRG/ERG22+ reports, this would only become an issue if my research focused on single-case studies, which would require a more thorough search for background information.

In order to ensure my own coding was sufficiently reliable and demonstrate the coding frame could be applied with consensus, two of my supervisors were provided with the codebook, along with several anonymised test cases and asked to independently code the full range of variables. When my supervisors and I compared coding for all test cases, we found the agreement rate between the three of us was quite high but still discussed ways to further develop the codebook to ensure even higher levels of inter-rater consistency. This resulted in several changes, including providing descriptions to support coding of certain Internet behaviours, such as clearly defining what constitutes an open social media platform/application compared with a standard chat application. Other aspects requiring refinement included the need to provide additional examples for specific variables to enhance clarity (e.g. 'group' for social connectedness). It was a particularly useful exercise to ask supervisors to code test cases using the codebook as it highlighted aspects that were less clear or may have resulted in lower levels of inter-rater reliability.

Another aspect of the coding discussed with my supervisors was whether the variable of mental health issues should be coded based on the SRG/ERG22+ author's view of what may be relevant within the main body of the report or rely solely on coding based on where there has been a formal diagnosis. It was agreed that for clarity, it would be more appropriate to code based on the scoring of the related item within the assessment itself, where the assessor should only rate the item relating to mental health issues based on a formal diagnosis. After making these changes, it was agreed the codebook was now sufficiently robust to allow for reliable coding.

My knowledge, cognitive abilities and creativity have continued to develop in relation to the process of conducting a systematic literature review. Following discussions with my supervisors about search and inclusion/exclusion criteria, I have finalised the review protocol and conducted a final

search of three academic research databases (PsycInfo, Pubmed and SCOPUS) and Google Scholar to find relevant sources relating to my review question. In preparation for conducting the final search, I sought support from NTU Library Services who introduced me to RefWorks and showed me how to use this software as an effective database for importing search results. Since then, I have been able to remove duplications, screen sources in relation to exclusion criteria and scan titles and abstracts to ensure only relevant entries remained.

One concern whilst completing the systematic review was whether I would be required to follow guidance provided within the NTU Systematic Review workshop, even though my review question relating to pathways to lone actor terrorism and overall low quality of the literature did not lend itself to all guidance provided. I queried whether it was essential to register the review and whether I needed a specific appraisal checklist for the records after running the final search. Having spoken to my lead supervisor, I was reassured to learn the workshop introduced one way of conducting a systematic review and that it was not a requirement to register the review. With regards the need for an appraisal checklist, I recognise that ensuring any decisions and approaches taken are well justified on the grounds of research is the most important aspect. I have also reflected on the importance of considering the purpose of research endeavours as this will have a bearing on the research strategy chosen. In my case, I am interested in reviewing literature that contributes to the conceptual/definitional debate around lone actor terrorism and current understandings of pathways. Instead of applying a quality checklist, categorising sources into those that contributed to either the conceptual debate or understanding of pathways, along with sorting sources into those that contained pure theoretical debate, those that included some theory and some data, and those that were strongly data-driven was more important to achieving my review aims. These were important realisations in developing my knowledge and creativity. Given the rarity of data-driven studies within the literature, one of the bigger points of my review would be to highlight that much of what is said about pathways to lone actor terrorism is not supported by evidence, and where it is, the quality of evidence is generally poor.

Annual Review – October 2019
Current Phase A1 Knowledge Base = **3** A2 Cognitive Abilities = **2** A3 Creativity = **3**
Finalising the systematic literature review and reflecting on feedback received from earlier drafts has helped develop my knowledge, cognitive abilities and creativity. The first draft submitted to my

supervisory team included a large number of themes, many of which were overlapping. The feedback indicated the need to focus on 5 – 8 overarching themes of similar length. Having re-worked the review to reduce the number of themes, one of the new themes included a number of sub-themes. Following discussions with my supervisors, I am aware that for the occasional theme, having sub-themes is appropriate when conducting systematic reviews. Other feedback was that I had included too much detail of some studies within the review and these should be summarised more succinctly.

I have also made significant progress in writing up my research study. Recent reflections have included ways of drawing out key messages from the results and how best to report my findings. As I am at the stage of analysing my results, my supervisors have stressed the importance of considering these in relation to each research question. Having identified differences in demographic variables, offence-type variables, Internet variables and ERG22+ ratings between pathway groups, it will be useful to present all my findings by comparing the three pathway groups identified. Through supervision meetings and feedback received on early drafts of the Results section, I am aware of the importance of ensuring all variables of interest are clearly defined before being reported in the analysis. I am also aware of the need to assert the relevance of findings and ensure reporting of findings is concise and clear.

As data analysis has progressed, I have recognised the need to be flexible and creative in my approach. Having conducted some analysis based on my original research questions, this has led to novel ideas of other areas of interest and additional analysis of interest. One example is exploring how pathway group membership and the types of websites/online applications used by those who have committed extremist offences may have changed with the passage of time. I anticipate that both these areas will be of significant interest to other researchers and policy-makers in particular given some recent literature suggests the way in which extremists have used the Internet has changed in recent years. Having spoken with my supervisors about other avenues of interest in terms of data analysis, we agreed it would be appropriate to amend the original research questions to ensure some of these new areas can be explored within the research study. I recognise it is common for researchers to have their final research questions settled way into the analysis stage and this has demonstrated the important role of creativity and innovation in research.

I have continued to develop knowledge of the topic area through self-directed reading. One article of interest was entitled ‘Building Secondary Source Databases on Violent Extremism’. The author

was a PhD student I met at one of the extremism conferences who had employed a similar research methodology to me. He highlighted many difficulties with conducting research in this area, particularly in obtaining primary data due to lack of access to those who have committed extremist offences. However, the author emphasised the value of good quality secondary data, where this was available. Based on the author's own experiences, he referred to many issues I was familiar with, including difficulties identifying robust inclusion and exclusion criteria, the many ways of defining violent extremism and the challenges with developing a codebook that draws from previous literature and creates new avenues for future research. Reading this article has increased my awareness of how some publications may not involve reporting research findings, but instead provide accounts of approaches to research and key considerations/difficulties to be aware of. This could be another avenue to explore for future publication opportunities.

Final Submission
RDF standards A1 Knowledge Base = **2+** A2 Cognitive Abilities = **2+** A3 Creativity = **2+** Current Phase A1 Knowledge Base = **3** A2 Cognitive Abilities = **3** A3 Creativity = **3**

Final Reflections on Being a Researching Practitioner:

At the outset of the DPsych, my prior involvement with research had been limited to a couple of small scale quantitative studies during qualification to becoming a psychologist, and a quantitative study using simple data analysis when undertaking the MSc in Forensic Psychology. My knowledge and creativity in relation to conducting research has grown exponentially whilst on the DPsych and I have now been introduced to a range of quantitative and qualitative methods. When planning the empirical study, a number of alternative methods came under consideration, including the use of text analysis tools as a way of identifying specific content from a high volume of data and thematic analysis of small numbers of reports from sub-groups of interest. This clearly highlights the flexibility I have demonstrated throughout the process when research plans have been revised.

Following extensive literature reviews of extremist offending, online radicalisation/use of the Internet and pathways to lone actor terrorism, I now consider myself to have a detailed and thorough knowledge of the subject area. Whilst I was clear on the specific research questions I

intended to answer and knowledge gaps I wanted to address within the thesis, I have identified a number of other avenues for potential research endeavours in the future. Examples include comparing extremists who are considered religious converts with those born into a particular faith, investigating those individuals who may have changed their support from one ideological group or cause to another, and comparing the three radicalisation pathway groups identified within my current study in terms of the individual engagement, intent and capability factors within the SRG/ERG22+ assessments.

One of my other key reflections at the end of the DPsych is the appreciation I have gained of some of the challenges and difficulties relating to conducting research in this field. Most notably, there remains a lack of primary source data, largely due to the difficulties obtaining direct access to those who have committed extremist offences, and much of what is known about extremist offending has come through studies relying upon open source and publically available data. In addition to this, there are a number of other challenges related to coding new variables of interest, particularly around establishing how an individual was radicalised, who is considered a lone or group actor and who is a violent or non-violent extremist offender. Having an enhanced awareness of these challenges, particularly having experienced many of these first-hand, has helped develop my ability to critically evaluate my own research and that of others.

Despite some of the challenges outlined, I consider my own study provides a unique contribution to knowledge in the area of extremist offending as I was fortunate to have been granted access to high numbers of specialist assessment reports. For the majority of reports, the offender contributed to the completion of the assessment through engaging in interviews with the author, but even in cases where participation was refused, the author still had access to a wealth of useful documentation, such as court reports, Police investigations and previous assessments contained within the individual's prison file. For these reasons, I anticipate there to be high levels of interest in any future publications relating to the original work contained within this thesis.

Domain B – Personal effectiveness

Application Stage – December 2017
I have certain personal qualities relevant to conducting effective research, including high levels of enthusiasm and motivation. I am particularly interested in the process of radicalisation of those who have committed extremist offences and developing further knowledge in this area is likely to have a positive impact on my ability to work in my current role as the lead for extremist offending within my team. I also appreciate the wider benefits of conducting research in this area in terms of potentially influencing policy and supporting professionals in managing those who have committed extremist offences, along with those at risk of radicalisation. At this stage, I lack research experience and recognise the current limits to my knowledge, skills and expertise as a researcher. For this reason, I am very open and willing to utilise the support and guidance from others as I recognise this will assist in my own development as a researcher. I appreciate that I currently require a high level of support from supervisors during the early stages of planning this project, but I hope to develop more independence and become less reliant as the research progresses and my confidence grows. I consider that one of my strengths is my ability to reflect on my practice and experience as I routinely engage in reflection as part of my role as a Forensic Psychologist. Whilst I am granted a study day a week from my employers, which ensures I have protected time to focus on my doctoral studies, I recognise the demands of conducting doctoral research is likely to result in me working additional hours at evenings and weekends. However, I am aware of the need to maintain a healthy work-life balance for the duration of my studies, ensuring I do not neglect my family responsibilities. I consider myself to have skills relevant to self-management in terms of an ability to prepare and prioritise my work, along with managing time effectively. These are skills I have developed whilst working towards qualification and more recently when working as a Senior Forensic Psychologist, alongside working as an associate tutor/academic supervisor for Cardiff Metropolitan University. I have started establishing networks and forged some important working relationships with others. I have now met with my supervisors and recognise the importance of corresponding with them on a regular basis whilst planning my research. In addition, I have liaised with a colleague who works with extremist offenders within the High Security Estate as she has detailed knowledge of this client

group and has a significant research background. I approached her to ask her view on where she considers that gaps exist within current knowledge of internet use by extremist offenders. I have established strong links with a research psychologist working within the Research and Evaluation Team of the MoJ. She is currently involved in research relating to pathways into extremism and has agreed to share relevant data to support my own research with this client group. Finally, I am in contact with members of the national HMPPS extremism team who have asked to be updated as my research plans develop.

Current Phase
B1 Personal Qualities = **1**
B2 Self-Management = **1**
B3 Professional and Career development = **1**

Interim Review – April 2018

Current Phase
B1 Personal Qualities = **1**
B2 Self-Management = **1**
B3 Professional and Career development = **1**

Over recent months, I have maintained my focus and enthusiasm during the early stages of research planning. I have also remained mindful of the limits to my own knowledge, skills and experience as a researcher. For this reason, I have found it useful to regularly engage with my supervisors. One example was asking my lead supervisor to provide me with feedback following the submission of my first ILP entries to reflect my development as a researcher at the application stage. I was keen to ensure entries were appropriate and of good quality.

Having received this feedback, I recognise I may have underscored certain ILP domain areas, including those relating to knowledge and personal qualities. One of my current roles for Forensic Psychological Services (FPS) in Wales is to lead on working with those who have committed extremist offences. Within this role, I had acquired some prior knowledge of extremist offending through conferences I had attended, past reading and working with this client group. I also considered I had shown enthusiasm and perseverance in terms of completing the initial research proposal when applying for the DPsych and committing to undertaking the top-up doctorate alongside my full-time employment. Going forward, I will place more value on experiences outside of the DPsych and how these contribute both directly and indirectly to becoming an effective researcher. This relates to the development of personal qualities in terms of having self-confidence and becoming more aware of my own abilities as a researching practitioner.

I have demonstrated high levels of self-management so far in terms of the commitment I have shown and my time management. I have taken regular study days since enrolling on the DPsych, which has allowed me to complete a significant amount of reading around the topic and ensure I have been able to progress my research plans through identifying a small number of research questions. However, I am aware that over the next few months I will need to maintain high levels of self-management in terms of completing the first draft of a research project proposal form and arranging a time to present my research plans to both my supervisory team and an independent advisor. I also need to decide upon a topic area for the systematic literature review to enable me to progress this aspect of the portfolio.

During the last six months, I have taken advantage of networking opportunities with other researchers in the extremism field. One recent example was contacting the author of a research proposal intending to test the filter bubble and echo chamber effects in relation to their potential impact on online radicalisation. Given this researcher had a wealth of experience conducting studies relating to new social media and the impact on radicalisation, I asked him whether he would recommend any particular text analysis tools to support my own research plans.

Annual Review – October 2018
Current Phase B1 Personal Qualities = **2** B2 Self-Management = **2** B3 Professional and Career development = **2**
I have remained passionate about the research I am undertaking over the last six months. My enthusiasm has grown since attending seminars/conferences in the UK and abroad relating to the topics of terrorism and extremism as this has provided me with new ideas and new contacts to support my own research plans. I have developed confidence in communicating my research ideas through presenting my research proposal to my supervisory team and independent assessor. I have also enjoyed engaging in discussions about my research and some of the issues I am likely to experience with my supervisory team and other researchers in the field. This has helped me to explain and justify some of the decisions I have taken so far to others in terms of my proposed research plans. Following the presentation of my research proposal to my supervisors and an independent assessor, my lead supervisor provided me with feedback about my ability to communicate research ideas to an audience. This included the need to identify who the national and international stakeholders are

of my proposed research, to provide audiences with a working model of radicalisation as context to my research, include more literature references when presenting my research and emphasising the uniqueness of the data source available to me. Other useful feedback included the importance of taking more credit for my research as the researcher and decision-maker, rather than sharing the credit with my supervisory team. This fits with similar feedback previously received about taking more ownership of all aspects of the research.

Within the Independent Assessor report, some feedback in relation to my draft research proposal was relevant to self-management. Some proposed timings for aspects of the project were considered ambitious and it was recommended I include a Gantt chart within the proposal to identify points of overlap in tasks to help manage my time. It was also recommended I build in some contingency time for potential delays encountered during the project. I recognise I may have underestimated the time it may take to code the large dataset having started this process. I may also have underestimated the time it would take to conduct the qualitative analysis of sub-groups of interest. With this in mind, I amended the proposal to include a Gantt chart that allowed more time for specific tasks and demonstrated some tasks would overlap adding a degree of flexibility.

I have demonstrated a high level of commitment to progressing my research, as evidenced by my ethics application to the NTU Research Ethics Committee and research application to the National Research Committee (NRC) both now being approved. However, when the initial ethics application was reviewed, the Associate Dean of Research at NTU recommended I give further consideration to the possibility of distress to myself as the researcher as I would be accessing and reviewing data of a distressing and concerning nature. It was highlighted that researchers may not always anticipate their own reactions to being 'up close and personal' with such material and therefore I should consider the potential risk of distress/vicarious trauma and how my supervisors would support me with any arising issues through regular supervision. This was useful feedback as it reminded me of the importance of my own personal well-being and preparing for the unexpected throughout the research project. It would be easy to consider that exposure to sources of information with distressing content would not impact on my well-being given I consider myself to be resilient and I am exposed to such materials on a regular basis in my role as a Forensic Psychologist. However, as I will be reviewing high numbers of SRG/ERG22+ reports, I recognise I will be exposed to descriptions of extremist offences, some of which may cause distress. To help mitigate this risk, I will discuss any personal reactions with my supervisors.

I have continued looking for opportunities to network and liaise with other researchers in the field. One example included corresponding with Paul Gill, Senior Lecturer at University College London's Security and Crime Science Department, about my research plans and his experiences of developing a coding database for lone actor terrorists. He put me in touch with another researcher who had experienced similar difficulties to me in relation to ways of a distinction between violent/non-violent extremist cases. I was provided with advice on what information to code and to ensure I had the flexibility to change the criteria with which I categorised individuals (e.g. as lone or group actors, as violent or non-violent extremists) to avoid future criticism of categories and definitions used.

I have also had opportunities to network, discuss my research plans and seek advice through the events/conferences I have recently attended. There appeared to be high levels of interest around my research plans, in part due to the unique dataset I have access to and volume of cases. Researchers I have spoken to have asked to be kept informed as my research develops and offered to provide ongoing support and advice as necessary. It has also been interesting to find other researchers are conducting similar research but using different samples; one relating to Islamist extremist offenders in the USA, the other relating to convicted extremist offenders in Bangladesh. This led to me reflect on potential research ideas in the future, such as cross-cultural comparisons of how extremist offenders from different countries have used the Internet.

Interim Review – April 2019

Current Phase
B1 Personal Qualities = **2**
B2 Self-Management = **3**
B3 Professional and Career development = **2**

In October 2018, my wife and I welcomed another child into our family. The arrival of another child has developed my self-management abilities as I have needed to manage my time effectively and maintain a healthy work-life balance. There have been times where I needed to focus my attention on childcare and assisting my wife in caring for our two children. There have also been times I have felt particularly sleep-deprived and in need of rest so have had several weeks' break from my research project shortly after the birth. However, over recent months I have been able to gradually increase the time spent on the research study and systematic literature review to ensure I continue to make progress.

In February 2019, I had the opportunity to present an overview of my research at the NTU Social Science Research Conference. Having been encouraged by my lead supervisor to submit an abstract

and apply for a presenting slot, I was selected as one of four presenters for the Crime panel. Whilst I was not able to share any research findings at this event (given a number of permissions would be required from the MoJ and various other parties before findings could be made public), this provided a great opportunity to inform others about the background, aims and nature of my research study and further develop my skills in communication and dissemination by implementing previous feedback from my lead supervisor after my research proposal presentation last year.

In line with previous feedback, during the presentation I ensured I clearly identified who the national and international stakeholders were for my research and also prepared by reviewing the literature to find an Internet-mediated model of radicalisation, which helped provide the audience with context and understanding of the role of the Internet in the radicalisation process. Previous feedback also included the importance of emphasising the uniqueness of the dataset, so I spent time describing the SRG/ERG22+ reports and highlighting this data was particularly valuable as much of the data-driven research had relied upon open source data due to difficulties in accessing those who have committed extremist offences. I also emphasised the importance of my research study, stating this should add to the existing work on media content analyses by introducing a novel body of information. I tried to present in a way that reflected me taking ownership of decisions and the direction of the research study as this was highlighted as a development area previously.

There is evidence that I am starting to establish a reputation in the field as someone who is highly knowledgeable about online radicalisation/role of the Internet in extremist offending. For example, I was recently contacted by a member of the HMPPS National Extremism team on two occasions, first to notify me of a seconded position within their team and ask whether I would be interested in applying, and second, to ask whether I was able to provide specific references from the literature relating to frequent use of open social media platforms/applications by those holding extremist views. Both these experiences were really positive and I intend to work towards further increasing my reputation and research esteem in the future through increasing awareness of the research I am conducting.

Annual Review – October 2019
Current Phase B1 Personal Qualities = **3** B2 Self-Management = **3** B3 Professional and Career development = **3**
I have recently returned to working as an Academic Supervisor at Cardiff Metropolitan University and now supervise a couple of students working towards becoming Registered Psychologists. Whilst this involves careful time management (given my primary employment with FPS and part-time Doctorate studies), I saw this as a good opportunity to support others in their work and research endeavours. The first submission received from one student related to completion of a rapid evidence assessment and based on my experience of conducting a systematic review as part of the DPsych, I felt confident in providing the student with feedback. I have now completed a finalised version of the systematic literature review and produced advanced copies of the Method and Results sections of the research study. Throughout this process, I have demonstrated a commitment to research, but at the same time, actively maintained my attention towards achieving a work-life balance given my family responsibilities. Within my role as a Senior Forensic Psychologist and Academic Supervisor, I have encouraged staff members and students that I supervise to continue their own professional development but also ensure they strive to achieve a healthy work-life balance as I recognise it is not easy to strike this balance. Other progress towards personal effectiveness includes encouraging my own and others' self-reflection. This relates directly to developing personal qualities as a researching practitioner. I have reflected on my own development, particularly since entering the writing up stage. I have also encouraged others to engage in reflective practice within their work. An example of this was arranging an upcoming training event for colleagues focusing on reflective practice techniques, which is due to be delivered by a clinical psychologist who works in a secure hospital setting. Reflective practice is frequently used by clinical staff within hospital settings and is an area this clinical psychologist had particular expertise in. Having completed two years on the DPsych, I have become increasingly aware of how much I enjoy conducting research, particularly in an area of interest such as extremism. This has led me to think about future research opportunities/collaborations and how I could take advantage of any that arise. This may involve changing jobs to one in academia, which may allow more time to undertake

research than my current role. Alternatively, I could explore what avenues may be available within HMPPS given I have established links with members of the MoJ Research and Evaluation Team. This would assist with professional and career development beyond completion of the DPsych qualification.

One way of maintaining my current motivation and enthusiasm for research will be to explore routes to publication and present my findings at future conferences. I am aware I will first need to submit an analytical summary to the MoJ and to ministers for approval to disseminate my findings more widely, but it seems I will be in this position sooner rather than later given I have analysed my data and produced an advanced copy of my Results section. Over recent months, I have become increasingly aware of how my research findings could influence existing policy and current approaches taken to the assessment and management of those convicted of extremist offences. This is exciting and provides me with additional motivation to complete my research study and thesis in a timely manner.

Final Submission

RDF standards
B1 Personal Qualities = **2+**
B2 Self-Management = **2+**
B3 Professional and Career development = **1+**

Current Phase
B1 Personal Qualities = **3**
B2 Self-Management = **4**
B3 Professional and Career development = **3**

Final Reflections on Being a Researching Practitioner:

I have remained highly passionate about my research throughout the last two and a half years, largely due to my high level interest in the subject area and relevance to my current role. I have attended a number of events and conferences, using these to discuss my research plans and network with others. Having spoken to other researchers and practitioners, I have found that many have been enthused by my research, particularly due to the unique data source I have accessed and the number of cases that feature within the dataset. This has led to a number of individuals asking to read my thesis upon completion or be kept informed of research findings. There have been times during the process I have needed to show high levels of perseverance, particularly when reviewing and coding new variables for large numbers of cases given this was a time consuming process. However, the support from my supervisors and encouragement from family members and work

colleagues has helped me complete such tasks. I have also been aware of the increasing levels of responsibility I have taken for my research and from being quite reliant on my supervisors at the outset, I now feel confident to make suggestions and take decisions, developing increasing levels of independence.

I have always considered myself to be someone with good self-management skills, particularly in relation to knowing which tasks to prioritise, how to manage my time and the need to be responsive and adapt to change. However, the DPsych has presented some new challenges, not least the arrival of another child into our family a year into the process. Particularly for the initial weeks and months after the baby was born, it was really important to strike a healthy work-life balance. In the latter stages of the DPsych, I have taken on secondary employment of acting as an academic supervisor for two students at Cardiff Metropolitan University. This has again required high levels of self-management, but has enabled me to provide advice to students and helping to develop their own skills when undertaking their own research projects whilst working towards qualification.

I have experienced clear benefits in relation to my professional and career development since undertaking the DPsych. Not only have I had plentiful opportunity to network and meet fellow researchers when attending events and conferences in the UK and in Europe, I have also started to establish a reputation in the field as someone who is highly knowledgeable about online radicalisation/role of the Internet in extremist offending. This has been evidenced by HMPPS colleagues contacting me specifically to ask about relevant literature and approach me about potential job opportunities. Most recently, I was contacted by the Lead Psychologist for working with extremist offenders in the high security estate about a role she thought would be of high interest to me, given my research and interest in the area of extremist offending. This role related to overseeing deradicalisation interventions offered nationally as part of the Prevent programme. Upon submission of the thesis and completion of the DPsych, I intend to actively seek roles that would allow me to work full-time within the extremism field.

Domain C – Research Governance and Organisation

Application Stage – December 2017
I have some awareness of codes of conduct and guidelines relating to ethical conduct when conducting research. For example, I have conducted previous research at MSc level and when working towards qualification, which required the submission of research proposals, and applying for ethical approval. Furthermore, in my current role, I am asked to review National Research Committee (NRC) applications for proposed research in prisons within South Wales. Through completing these tasks, I have gained awareness of some legal requirements surrounding research and appreciate some of the issues relating to the rights of those who may be affected by research. I have started to gain an awareness of how my own research plans may align with the research strategy of the organisation. For example, through discussing my research proposal with a research psychologist working for the Ministry of Justice, I learnt there is current research being conducted that is focusing on pathways into extremism by those who have committed extremist offences. This includes plans to examine a number of sub-groups of interest (such as female offenders, extreme right wing etc.) within the organisation. One of the sub-groups of interest are those who have used the internet in the lead up to committing an extremist offence, which aligns with my research proposal. For this reason, the research psychologist was keen to be kept informed of my own research plans. In relation to research management, I am aware of several potential risks with my own research plans. Through discussion with the research psychologist, I was made aware of various issues with some of the secondary sources I intend to review. For example, I was informed the ERG22+ reports for those who have committed extremist offences could vary in length and level of detail, which may impact on how much useful information can be obtained specifically relating to Internet use. I was also informed that OASys reports are only available in approximately 60% of cases for those with an SRG/ERG22+ report. At this stage, I have flagged these issues with my supervisors but will need to consider ways of managing these risks as the research project develops.
Current RDF Phase C1 Professional Conduct = **1** C2 Research Management = **0** C3 Finance, funding and resources = **0**

Interim Review – April 2018
Current Phase C1 Professional Conduct = **1** C2 Research Management = **1** C3 Finance, funding and resources = **0**
The experience of preparing a Data Sharing Agreement (DSA) and working with my supervisors to address various issues has significantly increased my understanding around data ownership and the many legal requirements surrounding research. Although it took some time for the DSA to be signed and the content to satisfy both parties, I recognise the importance of this being in place to ensure legal and ethical requirements are adhered to. As part of this process, the IT department at NTU have set-up a secure shared drive and protected folders so my supervisors and I can access the data from the University to comply with the DSA requirements. My lead supervisor has also requested a secure e-mail account so data can be passed to my supervisory team from my secure HMPPS e-mail account. Ensuring these processes are completed properly relates to professional conduct as a researcher. It was also useful to seek guidance from the course leader around the ethical procedure given the nature of my research project and the fact the data had already been received. It was advised that the first step should be to review the data as I would need to identify research questions as this information would need to be included on any ethics or National Research Committee (NRC) application. The course leader then advised first submitting an application to the NTU Ethics Committee to approve the research aspects, before then submitting an application to the NRC. I am aware that both applications will need to be approved before I start any practical work, or in my case, before starting data analysis. Having received a significant amount of sensitive data from the MoJ, my supervisors and I discussed how best to share the data so they could assist in developing research questions. It was agreed my supervisors would only need to view a sample of reports, as this would provide an indication of data quality. As the SRG/ERG22+ reports I received were not in anonymised form, it was agreed I would send fully anonymised copies of 10 reports to my supervisors. This sample of reports would include five ‘promising’ reports (with frequent references to Internet use), four randomly selected reports and one report where use of the Internet was not considered significant in the individual’s radicalisation.

The process of formulating several draft research questions has highlighted the importance of ensuring my own research aligns with the priorities of organisations such as the MoJ, who shared the data, and HMPPS, as my employers. Through discussions with colleagues, I am aware gaps exist within the current empirical knowledge base, such as whether those who are radicalised online are less engaged with an extremist ideology than those radicalised through face-to-face contact. Other areas of interest include whether differences exist in the way in which those who adhere to different extremist ideologies may use the Internet within their offending and the role online sources play within their radicalisation. With this in mind, the research questions I have drafted and shared with my supervisors have reflected many areas of interest to HMPPS, but only those that are achievable given the quality of data available. I recognise the importance of aligning my own research plans to the priorities of relevant organisations to ensure the research is considered valuable and may impact policy-making in the future.

Annual Review – October 2018

Current Phase
C1 Professional Conduct = **2**
C2 Research Management = **2**
C3 Finance, funding and resources = **2**

Prior to submitting the ethics submission form to the NTU Research Ethics Committee, the Associate Dean of Research for the School of Social Sciences was asked to consider the application and provide sign-off as my proposed research would qualify as 'Special Risk' research given the subject matter. The Associate Dean of Research recommended that additional consideration be given to the possibility of distress to researchers given this study included reviewing data of a distressing nature and researchers may not always anticipate their own reactions to being 'up close and personal' with such material. The Associate Dean of Research recommended I acknowledge the potential risk of distress/vicarious trauma and outline how my supervisors will support me and address any issues that arise through regular supervision. Having reflected on this feedback, I recognise the importance of not taking for granted how I may respond to accessing potentially distressing material, regardless of being exposed to similar material through my role as a forensic psychologist for HMPPS.

Having completed my research proposal and presented this to my supervisors and an independent assessor, I have continued developing skills in research management. Within the research proposal, I have worked towards defining a manageable research project and considered how my study will contribute to the research area and wider aims of stakeholders. As I am aware of the length of time it can take to receive ethics and NRC approval, I have worked with my supervisors to ensure the first

draft of my research proposal was completed by June 2018 so I could present my proposed research to the team. This ensured I had the summer months to obtain the various approvals required before coding the dataset and undertaking any form of analysis.

As well as considering some of the benefits and strengths of my research, I have spent time reflecting on some of the risks and challenges I may encounter when coding relevant information. This related to challenges in making distinctions between violent and non-violent extremist offenders and difficulties coding individuals based on degree of social connectedness. I have contacted other researchers who have compiled comprehensive coding databases on extremist offenders and discovered they had experienced similar coding issues. One researcher had written a paper on this issue and explained she had developed several 'working definitions' for a violent and non-violent extremist offender and had three independent researchers attempting to categorise case studies from a dataset of 50 cases, which still resulted in many cases being excluded due to a lack of agreement. I recognise there appears to be little middle ground between a permissive/inclusive definition and more liberal/restrictive definition. Given I have approximately 270 cases, I have some flexibility with definitions as sub-groups of interest should still have acceptable numbers even applying strict criteria. One approach may be to try different criteria for 'violent' or 'non-violent' along with what constitutes a lone actor, small cell and group actor, to see what is left in each case.

Another issue was considering how close individuals were to actually committing violent crimes, as this may be useful when applying definitions. Following discussion with my supervisors, I recognise it is important to consider how 'real' and 'imminent' the violent act is for the individual as there is typically a chain of cognitive-behavioural planning until violent acts are committed. A useful example was used in our discussions where it was pointed out that intending to travel to Syria is still a long way off from planning a particular attack, planning an attack is not the same as actually building a bomb, building a bomb is not the same as using it. I am aware that even if an individual has top-level awareness (e.g. Syria = deadly war and atrocities), a lot of this remains "unreal" for individuals until they have reached a stage of much more specific behavioural plans.

One reflection relating to finance, funding and resources relates to awareness of research organisations' reporting mechanisms. Following submission of the NRC application, one of the approval conditions is that a short research summary is completed once the study is complete, ideally within one month of the end date. The MoJ Research and Evaluation Team have asked me to prepare an Analytical Summary of my research to be published on gov.uk. I will need to ensure

these tasks are completed having conducted the research, alongside preparing my thesis submission.

Interim Review – April 2019
Current Phase C1 Professional Conduct = **3** C2 Research Management = **3** C3 Finance, funding and resources = **2**
Much recent correspondence with my supervisors has involved exploring potential opportunities to share my research findings with a wider audience, but also clarifying the dissemination process given the data is owned by the MoJ and it is highly sensitive in nature. One interesting opportunity was to submit a paper to the Government commission for countering extremism, particularly as one of the calls related to papers focusing on the role of the Internet. A second opportunity was to present an overview of my research alongside my supervisors at the National Security Meeting in London. However, after clarifying the process for dissemination with my contact at the MoJ, I discovered I could not pursue either opportunity given the strict process involving the need to gain various approvals before findings can be made publicly available. I learnt I would first need to report on the nature and outcomes of my research study using a MoJ gov.uk template, which would then be submitted to various MoJ representatives and a representative from the Joint Extremism Unit (JEXU) to be signed off. Following this, I would be required to draft a separate submission to obtain Ministerial sign off before any findings were made public. In light of this feedback, my supervisors and I also agreed it was highly likely I would need to invoke the embargo option in relation to the university archiving my thesis upon completion. In terms of research management, it has been particularly important not to focus solely on the empirical study and task of coding, but also progress the systematic literature review as this forms an important part of the overall thesis. For this reason, the focus of one recent supervisory meeting was to discuss ways of developing my systematic literature review relating to pathways to lone actor terrorism. Following discussion with my supervisors, I decided a meta-synthesis approach would be most appropriate given the literature within this area consists of a mixture of assumptions, speculation and only a few empirical studies. I was also aware the systematic review that I conduct will require me to integrate both data-driven and qualitative literature within the review. One of my main points of reflection following discussion with my supervisors was that part of the focus of the systematic literature review is likely to involve theorising around the concept of a lone actor,

and how some of the assumptions about lone actors may have affected how findings from data-driven studies have subsequently been interpreted.

I have had a number of discussions with my supervisors about the type of information I should include within the systematic review protocol. I recognised the need to include a wider range of sources beyond just peer-reviewed academic material, as this was unlikely to do justice to the topic area. My supervisors and I discussed inclusion of some 'grey' literature, such as governmental reports, policy-relevant papers and potentially even training materials that relate to the topic of pathways to lone actor terrorism. I considered it would be beneficial to run some preliminary searches to see what source material was accessible using a variety of relevant search terms. This resulted in me deciding to search for relevant literature across three academic research databases (Pubmed, PsycInfo and SCOPUS), alongside Google Scholar which included a number of relevant 'grey' literature sources.

In relation to professional conduct, I have taken opportunities where possible to offer support and guidance to the new intake of DPsych students. During recent workshops, new students have asked questions relating to ethical considerations and processes when preparing their own research proposals. When approached, I have shared my own experiences of this process and offered advice for helping students continue to progress their own research plans.

Annual Review – October 2019
Current Phase C1 Professional Conduct = **3** C2 Research Management = **3** C3 Finance, funding and resources = **3**
I have kept my research plans on track by submitting various drafts of the systematic literature review and the Method and Results section of the research study to my supervisors in a timely manner and responded promptly to feedback. This has resulted in me producing a final version of the systematic review for inclusion within the thesis and exploring publication opportunities within relevant journals with my supervisors. Keeping to deadlines has also resulted in the completion of advanced copies of both the Method and Results section of my research study. It has been important to remain flexible and open to change whilst my research plans have developed. For example, I have changed plans in terms of the type of analysis I will undertake. It was apparent following completion of the quantitative analysis that a considerable amount of

findings were generated and would need to be commented on as they related to my research questions. I had initially proposed conducting additional qualitative analysis to supplement the quantitative analysis. However, following discussion with my supervisors, it was agreed this would significantly increase the length of analysis and lead to difficulties meeting the thesis word count. I am now focusing specifically on the quantitative analysis to ensure sufficient time and space is dedicated to this part of the analysis. Conducting qualitative analysis on a small group to cases could be an area I identify for future research.

I have gained a greater appreciation over recent months of issues relating to finance, funding and resources in light of a recent funding issue. The Head of FPS had agreed to fund the DPsych over the last two years. However, when approaching the third year of study, I was informed of a reduced team training budget and was asked to confirm the upcoming fees and length of time until completion of the DPsych. I learnt that paying the full year fee would limit the funds available to others for upcoming training events. I explained that as my research was at an advanced stage, I may be able to transfer to writing up status. This would mean reduced fees, but limited access to supervision and workshops, along with a commitment to submit the thesis within 12 months. If successful in applying to transfer to writing up status, there would be sufficient funds in the training budget to continue funding the DPsych. I raised this issue with my supervisors and upon agreeing my research was at an advanced stage, I have submitted a request to transfer to writing up status.

Whilst not directly related to my research, I have developed further awareness of finance, funding and resources issues within my employment. One of my areas of responsibility is allocation of work to staff members across region. I am required to consider available resources, work priority and whether we commission external practitioners to complete work on behalf of our team. However, commissioning work to external practitioners does have a significant cost implication. Along with this, I am always alert to opportunities for income generation for our team. Recent examples include receiving requests for a specific assessment and training from organisations outside of our usual remit.

Final Submission
Required standard C1 Professional Conduct = **1+** C2 Research Management = **3+** C3 Finance, funding and resources = **1+** Current Phase C1 Professional Conduct = **3** C2 Research Management = **4** C3 Finance, funding and resources = **3**
Final Reflections on Being a Researching Practitioner: I consider myself to have maintained high standards and high levels of professional conduct throughout completion of the thesis. From the outset, I was involved in setting up a DSA between the MoJ Research and Evaluation Team and my supervisors at NTU to allow a large number of sensitive reports relating to extremist offenders to be shared. As it was agreed that my empirical study would support wider research being conducted by the MoJ looking at pathways to extremist offending, I have sought regular guidance around the appropriate dissemination strategy of my research findings. I recognise that following these guidelines is of paramount importance given the highly sensitive nature of the data and potential media interest in my research findings. Throughout the process of completing the thesis, I consider I have had plenty of opportunity to strengthen my research management skills. From the start of undertaking the DPsych, I have ensured my research plans would provide a novel contribution to the existing literature. I have also confirmed through discussion with key stakeholders that my research questions reflected important knowledge gaps for the MoJ and HMPPS. I have been able to keep all aspects of the thesis on track and to the timescales outlined within my research proposal. Throughout the process, I have regularly liaised with my supervisor team and requested feedback on chapters to ensure I was continuing to produce a high quality of work. I consider I have developed an ability to be flexible in terms of my research plans and learnt to recognise which tasks should be prioritised at each stage of the process. A good example of this was having recently switched my attention for several weeks from the empirical research study to finalising the manuscript for the systematic literature review to ensure this article could be submitted in a timely manner to the Terrorism and Political Violence journal. Having reached the final stages of thesis completion, I consider I have developed a greater appreciation of issues relating to finance, funding and resources. However, development in this area

has largely been due to my role within my current employment as the referrals/allocations lead for our team, which I have also held over the last two years. This role has required me to consider and make decisions around work load, priority areas for our team and the availability of resources at any one time. I have also been alert to income generation opportunities for our team, through delivery of ad-hoc training or offering to complete assessments outside of our usual remit. In terms of the DPsych specifically, my experience in this area has been somewhat limited, although towards the latter stages I have been required to work closely with the Head of FPS and my lead supervisor to find a solution to a funding issue, by transferring to writing up status in October 2019. To continue my development in this area, I will look for future opportunities to become involved in tasks involving audit tracking, budgetary planning and budget management.

Domain D: Engagement, Influence and Impact

Application Stage – December 2017
I have some skills relevant to working with others in an effective manner, which should support development as a researching practitioner. I am open to receiving feedback and have an awareness of how my behaviour can impact on others. These skills are important not just in research but also as a practicing psychologist. I am mindful of showing appreciation to others when they have provided valuable contributions to my work. Recent examples include me thanking various contacts who provided assistance whilst preparing my application to undertake the DPsych at NTU. Another skill I possess which should assist in development towards becoming a researching practitioner is an ability to work with others. Examples include times where I have engaged in various forms of supervision. In my current role, I act as a clinical supervisor for a trainee within my team. I also work with Cardiff Metropolitan University where I am employed as an academic supervisor for two trainees working towards qualification. Within my primary employment, I engage in peer supervision with other qualified psychologists which provides an opportunity to discuss ideas and share experiences. A past example demonstrating my ability to work with others includes when I was working towards qualification. During this time, I would regularly negotiate activities and agree deadlines with my clinical supervisor. I have some communication skills relevant to being a researching practitioner, such as an ability to present coherent arguments and share ideas with a range of audiences. I use these skills in my current role, particularly when providing consultancy or completing psychological assessment reports. However, I lack experience of using communication skills within the process of conducting research. I also lack experience in preparing publishable material and having an appreciation of the range and diversity of outlets for publication. Despite previously completing research reports whilst completing an MSc and working towards qualification, I have not explored routes to publication. I have identified this as a key developmental area and will familiarise myself with this process through self-directed reading and guidance from supervisors. I have started developing an understanding of ways in which research influences and interacts with teaching. One example is through delivering lectures to MSc students at Cardiff Metropolitan University, which involves discussing relevant research to the topic area. I am currently exploring potential future opportunities to share my research plans/findings with relevant others, for example with Probation colleagues in Wales who work with extremist offenders within a quarterly

Practitioner Forum. Another area I would like to develop relating to engagement and impact is to gain greater understanding of relevant policy-making processes and ways in which I can present research findings in a policy-friendly format. This is an area of particular importance given the potential impact that research findings on the role of the internet in the radicalisation process may have on policy.

Current Phase
D1 Working with others = **1**
D2 Communication and Dissemination = **0**
D3 Engagement and Impact = **0**

Interim Review – April 2018

Current Phase
D1 Working with others = **1**
D2 Communication and Dissemination = **0**
D3 Engagement and Impact = **0**

I consider I have made progress in terms of working with others. For example, the early stages of the DPsych have involved building strong relationships with my supervisors, negotiating activities and deadlines to ensure tasks are completed on time, and engaging in peer support with other students. In the last group peer supervision, all participants were asked to provide a 5-10 minute summary of their research; including strengths and areas of development. This also included a short discussion on ethics and some of the practicalities of the proposed research. Throughout, there were opportunities to listen, give and receive feedback in relation to my own proposed research and that of my peers.

Whilst completing background reading, I came across a review of the literature and research proposal relating to aspects of online radicalisation that I was particularly interested in; the filter bubble and echo chamber effects. Having shared this with my supervisors, we agreed it would be useful to explore whether this proposed research had been published. I contacted the author directly, who is a research fellow at the Hebrew University of Jerusalem and Managing Editor of the Journal of Quantitative Criminology, to enquire whether this proposal had resulted in published research. I received a response from the author stating that this research study would be published in the coming months and he asked about my own research plans. The author agreed to send me a copy of the published paper when available. I consider this was a good example of starting to establish networks and actively engage in knowledge exchange with other researchers within the extremism field.

Areas of development include my skills in communication and dissemination, along with engagement and impact but recognise there will be plenty of opportunities to do this as my research plans progress. Whilst I am some way off reaching a point where I can produce publishable material or communicate my findings to a range of audiences, I do hope to articulate my research plans to others in the months ahead. The first opportunity will be to my supervisors and an independent advisor in order to finalise my research project proposal. This process is also likely to provide opportunities to develop my skills when engaging in knowledge exchange and debate.

I have looked for opportunities to participate in various NTU research workshops over recent months, including those relating to qualitative and quantitative research methods. This has helped develop my understanding of the range of research methods available. I hope to attend other workshops at NTU relating to conducting research. I would also like to explore opportunities to attend relevant conferences/events relating to extremist offending. This will not only support me developing greater awareness of the ways in which research influences and interacts with teaching, but will also assist me with developing an understanding of the context in which my own research takes place, at both a national and international level.

Annual Review – October 2018
Current Phase Working with others = **2** Communication and Dissemination = **1** Engagement and Impact = **1**
Over recent months, I have continued liaising with my contact at the MoJ while preparing my research proposal. I sent my contact a copy of my proposal as my research is being conducted in collaboration with the MoJ. When discussing ways in which findings could be presented and disseminated, I was sent some documentation relating specifically to their own research on pathways to extremism for female extremist offenders. This was useful as it provided examples of how the MoJ have written up their research in a way designed to be accessible to others and I have been informed there will be a similar requirement for my own research focusing on the role of the Internet for those convicted of extremist offences. I have now attended a number of seminars/conferences relating to extremism and other areas. These events have allowed me to see how others have communicated and disseminated research. For example, I attended the Centre for Violence Prevention 2018 Annual Conference at the University of Worcester in June 2018. This was a good opportunity to see other researchers present

their research findings to a varied audience of academics and practitioners. I also attended a talk relating to 'The Rise of Extremism' in Cheltenham in June 2018, which focused on topics such as the psychology of extremism and discussion of factors that put people at risk of radicalisation. The panel included a Barrister, a far-right extremism specialist, and terrorism expert and researcher. The audience mainly consisted of members of the public who had an interest in the topic area, rather than academics or practitioners. Other conferences attended over recent months include the Society for Terrorism Research Postgraduate Conference in June 2018 at Swansea University. The audience included representatives from various Universities, international research centres and the Police. Most recently, I attended the VOX-Pol biennial conference on Violent Extremism, Terrorism and the Internet at University of Amsterdam in August 2018. This event featured a diverse audience including researchers, practitioners and representatives from large technology companies who are looking at ways of disrupting extremist activities on their platforms.

Having attended these seminars/conferences, I now have a better understanding of the ways in which research findings are presented to varied audiences. It was particularly noteworthy that many researchers who presented at these conferences were able to describe and share complex research findings in an accessible way and within a short time slot. It was also interesting to hear how other researchers had conducted research in areas they hoped would have an impact on future policy development. I hope my own research findings may also have a significant impact in such areas.

I recently had the opportunity to develop skills in communication and dissemination by presenting my research proposal to supervisors and an independent advisor. This involved presenting my plans for the systematic literature review and research study through verbal and written communication, with the aid of a PowerPoint presentation. Following the presentation, I was given specific feedback from my lead supervisor of ways to develop my presenting skills in the future. My lead supervisor highlighted the value of outlining who the national/international stakeholders are for my research early in the presentation and to include several examples as this demonstrates to an audience that I have a clear understanding of who relevant stakeholders are. My lead supervisor also said I could include more literature references as this will give more face validity to the presentation and credibility to myself as a researcher in terms of showing a good awareness of relevant literature. Within the proposal presentation, I referred to a central debate in the literature as to whether the Internet was the cause or facilitator of online radicalisation and I recognise how including key references for each side of the debate could enhance communicating this information to the audience.

My lead supervisor provided advice around ways of effectively communicating the radicalisation process to the audience. One way would be to subscribe to a working model of radicalisation and present this early within the presentation. This could be a multi-step model, based on pre-existing models and include core components, such as background characteristics of an individual on one side (e.g. demographics, ideology etc.) and outcome behaviour on the other side. My supervisor and I agreed this could be referred to as 'a working model' and could be presented in diagrammatic form, with relevant literature references about how this working model is synthesised. I recognise this could help the audience to understand and follow the points I was making related to the radicalisation process. Another advantage of including a working model is that it can help generate research questions and is a useful framework to refer to when discussing the specific research questions identified for my empirical study.

Other feedback was to use language that is more appropriate for a wider audience. For example, when delivering my research proposal, I referred to 'HMPPS priority areas', whilst I now recognise it may be more appropriate to refer to 'recognised knowledge gaps' and 'areas that relevant organisations feel we need to know more about'. I was given feedback that I should take more ownership when presenting and avoid phrases such as 'my supervisors and I discussed/decided…' as I am the researcher/primary decision-maker and I am presenting my own work. My lead supervisor also highlighted the need to emphasis the uniqueness of the dataset I have access to as it includes the whole population of convicted extremist offenders who had an SRG/ERG22+ assessment completed between 2010 and 2017. I am fortunate in that the dataset is the best available given current restrictions on interviewing convicted extremist offenders directly and therefore I should comment on the strength of the data from which my findings are obtained.

Interim Review – April 2019
Current Phase D1 Working with others = **3** D2 Communication and dissemination = **2** D3 Engagement and impact = **1**
I have continued to build collaborative relationships with my supervisory team over recent months. One example of us working effectively as a team was when I provided two of my supervisors with several anonymised test cases and the codebook I had developed and asked them to independently code all variables to assess whether the coding frame was robust and whether high levels of inter-

rater reliability would be achieved. Following this, my supervisors and I met to compare coding and discuss the clarity/accuracy of variable descriptions in the codebook.

Early in the process, I discussed with my supervisors the need to clarify the dissemination strategy with my contact from the MoJ Research and Evaluation team. My contact explained I would first be asked to transfer my research study into a specific MoJ gov.uk report template. Whilst the normal procedure would be for the MoJ to request an external peer review of this report, this may not be necessary as my supervisors have already acted as peer reviewers. I was informed the report would need to be signed-off by various parties, including the MoJ Chief Government Social Researcher and a representative from the Joint Extremism Unit (JEXU) to confirm the research had policy sign off. Once approved, I would then be expected to submit a research overview for ministerial level approval. I recognise this process exists due to the sensitive nature of the data and high likelihood that findings could be reported in the media once in the public domain.

I have continued to look for opportunities to develop my skills in communication and dissemination. One example of where I have shared my knowledge around the role of the Internet in the radicalisation process and extremist offending is when delivering a lecture to MSc students at Cardiff Metropolitan University. For the past few years, I have been asked to deliver this lecture given my knowledge and experience working with this offender group. I spoke to the course leader and discussed the value of sharing my research plans given the frequency with which the Internet is involved in extremist pathways and highlighting where gaps remain in current knowledge around this area.

Another example of developing skills in communication and dissemination included presenting an overview of my research on the 'Crime' panel at the NTU Social Science Research Conference. To apply for a presentation slot, I provided a 250-word abstract and identified which strategic theme my research most closely aligned to (in this case 'Crime'). My supervisors and I agreed the specific content of my presentation in preparation for attending the conference. As I had finished the coding of all cases and recently completed a quality check of the coding frame with my supervisors, we discussed the importance of spending time in the presentation describing the background/context to the research and referring to the unique dataset I had access to. We also agreed I should describe the SRG/ERG22+ reports in terms of typical content. Whilst it was likely audience members would be interested in hearing some of the initial analysis of the data, this would not be possible given the restrictions and approvals required for me to share findings with members of the public. We also considered ways of making some of the complex terminology accessible, such as defining the term

‘radicalisation’ and describing the various phases of a proposed model for Internet-mediated radicalisation.

Annual Review – October 2019
Current Phase D1 Working with others = **3** D2 Communication and dissemination = **2** D3 Engagement and impact = **2**

I have enhanced my skills in communication and dissemination by delivering an overview of my research to TACT Probation practitioners in Wales in April 2019. A number of questions were asked in relation to my research, demonstrating interest in the topic area. One area discussed related to the various definitions used for lone actor terrorists, and how even for lone actors, previous contact with others/groups was common. It was discussed that if too stringent a definition was used, e.g. never having engaged with like-minded others in either the offline or online space, the number of lone actors within my empirical study would be very small, making meaningful analysis quite difficult. However, the practitioners at the meeting also discussed the difficulties I would have if I were to expand the definition to encompass lone dyads, as once others were involved, this may change the dynamics. I explained that I had conducted a systematic review of pathways to lone actor terrorism, as this provided an opportunity to consider the varied definitions used within the academic literature, and select one appropriate for the purposes of my research.

It became apparent that another useful opportunity to communicate and disseminate my findings with those directly working with extremist offenders included sharing my research with Home Office approved Intervention Providers. These Intervention Providers undertake ideological/theological work with those who have committed TACT offences, particularly in cases where misinterpretations of religious texts were relevant to an offender’s pathway. A number of Probation practitioners expressed their view that Intervention Providers would be less knowledgeable about the role of the Internet within the radicalisation process and how the Internet may facilitate extremist offending. I recognise that communicating my research findings to this group could have a significant impact on intervention work conducted within the field.

In May 2019, I attended an HMPPS National Extremism Team Professional Practice Forum. This event provided an opportunity to learn about revisions to the ERG22+ and Healthy Identity Intervention (HII) in response to research. It was encouraging to hear from members of the HMPPS National Extremism Team were aware of my research plans, evidencing progress in engagement and

impact. I spoke to the Head of the National Extremism team for HMPPS about ways my research could contribute to future work by his team. He suggested it would be useful for me to present my findings to his team once my study was complete. I have discussed this opportunity with my supervisors and I will seek further clarification from my contact at the MoJ regarding dissemination of findings to key stakeholders within HMPPS.

I have recently been offered an opportunity to present my systematic review on pathways to lone actor terrorism at the Psychology Seminary Series: DPsych 'take-over' event in October 2019 at NTU. This would involve presenting to a mixture of NTU staff, students and those not directly affiliated with the University. When preparing my presentation, I accessed the NTU Researcher Development Gateway to view online tutorials for presenting to an academic audience. The most useful tips included the importance of first impressions and greeting the audience by introducing yourself and clearly explaining the presentation topic. When preparing presentations, I learnt one of the most common mistakes is to include too much information and talking too fast. I recognise the value in simplifying slide content and focusing on a limited number of key messages within the allocated time. It is also important to focus the presentation on the findings, rather than spending too much time on existing literature. It was interesting to note the tutorials talked about the audience being three steps behind the speaker so to keep this in mind when presenting.

Another area I am hoping to make progress in relates to pursuing avenues for publication by reworking my systematic literature review in manuscript form to submit to journals. Having finalised the systematic review for inclusion within my thesis, my supervisors and I have discussed reducing the word count and rewriting the Introduction and Discussion sections into journal format. Having considered a number of potential journals that may be interested in a systematic review of pathways to lone actor terrorism, it was agreed that it would be most appropriate to submit to a specialist terrorism journal, such as ‘Studies in Conflict and Terrorism’ or ‘Terrorism and Political Violence’.

Final Submission
RDF standards D1 Working with others = **1+** D2 Communication and Dissemination = **2+** D3 Engagement and Impact = **1+** Current Phase D1 Working with others = **3** D2 Communication and Dissemination = **3** D3 Engagement and Impact = **3**

Final Reflections on Being a Researching Practitioner:

I recently attended a BPS Conference in Wales entitled working psychologically with extremism and terrorism. Having reached the final stages of completing my thesis, such events provide excellent opportunities to discuss the implications of my research with others. At this event, I spoke to one of the key speakers from HMPPS, who helpfully recommended a specific journal article relevant to points made within the discussion. This article related to moral aggrandising online and we discussed how this phenomenon may be relevant to some who primarily radicalised online within my dataset. The key speaker also highlighted the dangers of post-arrest radicalisation, whereby those who are radicalised online are often exposed to other extremists in custody, potentially reinforcing and strengthening extremist views. Alongside this, there were opportunities to seek out potential collaborative partners at this event. For example, I had previously been in contact with one speaker who currently delivers interventions with extremist offenders in the community and provides consultancy to relevant counter-terrorism organisations. This individual approached me following the conference to say he would be very interested in reading my thesis and we discussed opportunities to work together in the future.

I have worked closely with members of my supervisory team to prepare a manuscript of the systematic literature review for submission to Terrorism and Political Violence. This involved reducing the word count and deciding which aspects could be removed without compromising the quality of the work. The manuscript was then submitted, with me as the lead author and is currently undergoing peer review. As this was my first experience of helping prepare a manuscript for publication, I am looking forward to receiving feedback after peer review. If the manuscript is accepted and later published, this could result in more opportunities to engage with other researchers in the field and increase the exposure and impact of my work within the research community. Following this experience, I am looking forward to future opportunities to collaborate

with my supervisors when submitting manuscripts based on my empirical study. As with the systematic review, it may be most appropriate to target extremism/terrorism specific journals for publication, although general psychology journals may also be interested given extremism is such a newsworthy topic currently.

In October 2019 I presented my systematic review of pathways to lone actor terrorism to psychology staff, peers and students at the NTU psychology research seminar. I felt able to confidently respond to questions following my presentation, which reflected my developed theoretical understanding of the research around lone actor terrorism. Having now had several opportunities to present aspects of work from my thesis, I have grown in confidence when presenting my work to others. This is evident by me actively seeking out opportunities to present my work, both at NTU and also within regional extremism practitioner meetings. Once I have submitted my thesis and have the relevant permissions to disseminate my findings, I would like to explore opportunities to present at national events and conferences to engage with a wide range of academics, practitioners and policy-makers.

Following delivery of the lecture to MSc students on working with those who have committed extremist offences, I was particularly pleased to be contacted by several students who were keen to ask further questions due to their expressed interest in the topic area. One student said she had chosen this topic for the assessed component of the module and wanted to find out where she could access current statistics on extremist offending, whilst another student asked for additional references relating to the HII so she could conduct further background reading to inform her work. Since the lecture, I have reflected on both the importance and how rewarding it feels to potentially attract new researchers and/or practitioners to the field. This is certainly an aspect of lecturing that I enjoy and will look to continue in the future.

In February 2020, I attended the workshop on Critical Writing and Publication at NTU as I wanted to learn more about the publication process and key differences when submitting manuscripts to journals. Some of my key reflections were around the importance of stating how your work contributes to the field and keeping manuscripts simple, by focusing on a central message. When preparing a manuscript, I learnt the importance of respecting the word limit, following formatting guidance, using simple language and keeping articles short as they take up less space within journals. Another important consideration is selecting the most appropriate journal for your submission, considering who the audience is, the breadth of the journal and associated impact factor. Whilst one of my supervisors had taken the lead in preparing the manuscript of the systematic review due

to my inexperience in this area, I would like to take a more central role in preparing manuscripts based on the empirical study to develop my skills in this area.

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APPENDICES

Appendix A – Codebook

This version of the codebook has been edited to feature only those variables described within chapters of this thesis and included within the analysis.

Coding variable	Explanation, coding options and examples
Type of extremist offender	
Type of prison-based extremist	This relates to which of the four prison-based extremist typologies identified by Silke (2014) that the individual belongs to. Options include: • 'Radicalised extremist' • 'Affiliate' • 'Prison Recruit' • 'Vulnerable' Definitions: 'Radicalised extremist' – individuals who entered prison already holding extremist views and who had engaged in extremist actions in outside world. 'Affiliate' – individuals who have been convicted of involvement in extremism or terrorism, but where there are good reasons to suggest they were not actually radicalised when they did so. 'Prison Recruit' – 'ordinary decent' individuals who have been radicalised within prison, possibly as a result of contact with extremist prisoners. 'Vulnerable' – 'ordinary decent' individuals who, while at the moment may not have radicalised, may be assessed as vulnerable to joining the 'spectacular few' in the right circumstances. *Examples:* *If an individual has been convicted of an extremist offence of disseminating terrorist materials online and there is evidence they have been subject to Police surveillance in the community for several months prior to their arrest due to concerns about extremist activity, this individual would be coded as a 'Radicalised extremist'.* *If an individual has provided assistance to another wanting to pursue extremist goals (e.g. by allowing the use of their bank account for the transfer of funds or by providing a lift to the airport to those intending to travel) but there is a reported lack of evidence that they themselves*

	have been radicalised or support an extremist ideology, this individual would be coded as an 'Affiliate'. *If an individual has committed an index offence not considered extremist but has displayed concerning behaviour in custody through, for example, their choice of associations or comments made to others, this individual would be coded as a 'Prison Recruit'.*
Method of radicalisation	
Primary method of radicalisation	This relates to identifying the primary method of radicalisation for the individual based on descriptions provided within the SRG or ERG22+ report regarding how an individual came to be engaged with an extremist group, cause or ideology. The primary method of radicalisation was established through a combination of either reviewing a formulation if provided by the author, through reviewing offence details or by reviewing the scoring of factors relevant to the assessment. If it is not clear from the information contained within the SRG or ERG22+ report, 'Not clear' is used. For those individuals who are not considered to have become radicalised (e.g. identified as Affiliates), 'N/A' is used. Options include: • 'Internet' • 'Face to face' • 'Both' • 'Not clear' • 'N/A'
Internet-related behaviours	
Learn from online sources	For those individuals where the use of the Internet is relevant, this item relates to whether there is evidence within the SRG or ERG22+ report that the individual learnt from online sources (e.g. online documents/materials). For those individuals where the use of the Internet is not relevant, 'N/A' is used. It should be noted that even if an individual is not considered to have been radicalised (e.g. an affiliate), this can still be coded if there is evidence of them learning from online sources.

	Options include: • ‘Yes’ • ‘No evidence’ • ‘N/A’
Interact with co-ideologues online	For those individuals where the use of the Internet is relevant, this item relates to whether there is evidence within the SRG or ERG22+ report that the individual communicated with co-ideologues online. For those individuals where the use of the Internet is not relevant, ‘N/A’ is used. It should be noted that even if an individual is not considered to have been radicalised (e.g. an affiliate), this can still be coded if there is evidence of them having interacted with those supporting extremist views online. Options include: • ‘Yes’ • ‘No evidence’ • ‘N/A’
Generate their own extremist propaganda online	For those individuals where the use of the Internet is relevant, this item relates to whether there is evidence the individual has generated their own extremist propaganda online. For those individuals where use of the Internet is not relevant, ‘N/A’ is used. Options include: • ‘Yes’ • ‘No evidence’ • ‘N/A’ *Examples:* *If there is reference to an individual having designed their own extremist image and posted this on line, this would be rated ‘Yes’.* *If it is reported that an individual has posted their own comments which are of an extremist nature on a social media platform, this would be rated ‘Yes’.* *If an individual is reported to have posted a link which leads directly to extremist content on another platform generated by others, this would be rated ‘No’.*

Provision of material support	For those individuals where the use of the Internet is relevant, this item relates to whether the individual has been involved in the provision of material support online. For those individuals where use of the Internet is not relevant, 'N/A' is used. Options include: • 'Yes' • 'No evidence' • 'N/A'
Active or Passive Internet user	For those individuals where the use of the Internet is relevant, this item relates to whether they are considered to be a passive or active Internet user. For those individuals where use of the Internet is not relevant, 'N/A' is used. Options include: • 'Passive' • 'Active' • 'N/A' Passive users - includes those who have only consumed extremist online content (e.g., reading online comments or viewing online videos). Active users - includes those who create or contribute to extremist online content (e.g. posting materials/videos online, writing online comments or engaging in online conversation on social network sites).
Access specific extremist websites/home pages	For those individuals where the use of the Internet is relevant, this item relates to whether there is evidence the individual has accessed specific extremist websites/home pages online. For those individuals where use of the Internet is not relevant, 'N/A' is used. Options include: • 'Yes' • 'No evidence' • 'N/A' *Examples:* *If an individual is reported to have set up their own website to promote extremist ideology/rhetoric, this would be coded 'Yes'.*

	If an individual has disclosed having published the details of animal testing companies on an animal rights/activist website, this would be coded 'Yes'. *If an individual has been accessing the English Defence League (EDL) website, not in support but in terms of attack planning against them, this would be coded 'Yes'.* *If an individual had accessed extremist content online but only through open social media platforms such as Twitter and YouTube, this would be coded 'No'.*
Use of open social media applications/platforms	For those individuals where the use of the Internet is relevant, this item relates to whether there is evidence the individual has used open social media applications/platforms online. Open social media applications/platforms are those where the intended standard use is generally made for increased openness and wider sharing/distribution of content to others (e.g. Facebook, Twitter, YouTube etc.) For those individuals where use of the Internet is not relevant, 'N/A' is used. Options include: • 'Yes' • 'No evidence' • 'N/A'
Use of E-mail/standard chat applications	For those individuals where the use of the Internet is relevant, this item relates to whether there is evidence the individual has used e-mail/standard chat applications online. E-mail/standard chat applications are those where the intended standard use is generally for more restricted/targeted communication to others (e.g. E-mail, Skype, Messenger, WhatsApp (pre 2016) etc.) For those individuals where use of the Internet is not relevant, 'N/A' is used. Options include: • 'Yes' • 'No evidence' • 'N/A'

Use of encrypted applications	For those individuals where the use of the Internet is relevant, this item relates to whether there is evidence the individual has used encrypted applications online (e.g. Telegram, Viber, WhatsApp (post 2016) etc.) For those individuals where use of the Internet is not relevant, 'N/A' is used. Options include: • 'Yes' • 'No evidence' • 'N/A'
Demographic and offence type variables	
Age	This relates to the age of the individual at time of sentencing. This may be referenced directly within the SRG or ERG22+ report or calculated based on their DOB and date of sentence.
Gender	This relates to the gender of the individual. Options include: • 'Male' • 'Female'
Place of birth	This relates to the country in which the individual was born. Where this is not reported/not clear – 'Not reported' is used.
Convicted offending history	This relates to whether the individual has previous convictions. Options include: • 'Yes' • 'No' • 'Not recorded' *Example:* *If an individual has no prior convictions, but does have previous cautions or has been the subject of prior Police call-outs, this would be coded 'No' as the focus of this variable is on prior convictions.*

Presence of mental illness/PD	This relates to whether the individual is reported to have mental health and/or PD difficulties as scored within the relevant item of the ERG22+. Options include: • 'Not present' • 'Partly present' • 'Strongly present' • 'Omitted'
Violent or non-violent	This relates to whether the individual's index offence is considered to be violent or non-violent. This variable is included in an attempt to distinguish between those who simply espouse radical beliefs and those who are prepared to commit acts of extremist-related violence. For the purposes of coding this variable, a strict definition of 'Violent is used: • Those convicted of any act which constituted, or any potential act which, if carried out would constitute, Murder, Attempted Murder, Manslaughter, Assault, and/or real injury to another, and/or cause serious and significant structural damage. Therefore, the 'Violent' category does include some individuals who were arrested prior to having conducted an act of violence, but were convicted on the basis there was sufficient evidence to suggest they would have conducted the act if they had not been disrupted. Individuals who had knowingly conducted non-violent behaviours that could facilitate violence conducted by others (e.g. by disseminating extremist materials online) would fall within the 'Non-violent' category. Options include: • 'Violent' • 'Non-violent' *Examples:* *An individual who is reported to have committed an arson attack on a building to seek revenge on a specific group of people would be coded as 'Violent'.* *An individual who is reported to have been involved with others in planning a terrorist attack on civilians by sourcing bomb materials, constructing detonators and making a martyrdom video in preparation for his own intended death, but was arrested before any attack was carried out would be coded 'Violent'.*

	An individual who is reported to have known about the plans of others to commit a violent extremist offences and helped the perpetrators to evade detection following these acts would be coded 'Non-violent'. *An individual who is reported to have been convicted of Conspiracy to blackmail towards companies suspected of involvement with animal testing through use of threats would be coded as 'Non-violent'.* *An individual who publishes a list of individuals or companies online from which others had then used as targets for activism would be coded as 'Non-violent'.*
Role in event	This relates to the individual's role within the index offence. Options include: • 'Attacker' • 'Traveller' • 'Financer' • 'Facilitator' There may be individuals who are coded with more than one option if this is relevant to them (see the examples provided below). Attacker – the individual has either committed an extremist attack themselves on another person or property, or there is sufficient evidence (based on their conviction) they would have done had they not been arrested/disrupted prior to such. Traveller – the individual has either travelled to other countries to pursue extremist goals, or there is sufficient evidence (based on their conviction) they would have done had they not been arrested/disrupted prior to such. Financer – the individual has provided financial support to either others with extremist views or to an extremist group/organisation. Facilitator – the individual has provided either direct or indirect support (other than financial) to others with extremist views or to an extremist group/organisation. This also includes those individual who may have provided some level of direct support to others (e.g. supporting others involved in extremist activity) or those who have provided indirect support through inspiring others through their actions (e.g. through disseminating extremist material online). *Examples:* *If an individual is reported to have damaged property by spray-painting messages relating to activism on the walls of a greyhound track, this individual would be coded as an 'Attacker'.*

	If an individual is reported to have posted a beheading video and link to a terrorist publication on Twitter, and by doing so potentially inspired the actions of others, this individual would be coded as a 'Facilitator'. *If an individual has provided accommodation or helped an individual who is wanted by the Police secure passage out of the country through obtaining a fraudulent passport following a terrorist attack, this individual would be coded as a 'Facilitator'.* *If an individual is reported to have provided financial support to another who is fighting for an extremist group abroad but then has made their own attempt to travel to join them, this individual would be coded 'Financer/Traveller'.*
Degree of social connection	This relates to the degree of social connection with others holding extremist views that the individual experienced around the time of the index offence. It is important to note this is referring to social connectedness offline as opposed to online. Options include: • 'Lone' • 'Small cell' (2-3 people) • 'Group' *Examples:* *If an individual is reported to have been socially isolated for much of their life, not communicated with other co-ideologues either face to face or online, and planned an extremist offence alone prior to bring arrested, this individual would be coded as 'Lone'.* *If an individual is reported to have previously been a member of an extremist group but around the time of committing the index offence had not been affiliated with any extremist group or organisation, and was considered to have acted alone during the planning and execution of an extremist offence, this individual would be coded as 'Lone'.* *If an individual is reported to have been convicted for the offence of provided financial support to another who is fighting abroad on behalf of an extremist group or organisation, with no evidence of contact with others holding extremist views, this individual would be coded 'Small cell'.* *If an individual is reported to have been a member of an extremist group and worked with a large group of others in the preparation and planning of an extremist offence, this individual would be coded as 'Group'.*

Ideology	This relates to the specific ideology of which the individual is affiliated. The specific ideology is referenced within the SRG or ERG22+ report for all individuals within the dataset. Options include: • 'Islamist Extremist' • 'Extreme Right Wing' • 'Political'* • 'Animal Rights' *This group consists primarily of individuals supporting groups or causes on the far left of the political spectrum and those described as anti-establishment.
ERG22+ specific items	
Overall engagement rating	This relates to the overall ERG22+ engagement rating. This is either recorded within the ERG22+ grid within some reports or is referenced within the text of the report. Options include: • 'High' • 'High/Medium' • 'Medium' • 'Medium/Low' • 'Low' • 'Not reported'
Overall intent rating	This relates to the overall ERG22+ intent rating. This is either recorded within the ERG22+ grid within some reports or is referenced within the text of the report. Options include: • 'High' • 'High/Medium' • 'Medium' • 'Medium/Low' • 'Low' • 'Not reported'
Overall capability rating	This relates to the overall ERG22+ capability rating.

	This is either recorded within the ERG22+ grid within some reports or is referenced within the text of the report. Options include: • 'Significant' • 'Significant/Some' • 'Some' • 'Some/Minimal' • 'Minimal' • 'Not reported'
Consent to participate in SRG or ERG22+	This relates to whether the individual had given their consent to participate in interviews for the purpose of the SRG or ERG22+ assessment (i.e. was the SRG or ERG22+ assessment informed by the individual directly). Options include: • 'Yes' • 'No'