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Background and Preparatory Behaviours of Right-Wing Extremist Lone Actors: A Comparative Study

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Abstract

The threat posed by lone actors ranks high on the list of terrorism-related security concerns. In recent years especially, discussions about these perpetrators have focused primarily on those associated with, or inspired by, Islamic State and other jihadist entities. However, a significant portion of lone actors actually hail from right-wing extremist milieus. This article serves to draw attention to this subcategory of lone-actor terrorists, with a particular focus on their backgrounds and pre-attack behaviours. To that end, two datasets are presented that allow a comparison to be made between right-wing extremist lone actors and other ideologically-motivated lone actors. While several differences are noted, perhaps the most surprising finding is the degree of similarity between right-wing extremist lone actors and those adhering to different ideological currents. The results contribute to a knowledge-base that can inform discussion about whether risk assessment tools and protocols should differentiate between ideological categories of lone actor terrorists.

Keywords: Lone-actor terrorism, right-wing extremism, pre-attack behaviour, background characteristics, comparative, risk analysis

Introduction

Lone-actor terrorists are considered by police and intelligence agencies to constitute a particularly dangerous threat.[1-5] Although new research draws into question whether lone actors are indeed as isolated and capable as is sometimes claimed,[6] the fact remains that many recent acts of terrorism were carried out by individuals rather than groups. From Anders Breivik's 2011 massacre in Norway,[7] to a spate of run-over attacks seen in Europe in 2016 and 2017 and, particularly in the United States, a continuing trend of firearms-enabled assaults, terrorist attacks carried out by lone individuals appear to be on the rise.[8]

While the contemporary terrorist threat is commonly associated with Islamist extremist groups such as al-Qaeda and Islamic State (IS), a significant proportion of lone-actor attacks are perpetrated by individuals with a right-wing extremist background. Some of the most well-known lone-actor terrorists, such as Eric Rudolph, David Copeland and Anders Breivik, hailed from this particular ideological milieu. The extent to which these extremist right-wing (henceforth, XRW) lone actors differ from other lone terrorists in terms of their background and attack behaviour is an empirical question with implications for risk assessment and attack prevention. To the extent that analysts rely on specific sets of indicators to assess the lone actor threat, differences between ideological categories of lone actors are likely to be salient.

The present article presents a comparative analysis between XRW lone actors and other ideologically-motivated lone actors. Given the particular relevance of these indicators to risk assessment by law enforcement analysts, this article also includes an analysis of a sub-sample of XRW lone actors' cases particularly rich in information on attack planning and preparation behaviour. In doing so, we aim to contribute to a knowledge-base that can inform discussion about whether risk assessment tools and protocols should differentiate between ideological categories of lone actor terrorists.

Background: Right-Wing Extremists and Lone-Actor Terrorism

Lone-actor terrorism is not unique to one particular extremist ideology, yet in some ways its 20th and 21st century emergence is strongly tied to developments in right-wing extremism.[9] Starting in the late 1960s, as Kaplan

explains, elements within the neo-Nazi movement in the United States came to see the idea of sustaining a mass revolutionary movement as unfeasible due to a lack of popular support. Instead, they began advocating for a violent 'propaganda by the deed' approach, to be undertaken by small cells of militants, essentially emulating similar tactics deployed by left-wing extremist groups such as the Weather Underground. This trend towards more individualized action was strengthened during the 1970s and 1980s by the death or imprisonment of leading members of the right-wing extremist milieu, which demonstrated the state's power and the movement's inability to organize a sustained resistance.

However, it was the 1992 Ruby Ridge incident that propelled leaderless resistance to the forefront. A couple of months after the deadly shootout between law-enforcement personnel and the Weaver family, some 160 far-right extremists formed a so-called 'Sacred Warfare Action Tactics committee' to 'evaluate what our people would be forced to consider should tyranny and despotism become the order of the day'. The committee recommended Louis Beam's concept of 'Leaderless Resistance' to its supporters. Between the events of Ruby Ridge and Waco a year later, Leaderless Resistance moved from being an 'isolated theory' to being 'seen as a matter of survival in the face of a government now determined to eradicate the righteous remnant of the patriot community once and for all'.[10]

Beam's mantle was later taken up by other white supremacists, such as Tom Metzger and Alex Curtis in the early 1990s. While Beam's essay allowed for small autonomous cells as well as lone actors, both Metzger and Curtis pushed the lone actor to the forefront. Since the early 2000s, Leaderless Resistance, and the lone-actor terrorist attacks this concept inspires, have been embraced by Islamist extremists as well. In a pattern similar to that seen among right-wing extremists, the concept gained traction through the force of example, because leading ideologues promoted it and, most recently, because IS used its own power and reach to advocate its adoption.[11-14]

Leaderless Resistance and lone-actor terrorism are thus not unique to right-wing extremism. Yet the strong ties between these concepts and the right-wing extremist ideological current make it a particularly interesting one to study in order to gain a better understanding of the lone-actor violence it has spawned. On a more practical note, the considerable (media) attention given to jihadist extremism has arguably served to under-emphasize the threat of terrorism by right-wing extremists. While *fatal* violence perpetrated XRW actors appears to have declined in the European context,[15, 16] it is a more prevalent form of violent extremism in North America.[17-19] In both geographical contexts, moreover, lone actors are often the (suspected) perpetrators of XRW violence.[9] Gaining a better understanding of the pre-attack behaviours of XRW lone actors, as well as a sense of differences in background and individual indicators between XRW actors and others, thus serves to strengthen a potentially under-researched aspect of contemporary terrorism, and can contribute practice-oriented insights to inform the detection and prevention of these types of attacks.

Data

The data used in the following analyses is made up of two distinct sets of lone-actor terrorists. Both sets define lone actor terrorists primarily as individuals who, in media reporting or existing academic work, are described as operating autonomously and independently of a group, for instance in terms of training and target selection. Also included are individual terrorists with command and control links to a terrorist group, but who carry out the attack by themselves.

The first set is an expansion of Gill and colleagues' dataset, updated to the year 2016 to make up the EU-funded 'FP7 PRIME Project' dataset. This sample includes 125 individuals who engaged in, or planned to engage in, a lone-actor terrorist attack in North America and Europe, and were convicted for their actions or who died in the commission of their offence, since 1990. Data collection was limited to the post-1990 period, because considerable part of the information on lone actors was drawn from the LexisNexis archive, whose records are less complete before the 1990s. Further to the addition of new cases, the original Gill et al. codebook was augmented and updated. The inclusion of the 40 new variables, which relate chiefly to radicalization

processes and antecedent behaviours, was guided by a custom Risk Analysis Framework (RAF)[20] designed to operationalize the theoretical models of radicalization and terrorist action proposed by Bouhana and Wikström.[1]

From a risk assessment perspective, the purpose of the RAF is to guide the identification, interpretation and evaluation of indicators, which are likely to vary across cases, time and geography, by setting out clearly the categories of processes to which these indicators relate, such as individual susceptibility to moral change or selection for exposure to radicalising settings. From a research perspective, the framework motivates the selection of indicators which are hypothesized to be causally or behaviourally meaningful.

These data were put together by coding information extracted from open-source news reports, sworn affidavits and, when possible, openly available first-hand accounts. Most of these sources were identified through LexisNexis searches. Each observation was coded by three independent coders. After an observation was coded, the results were reconciled in two stages (coder A with coder B, then coders AB with coder C). In cases where the three coders could not agree, a senior researcher resolved differences based on a re-examination of the original sources. These decisions factored in the relative reliability of the original sources (e.g. trial proceedings versus news report in the immediate aftermath of events).

The second dataset used in this article focuses specifically on attack planning and preparation and is made up of a subset of individuals drawn from the PRIME dataset described in the previous paragraphs. Cases within this larger PRIME dataset were first ranked according to richness of information regarding planning and attack preparation antecedent behaviours, as a more detailed exploration of these issues could only be realized if sufficient data was available. This led to 43 cases being retained for further analysis. The data collection process and discussions with colleagues led to the inclusion of a further 12 cases for which pre-attack information was particularly rich: two Canadian, one American, one Danish and eight Dutch individuals. For the purpose of the present article, two additional German XRW cases have been added, bringing this second, attack planning and preparation specific dataset up to a total of 57 individuals.[3]

As with the larger dataset, information was gathered primarily from open sources, such as newspaper articles and terrorist biographies, but where possible cases were assessed using first-hand information drawn from police investigative files, autobiographical materials, interviews with subject matter experts and, more commonly, sentencing information published by courts. Open-source data on terrorism should always be critically evaluated in terms of reliability and accuracy. Several other data-collection issues must also be acknowledged. First, there is the media's tendency to underreport failed or foiled attacks, making less information available on cases that could provide key insights into how terrorism can be prevented.[21] Secondly, media coverage of terrorism tends to skewed towards jihadist-inspired attacks, particularly where the perpetrators are foreign, meaning that instances of XRW terrorism may not be consequently reported as such or attract less coverage and are thus more difficult to reconstruct in detail.[22] Concerted efforts to gather as much information as possible from a wide array of sources was used to overcome these limitations, but they must be kept in mind.

Both of the aforementioned datasets encompass individuals across the ideological spectrum (extreme right-wing, extreme left-wing, religiously inspired, or those driven by so-called 'single-issue' concerns). While these samples cannot claim to make up the entire lone-actor population, they are the most extensive and detailed research datasets of their kind to date.

The following analyses draw from the respective strengths of each dataset. In the first section, a comparative, descriptive analysis of indicators is presented, contrasting XRW lone actors and the rest of the 125-strong sample, made up of religious-inspired, left-wing and single-issue individuals. Inferential statistics are further used to test the significance of the observed differences. In the second section, a more in-depth look is taken at behaviours related specifically to the attack planning and preparation phase. While the smaller size of this second dataset precludes a full-fledged statistical comparison between the XRW subset and other cases, it does provide further insight into potential differences between actor categories.

Before proceeding to the result of these analyses, a definitional issue must be tackled. Predictably, there is

no single, widely accepted definition of what constitutes right-wing extremism or right-wing terrorism.[23, 24] Where jihadists can generally be defined by their adherence to extremist currents within Islam, what exactly is 'right-wing' in this context? As Mudde illustrates, definitions of right-wing extremism range from those that focus on a single feature to ones with more than ten constituting elements. The most commonly recurring elements, however, are nationalism, racism, xenophobia, anti-democracy and a desire for a strong state.[24] These elements provide useful markers of right-wing extremism, but their application to the datasets underpinning this article presents several interpretative challenges.

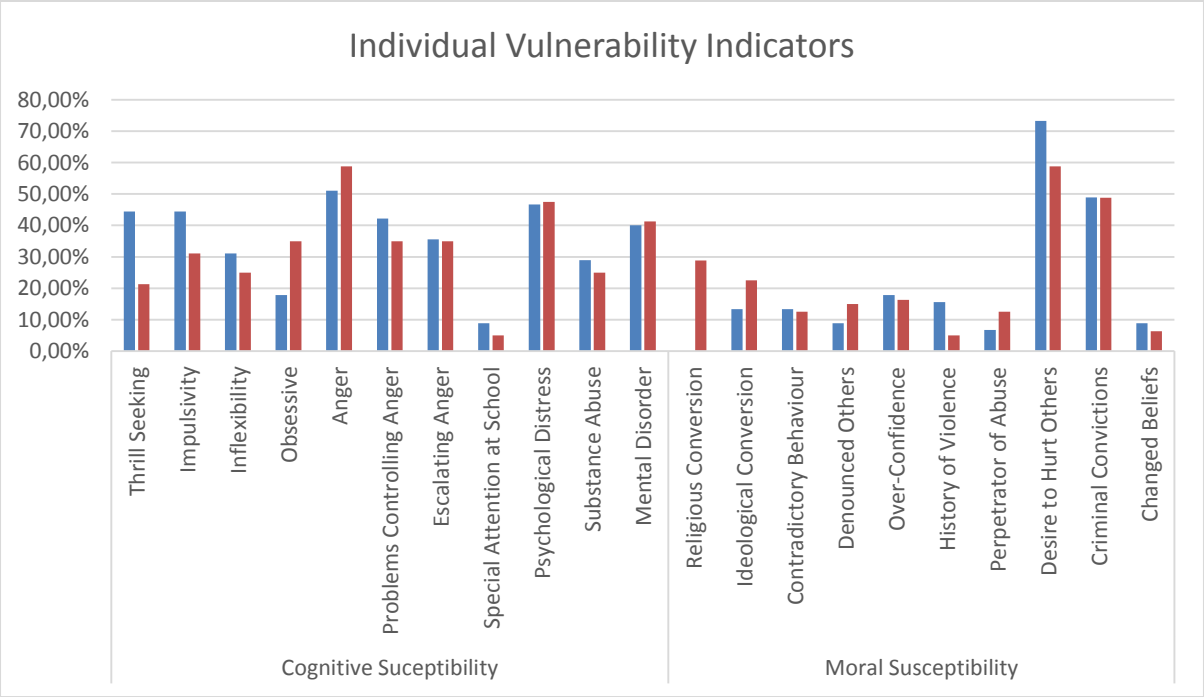
Both PRIME datasets include numerous individuals who clearly match the elements of right-wing extremism that Mudde distilled. Yet, there are also several cases in which the degree of adherence to these precepts is more ambiguous. Lone actors motivated by anti-abortion convictions are generally not counted as right-wing extremists, despite the fact that some also displayed an overlap with right-wing extremist beliefs or operated in social circles on the fringes of such a milieu. More difficult were the lone actors driven by what could be termed 'anti-government' views. For some, such as Walter Leroy Moody, these grievances had a distinctly personal rather than political origin, allowing them to be quickly dismissed from the case selection. But for individuals such as Timothy McVeigh, this is more challenging because his anti-government views, while politically motivated, were not solely right-wing extremist in orientation.

These ambiguities should be kept in mind when interpreting the results presented below. With regards to the larger dataset, 45 right-wing extremist individuals are identified as *primarily motivated by right-wing extremist beliefs* and are compared against the rest of the sample, while 28 (out of 57) such individuals are present in the second dataset selected for the richness of information on attack planning and preparatory behaviour. The inclusion criteria, and the fact that the samples do not encompass all known instances of right-wing extremist lone-actor violence to have taken place in Northern America and Europe, must be kept in mind when interpreting the results presented next. While we cannot and do not claim fully generalizable insights into right-wing extremist lone-actor terrorists, our findings do present an important first step towards understanding the backgrounds and pre-attack behaviours of this particular subset of the lone-actor threat in a comparative light.

Results: Comparison between XRW Lone-Actor Terrorists and other Lone Actors

The following section provides a comparative snapshot of key indicators between XRW lone actors (blue) and other categories of lone actors (orange). They are presented by category, as set out in the PRIME RAF.[20] Briefly, vulnerability indicators are hypothesized to be markers belonging to the cognitive and moral domains and related to an individual's vulnerability to moral change (i.e. vulnerability to the adoption of terrorism-supportive beliefs). Selection indicators are likewise hypothesized to be markers for self and social processes which put individuals at risk of exposure to radicalizing and criminogenic settings. Motivation and capability indicators relate to movement from propensity to action and the actor's capability to carry out an attack successfully (the perception of which plays a crucial part in sustaining his or her motivation). Leakage and attack indicators are outcome markers commonly included in the behavioural analysis of terrorist events.

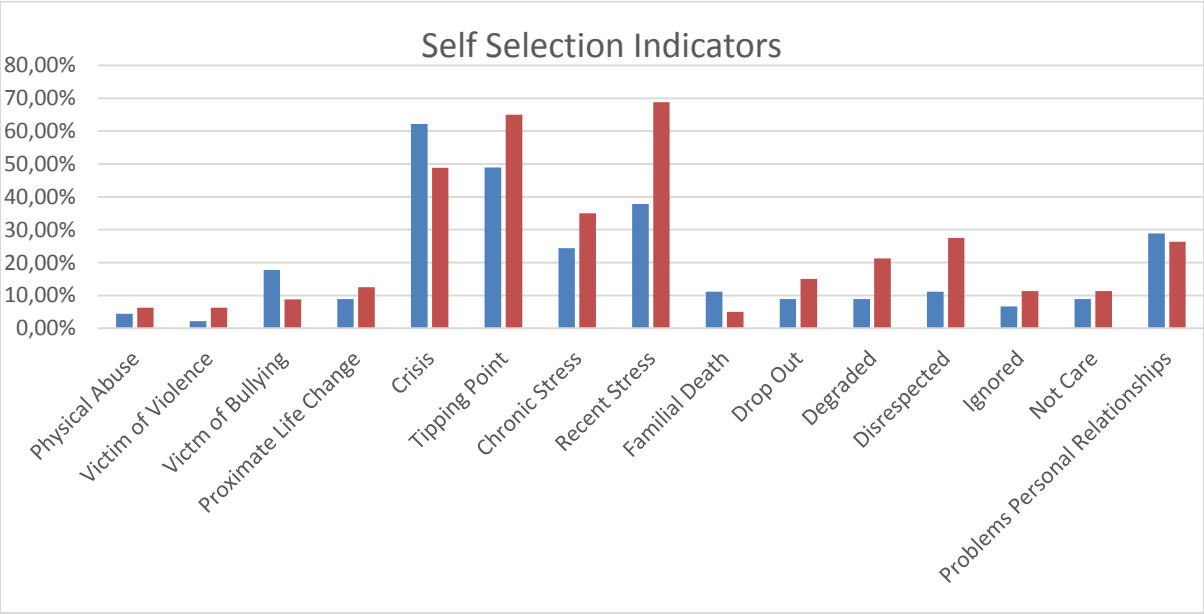
Individual Vulnerability Indicators



It is in the category of vulnerability indicators that most of the statistically-significant differences between the XRW and other lone actors are found, notably in terms of morality-related markers of susceptibility. With regard to indicators of cognitive susceptibility, both groups are characterized by fairly high prevalence of several indicators which are common to other categories of behavioural problems, including common criminality and other high risk behaviours.[25] This is notably the case for the XRW actors which are the concern of this article, almost half of whom are described as thrill seeking (44.4%), compared to 21.3% of other lone actors (henceforth, OLAs) (7.435, p=0.006), and impulsive (44.4%) compared to 31.1% of OLAs. Anger is also a prevalent indicator within the sample (51.1%), with 42.2% described as having problems controlling their anger (35% of the OLAs) and 35.6% noted for the fact that their anger had been escalating (35% of the OLAs). Psychopathological indicators have remerged as a topic in the terrorism literature and it is notable that 46.7% of the RXW actors experienced psychological distress, while 40% had a diagnosed mental disorder, which is very similar to the OLAs (47.5% and 41.3% respectively). It is notable that 28.9% of XRW actors were reportedly substance abusers, which is much higher than the base rate.[26] Here again, the prevalence for the OLAs is similar (25%).

As regards morality-related indicators of susceptibility, XRW actors are more likely to be raised in the country in which they carried out their attack (95.6% vs 66.3%; 14.332, p=0.001), while the OLAs are by far more likely to have been raised in a religious household (13.3% vs 86.7%; 15.679, p=0.000). Of note is the absence of any report of religious conversion in the XRW actors compared to the OLAs (25%; 13.393, p=0.000). However, it is not possible to tell whether these differences are exacerbated by reporting issues, whereby questions about past religious behaviour are only asked in the case of religiously-inspired actors, who make up a large proportion of the OLAs. XRW actors are more often identified as atheist (11.1% vs 5%; 45.674, p=0.000), while OLAs are more often identified as Muslim (0% vs 55%; 45.674, p=0.000). Unsurprisingly, very few instances of religious intensification are reported among XRW actors (2.2% vs 43.8% in OLAs; 24.221, p=0.000); reports of ideological intensification are also more prevalent among the OLAs (37.8% vs 56.3%; 3.931, p=0.047). XRW actors distinguish themselves by the high prevalence of the expressed desire to hurt others (73.3% of XRW actors and 58.5% of the OLAs), although the difference is not statistically significant. Noteworthy is that 48.9% of XRW actors had previous convictions, almost exactly the same as the OLAs (48.8%). However, XRW actors had a higher prevalence of a history of violence (15.6%) than their counterparts (5%; 3.984, p=0.046).

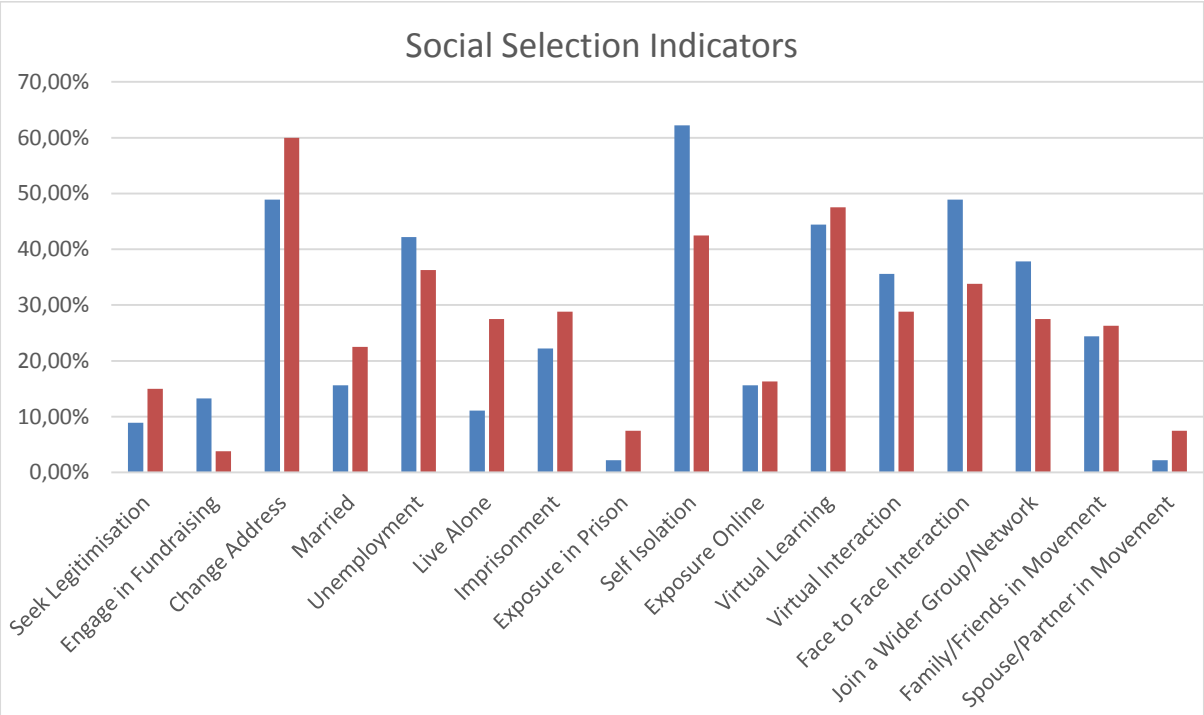
Selection Indicators



With regards to selection indicators (i.e. markers of possible vectors of exposure to the radicalizing ideology), almost no significant differences emerge in terms of self-selection indicators, the most prevalent of which are, as one might expect from the lone actor literature, the experience of a personal crisis (62.2% vs 48.8%), of a tipping point (48.9% vs 65%), chronic stress (24.4% vs 35%), recent stress (37.8% vs 68.8%) and problems in personal relationships (28.9% vs 26.3%). OLAs are significantly more likely to experience episodes of disrespect than XRW lone actors (11.1% vs 27.5%; 4.568, p=0.033).

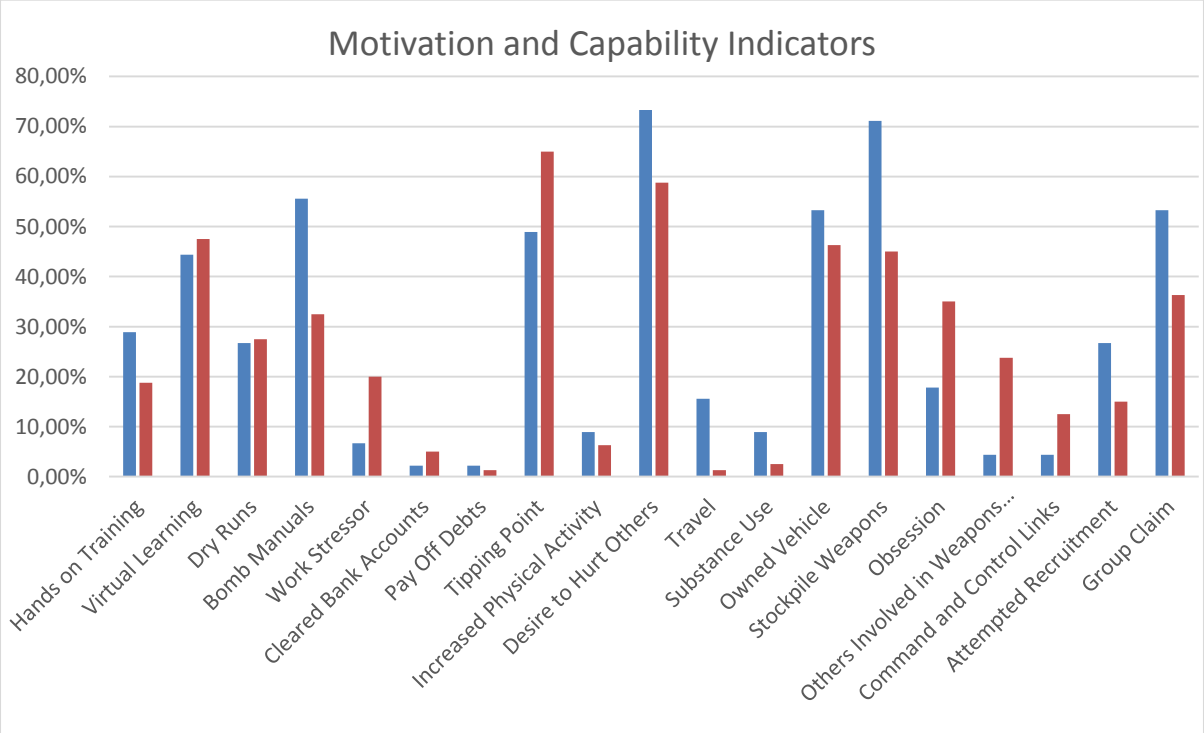
Although the traditional criminological literature may have raised expectations otherwise,[27] risk factors associated with childhood, such as physical abuse (4,4% vs 6.3%), are not prevalent among either group, compared to the general base rate,[28] although XRW actors were more likely to be victim of bullying (17.8% vs 8.8) than their counterparts.

Social Selection Indicators



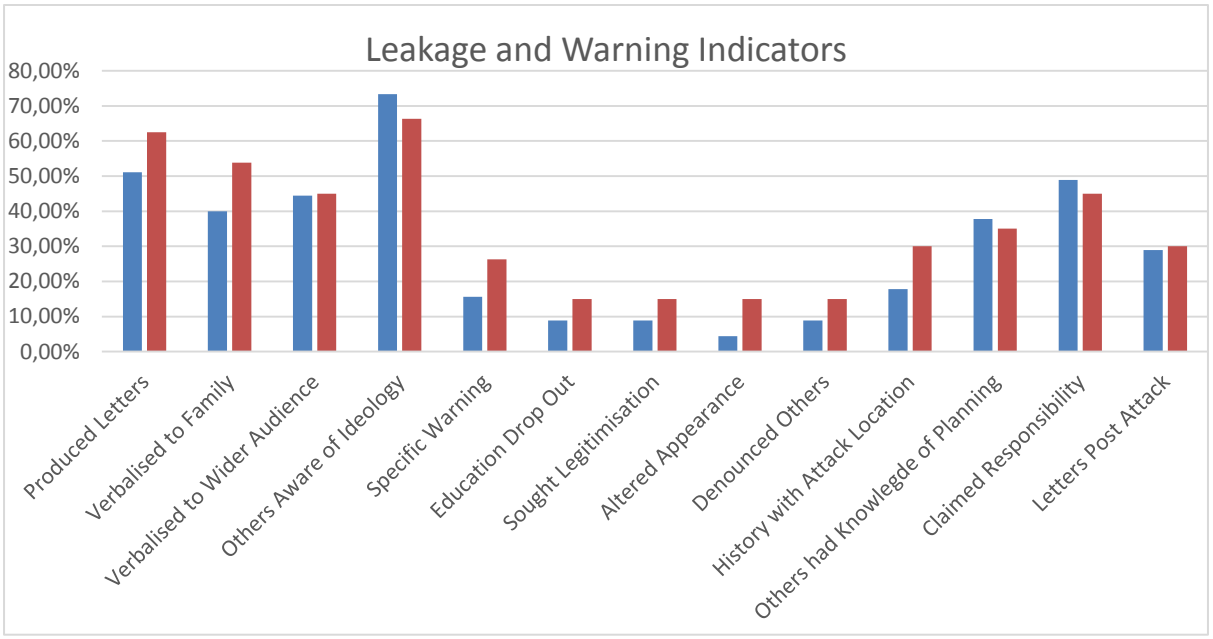
Analysis of social selection indicators (whereby the exposure vector is associated with social organization and belonging to particular social groups) reveal slightly more significant differences, to the extent that XRW actors are less likely to have experienced recent unemployment (17.8% vs 36.3%; 4.716, p=0.030) and to have lived alone at the time they adopted a terrorism-supportive ideology (11.1% vs 27.5%; 4.568, p=0.033), but more likely to have engaged in legal fundraising activities in connection with a political organisation (13.3% vs 3.8%, 3.959, p=0.047), to have consumed literature on other lone actors (37.8% vs 20%, 4.685, p=0.030) and to have consumed propaganda on lone actor methods (28.9% vs 10%, 7.351, p=0.007). No significant differences emerged with regard to prevalent social selection indicators such as self-isolation (62.2% vs 42.5%), online exposure (15.6% vs 16.3%), virtual learning (44.4% vs 47.5%), virtual interaction with other extremists (35.6% vs 28.8%), face-to-face interaction (48.9% vs 33.8%), having joined a wider group or network at some point (37.8% vs 27.5%), having family or friends belonging to a movement (24.4% vs 26.3%), or having a spouse or partner in the movement (2.2% vs 7.5%). Of note, given ongoing debates on the role of prison in radicalisation and involvement, is that while a non-negligible proportion of actors in both groups experienced imprisonment (22.2% vs 28.8%), prison is not a prevalent vector of exposure to the terrorism-supportive ideology for either group (2.2% vs 7.5%), as far as our data show.

Motivation and Capability Indicators



There are no significant differences between XRW actors and OLAs in terms of motivation and capability indicators, which are analytically related to the extent that perception of capability (the perception that one has the means and resources to carry out an action successfully) is hypothesized to be necessary to sustain the motivation to act over a period of time, especially when one is alone.[20] A majority of actors expressed a desire to hurt others (73.3% vs 58.8%) prior to engaging in terrorist action, an indicator which could flag susceptibility to moral change and as well as motivational processes, as does obsessive behaviour (17.8% vs 35%), experiencing work stressors (6.7% vs 20%) or tipping points (48.9% vs 65%), and substance use (8.9% vs 2.5%). The most prevalent capability indicators are the stockpiling of weapons (71.1% vs 45%), owning a vehicle (53.3% vs 46.3%), consulting bomb manuals (55.6% vs 32.5%), learning from virtual sources (44.4% vs 47.5%), and engaging in hands-on training (28.9% vs 18.8%) and in dry runs (26.7% vs 27.5%). A group claimed the attack in more than half of the XRW cases (53.3% vs 36.3%), though command and control links were more rarely present, as expected for this actor category (4.4% vs 12.5%). XRW actors tended to have travelled more than OLAs prior to the attack (15.6% vs 1.3%) and to have attempted to recruit others (26.7% vs 15%), although others were more often involved in weapons procurement in OLA cases (4.4% vs 23.8%).

Leakage and Warning Indicators



The category where XRW actors and OLAs appear the most undifferentiated is that of leakage and warning indicators, where the same markers appear equally prevalent across the board. In over half of the cases, others were aware of the actors' ideological commitments prior to the attack (73.3% vs 66.3%). In over half or almost half of the cases, the offenders produced letters (51.1% vs 62.5%), expressed their violent intentions to family members (40% vs 53.8%) and/or to a wider audience (44.4% vs 45%) and claimed responsibility for the attack (48.9% vs 45%), sometimes by writing letters (28.9% vs 30%). Others had knowledge of planning activities in a third of cases (37.8% vs 35%). OLAs tend to more often have a history with the attack location (17.8% vs 30%) and to issue specific warning (15.6% vs 26.3%), but these differences are not statistically significant.

Attack and Target Indicators

Ideology helps frame who is a justifiable target and shapes the repertoires of action deemed legitimate for the movement. It is therefore unsurprising that many significant differences appear between both ideologies for attack and target-related indicators. XRWs are less likely to attack at business locations (4.4% vs. 18.7%) but more likely to attack at private citizen locations (33% vs. 18.8%), and religious locations (22.2% vs. 5%). Given the significant differences in these location, it should be no surprise XRWs were also significantly more likely to attack private citizens (64.4% vs. 43.8%) but less likely to attack government targets (13.3% vs. 32.5%). XRWs were almost twice as likely (24.4% vs. 12.5%) to conduct multiple attacks, perhaps due to the greater preponderance of jihadist lone actors conducting suicide missions. There was no difference in the capability of XRWs and other ideologies in terms of their ability to implement an attack, conduct planning activities or kill people in the course of their actions. There was very little difference with regard to attack types in terms of XRWs proclivity in using bombs (44.3% vs. 37.9%), or firearms (35.4% vs. 39.1%); however other ideologies were significantly more likely to utilize bladed weapons (2.2% vs. 14.1%).

Results: Analysis of Pre-Attack Behaviour

The discussion now turns to look specifically at the second dataset to be developed during the PRIME project, which focuses in detail on lone actors' pre-attack behaviours. This part of the analysis disaggregates the findings presented in Schuurman et al.'s work on lone-actor terrorists' attack planning and preparation to assess the degree to which XRW lone actors (N=28) differ from the larger sample (N=57).[3, 29] In order to give readers a measure for gauging the reliability of a particular finding, the percentage of cases for which no data could be found is given in brackets after every variable. To underline the fact that we are dealing with a small sample size

when it comes to the pre-attack variables, percentages are given without decimal points.

Plot-relevant Background Characteristics

One of the main points to come out of earlier work on lone actors was that 46% (12% unknown) had a history of violent criminal behaviour. For the XRW lone actors surveyed here, this appears to be very similar at 50% (14% unknown). Whether a larger sample upholds this difference would be interesting to investigate, particularly given renewed recent interest in the so-called 'crime-terror nexus', which has so far been largely studied only in relation to jihadist terrorism.[30-32] For now, however, it is sufficient to note the high percentage of XRW lone actors with violent pasts. As previous engagement in criminal behaviour has been shown to be a potent predictor of similar delinquency in the future, this may be a particularly relevant aspect of threat assessment work for lone-actor terrorists in general.[33]

Social Context

It may seem counterintuitive to investigate the social aspects of lone-actor terrorists. Yet, previous research has demonstrated that, for a majority of lone actors, ties to radical, extremist or downright terrorist[34] individuals or groups are key elements in their adoption and maintenance of the motive, and sometimes also the means, to commit terrorist violence.[3, 6]

Again, while the small sample size precludes far-ranging generalizations, it is interesting to note that at 79% (7% unknown), XRW lone actors appear to be somewhat more likely to have such contacts than the larger sample from which they are drawn (63%, 9% unknown). Moreover, 54% (18% unknown) of XRW lone actors had contacts with leaders or authority figures within radical and extremist milieus, which is again higher than the 33% (16% unknown) found in the larger sample. But the biggest difference appears to be in the degree to which XRW lone actors have formal ties to radical, extremist or terrorist groups. At 50% (7% unknown), this appears to be clearly higher than the 32% (4% unknown) found in the larger sample. It would be particularly interesting for qualitative research to explore the effects of this stronger socialization in a radical, extremist or terrorist milieu. For now, these figures serve to underline the questionable assumptions about the isolation often thought to typify lone actors, and to illustrate the diversity in terms of embeddedness in radical social settings found within this category of terrorism.

Attack Planning

In terms of attack planning, understood here as the process of selecting suitable targets, no notable differences were found between the subsample of XRW lone actors and the 57 individuals in the total dataset. At 64% (18% unknown), a majority of XRW lone actors engage in at least some form of planning, very similar to the 70% (12% unknown) found in the larger sample. Similarly, 39% (32% unknown) of the XRW group engaged in target reconnaissance, just as 37% (28%) of the larger sample did.

Attack Preparation

Looking at the variables related to the acquisition of the means necessary to carry out an attack, the differences again appear to be small. Some 25% of XRW lone actors (4% unknown) had a history of (para-)military training, versus 16% (7% unknown) for the larger sample, which may translate into a slightly higher proficiency with the use of weapons among the former. The slightly greater prevalence of firearms training among XRW lone actors (43%, 29% unknown, versus 35% and 28% unknown for the entire sample), further emphasizes that these individuals may be characterized by a greater familiarity with the means to carry out acts of terrorist violence.

At 46% (7% unknown), the XRW subset was essentially just as interested in making homemade explosives as the 42% (4% unknown) found in the larger sample. This also extends to the acquisition of firearms, which 68% (4% unknown) of XRW lone actors and 61% (2% unknown) of the larger sample did. In other words, the higher incidence of weapons-related training may make XRW lone actors slightly more effective in the use of armed violence, but this difference does not appear to translate into very specific weapons' preferences.

Operational Security

One fascinating aspect of terrorists' pre-attack behaviours is their tendency to disregard operational security measures, or to execute them poorly, and their desire to share with others their convictions and sometimes also (hints of) their violent plans.[3, 35] Such 'leakage behaviour' in particular is striking, as it makes terrorists especially vulnerable to early detection and interdiction.[36] The desire to communicate an affiliation with a particular radical or extremist milieu, and to receive the benefits of status, a sense of belonging and fame (or infamy) often seem to outweigh the more practical dictates of maintaining a low profile prior to carrying out an attack. Operational security behaviour (or the lack thereof) and the tendency to 'leak' intent and capability for an attack are thus two of the most relevant categories of pre-attack behaviours for attempts to identify and prevent this form of violence. Because leakage behaviour has already been discussed in relation to the larger dataset above, this section focuses on operational-security relevant findings.

At 25% (21% unknown), XRW lone actors generally appear to be no more inclined to take operational security measures very seriously than the broader sample to which they are compared (26%, 18% unknown). One potential discrepancy may be that, at 39% (0% unknown), XRW lone actors appear to hide incriminating evidence such as weapons and explosives somewhat more often than the larger sample (26%, 0% unknown).

Another small potential operational-security related difference to emerge from this comparison, is that at 39% (11% unknown) XRW lone actors appears somewhat less likely to be known by the authorities on account of criminal (but not terrorist) antecedents than the larger sample (47%, 7% unknown). On the whole, however, this particular subtype of the lone-actor typology appears to display roughly the same vulnerabilities to detection and prevention through poor observance of operational security and a tendency towards leakage as lone actors overall.

Temporal Aspects of Pre-Attack Behaviours

The final comparison to be made looks at the temporal aspects of pre-attack behaviours. Because open-source data on how long various planning and preparatory activities took was often amongst the hardest to find, these findings are best seen as a first exploratory attempt to investigate this aspect of XRW lone-actors' behaviour. While keeping that in mind, Table 1 does hint at several interesting differences. XRW lone actors appear to become involved in radical, extremist or terrorist social milieus significantly earlier than their counterparts adhering to other extremist ideological currents. They also appear to start leaking both their convictions and their involvement in suspicious, that is violence-related, activities months and even years earlier than other lone actors. On the other hand, there seems to be no difference in terms of the length of the planning process and XRW lone actors may spend significantly shorter periods of time on attack preparation.

Table 1: Temporal Aspects of Pre-Attack Behaviours

Averages, time in months prior to attack/arrest	XRW (N=28)	Total sample (N=57)
Start contacts w. radical / extremist / terrorist individuals	90	72
Join radical / extremist / terrorist group	62	52
Development of intent to carry out an attack	34	30
Planning activities start	11	11
Preparation activities start	23	47
Operational security starts	23	15
Leakage of convictions starts	97	75
Leakage of involvement in suspicious activities starts	35	26

Discussion and Conclusion

The first part of the analysis compared XRW and other lone actors across a number of vulnerability, selection, motivation, capability and outcome indicators. Most of the significant differences were found in the vulnerability category. Those differences that emerged as significant characterized XWR actors as more likely to be a-religious thrill seekers born and raised in the country of attack, with a history of violence, compared to the OLAs who scored significantly higher on indicators related to religion (conversion, experiencing religious and ideological intensification, being Muslim, raised in religious household, born out of the country of attack). With regards to vectors of exposure to the terrorism-supportive ideology, indicators suggest that XRW actors were less likely to live alone at the time when they adopted their terrorism-supportive ideology, more likely to be involved in legal fundraising activities and to have consumed literature and propaganda related to lone actors. They also differed in their target choices: while OLAs were more likely to attack government targets and business locations, XRWs were more likely to go after private citizens and religious locations.

Perhaps more interesting than these findings, none of which appear to be that counterintuitive, is what our comparative analysis does not reveal: namely, we find no significant differences in terms of the vast majority of indicators, including all those related to motivation, capability, and, quite strikingly, in terms of leakage behaviours and warning signs. This raises the question to what extent risk assessment tools and processes must or should be tailored to ideology. Indeed, the Risk Analysis Framework used here is built on the notion that, while specificity and variability in indicators should be expected, due to social and self-selection effects, if nothing else, these and other underlying processes and mechanisms are common to all such events.[20] Whether more indicators and larger Ns would detect significant and meaningful differences between actor categories is an empirical question, but there are theoretical and empirical grounds to believe this is unlikely to be the case.[20, 37]

The second part of the article took a specific look at behaviours related to attack planning and preparation, using a second dataset encompassing 57 lone actors, of which 28 were classified as XRW. This provisional comparison also noted numerous similarities across categories; like lone-actor terrorists more generally, XRW lone actors appear to be typified by a high prevalence of violent criminal pasts, most of their attacks result from at least rudimentary planning and most of them appear to spend relatively little attention on operational security measures.

Yet there were also some differences that, while the small sample size must be kept in mind, point to potentially interesting divergences in terms of pre-attack behaviour that may also be of particular relevance for risk assessment purposes. On average, XRW lone actors seem to be slightly better trained in the use of weapons. This may make them more effective in the use of armed force and thus potentially more lethal. On the other hand, XRW lone actors also appear more likely to be involved with radical, extremist or even distinctly terrorist individuals and groups. While their higher likeliness of being (peripherally) embedded in such radical milieus could boost their capabilities by exposing them to a larger number of like-minded individuals who may have skills or experience relevant to conducting acts of terrorism, these social ties also undercut their ability to remain anonymous. A third differentiation was found in the length of the planning and preparatory process, with XRW generally starting months and even years earlier with becoming involved in radical milieus and engaging in leakage behaviour.

What all of these findings underline is that, like lone actors in general, the XRW lone actor is not a completely isolated individual liable to strike out of the blue. Their social ties to like-minded individuals and groups, the limited attention paid to operational security measures, the tendency to leak both convictions and violent intent, and the fact that many of these processes occur over a period of months, if not years, prior to the (planned) attack, means that early-detection and prevention of this threat is distinctly possible. Hopefully, the results presented in this article will be able to contribute to the more effective pre-emption of lone-actor terrorism, whether extreme right-wing in ideological orientation or otherwise.

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