Doing it again. Assessing the features and implications of terrorism recidivism in the context of jihadi attacks in Europe

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Abstract

This article focuses on the issue of terrorism recidivism as it relates specifically to terrorist attacks. Based on the analysis of a dataset comprising information on the jihadi attacks and their perpetrators in Europe between 2014 and 2022, it introduces the following findings: terrorism recidivists are disproportionately more likely to carry out attacks in groups with other "experienced" terrorists; their attacks have a significantly higher impact in terms of casualties; the rate of mental health is remarkably low; and they seem to be able to evade authorities in a much higher percentage of cases than other perpetrators without a terrorism-related criminal record. Overall, these suggest that terrorism recidivist perpetrators operate more "professionally" than the rest of the terrorist perpetrators, making their attacks more lethal and harder to prevent.

Introduction

Compared to instances of ordinary crime such as murder or theft, terrorist attacks are extremely rare, yet they have disproportionate repercussions on politics and societal dynamics. Still at the time of writing, the upcoming release of a high number of incarcerated terrorists and FTFs creates additional challenges. According to a paper published by Basra and Neumann (2020), at least 1414 individuals were detained for terrorism-related charges and/or sentences in European prisons in 10 countries, with most expected to be released by 2025. In addition, Basra and Neumann's estimates of incarcerated violent extremist offenders increased to at least 3080 when also accounting for individuals monitored by prison staff for radicalization. In order to address this threat, European states have invested significant efforts in the last years, not least financial, in prevention, deradicalization and disengagement programs. The effectiveness of such programs has recently come under scrutiny, considering

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the fact that some of the perpetrators of terrorist acts were not only recidivists, but in fact individuals who had been counselled in the framework of such programs. In 2020 for example, three jihadi attacks in Europe were carried out by individuals who had already been convicted for terrorism resulting in 30 casualties: a stabbing in London, a stabbing in Dresden, and a shooting in Vienna. The Viennese perpetrator was still part of a counselling program at the time of his attack (Bell: 2020). The London terrorist is reported to have been involved in violence and criminal activities and experienced mental problems (Sandford 2021).

Program related considerations aside, another avenue to shed light on these cases is asking the question whether there is something specific about individuals who go on to commit further terrorist motivated crimes after already having been convicted for the same. Do they pose a more significant security threat? Are there differences between terrorist recidivists and criminal recidivists who then engage in terrorism? This article presents the outcome of a systematic data analysis of a dataset comprising information on the jihadi attacks and their perpetrators in Europe between 2014 and 2022. The analysis compares terrorism recidivist perpetrators with the sample of criminal recidivist perpetrators and first offender perpetrators in the same period. While all three groups are fairly diverse and share many characteristics, the group of terrorism recidivist perpetrators stand out in four respects. They were found to be disproportionately more likely to carry out attacks in groups with other "experienced" terrorists (e.g. foreign terrorist fighters) instead of going it alone. This is likely the reason for their attacks having a significantly higher impact in terms of casualties compared to others. The rate of mental health conditions among terrorism recidivists in the sample is remarkably low. Finally, while terrorism recidivists tend to be known to authorities as potential threats, and some were even under surveillance, they seem to be able to evade authorities in a much higher percentage of cases than other perpetrators without a terrorism-related criminal record. Overall, these suggest that terrorism recidivist perpetrators operate more "professionally" than the rest of the terrorist perpetrators, making their attacks more lethal and harder to prevent.

The following sections provide a brief overview of the state of the art on the topic of terrorist recidivism; a description of the methodology used, an analysis of the dataset and its

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main insights; and a more in-depth discussion of the findings, making the case for the increased professionalism of terrorism recidivists. The article concludes with a reflection on the implications of the results for policy and practice, including for rehabilitation and reintegration measures, as well as for the security landscape of Europe more broadly.

Terrorist recidivism and reengagement

According to extant literature, the levels of terrorist recidivism appear to be generally low, as such and relative to criminal recidivism. For example, Renard (2021: 21) compares the average rates of criminal recidivism as being between 40% and 60% worldwide, with the results of various studies on terrorism recidivism which appear to be between 0% and 8.3% (ibid.: 22). The same author also outlines the various understandings of recidivism, such as an individual having two convictions on counts of terrorism, as opposed to terrorism 'reengagement', which would refer to a person continuing his or her involvement in terrorism after a break (ibid: 20). In his own dataset, Renard finds 2.3% of recidivism in the former, narrower sense, which increases to 4.8% if cases of reengagement are considered. Other individual country studies also highlight slightly higher numbers for terrorist reengagement, such as 9.7% in Spain or 16% in France (cited in Basra and Neumann 2020: 45). In another study, in a sample of 326 jihadis arrested in 2015 and later convicted on counts of terrorism, a number of 23 terrorist recidivists were identified, which roughly corresponds to 7% of the sample (Globsec 2019, pp. 7, 11). On a related topic, Hegghammer and Nesser (2015: 20) concluded that the "proportion of outgoing fighters who return and plot attacks against their home country or region – from Syria is thus far very low indeed", namely 1 in 360.

Other articles and studies appear to contradict this initial impression of comparatively lower recidivism when it comes to terrorist offenders. Altier et al. (2019) provide an approximate recidivism rate of 67.5% (reengagement for cases of individual, involuntary disengagement) and a true recidivism rate of 64.6% (p. 847). They define recidivism as "a return to terrorism after a period of formal sanction (commonly imprisonment or involuntary detention), where the return is usually marked and measured by reconviction" and reengagement as "a return to terrorism after a period of disengagement, regardless of whether

the disengagement was involuntary, or voluntary and perhaps not on law enforcement's radar" (p. 837). Overall, these outlier results might be traceable to the nature of the sample; the latter only included autobiographies, which suggest individuals with a (longer) terrorist careers and thus more likelihood of reengagement and it does not include lone actors.

Some experts have also examined the average time span between the individual's release and the second terrorism-related offense. Renard (2021: 26) found that 23 months pass on average after release until reoffending, with the median being 9 months. Malet and Hayes (2018) looked at "blowback rates" of FTFs and lag times in Western countries. They found that 97% of the returnees who engaged in a terrorist operation had less than 3 years of lag (i.e. the time between returning from foreign fighting and carrying out an attack or being arrested in relation to a plot), whereas the average lag time was 9 months, the median lag time was 5 months, and the most frequent (modus) lag time was just 4 months (ibid.: 9). Furthermore, their study found that most terrorist attacks occur within one year of returning. Prison did not appear to have an impact on the lag time, as most terrorist operations happen shortly after return (ibid: 10).

Finally, some studies have also inquired into the possible reasons behind terrorist reoffending. Silke and Morrison (2020: 5-6) argue that these might be lower because of monitoring and supervision, political motivation, different psycho-social features, such as the lower impact of psychiatric factors. In Altier et al. (2019), while the sample of recidivists was too low to draw firm conclusions about risk factors, a number of such factors could be identified in relation to reengagement, namely: lower age, "harboring 'a lot' of radical beliefs and maintaining some terrorist connections while disengaged, not being "from an upper or middle class childhood family" (p. 837).

From a different perspective, another strand of literature has focused on a specific type of reengagement, namely of returning foreign terrorist fighters (FTFs) and has also included information about the nature and effects of the respective terrorist plots. Hegghammer and Nesser (2015: 21) concluded that Daesh-linked foreign fighter plots were more lethal on average (7.3 deaths/attack) than plots without foreign fighters (1.2 deaths/attack), which hints at a higher lethality of attacks by terrorism recidivists defined broadly.

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While existing studies have provided valuable insights into specific characteristics of terrorism recidivists and their attacks, their findings remain fragmentary and largely unrelated to the characteristics of terrorist attacks. Questions remain whether terrorism recidivists are any different to attackers with an ordinary criminal record or those without any criminal history, and if so, how, and with what implications. This article builds on the existing findings and attempts to fill some of the remaining gaps, thereby contributing to the discussion with new data. It also bridges the literature on terrorist recidivism and the one on the reengagement of FTFs in terror attacks by considering recidivism specifically as it relates to terror attacks and how this affects their nature and impact.

Methodology

For the purposes of this article we took a broader definition of recidivism than simply 'two convictions', in order to better reflect the fundamental understanding in recidivism studies as "the continuation of, or return to, a previous pattern of criminal behaviour" (Silke and Morrison 2020:1); this also considers the fact that oftentimes the commission of a terrorist offence cannot be sanctioned by law anymore since the perpetrators died in the process. We therefore define it as *individuals carrying out a terror attack while also having a previous conviction for terrorism-related crimes* (incl. financial or logistical support for terrorism, spreading propaganda, participation and/or membership in a terrorist association, etc.), even if the perpetrator died and was not convicted for a second time. The narrow focus on attack perpetrators is a major difference compared to most other studies that also count non-violent reoffenders as terrorism recidivists. Furthermore, the article focuses specifically on terrorist attacks as forms of recidivism.

The report at hand draws on a SCENOR in-house dataset of jihadi terror attacks in the European Union (plus UK, Norway, and Switzerland) between 2014 and 2022. The database was created using open-source data: primarily secondary sources (news articles, incl. in local language; other publicly available datasets, such as the Global Terrorism Database [START 2022], reports by authorities [e.g. Europol's annual TE-SAT: 2022], press conferences, leaked

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investigation files), as well as primary sources if available (e.g. verified social media information).

The criteria for inclusion in the dataset were as follows: the attack was declared as terrorism by authorities, AND/OR a recognized terrorist entity claimed credit for the attack, AND/OR the perpetrator(s) expressed clear political/ideological motives (e.g. on social media, or during the attack) AND/OR the perpetrator(s) was proven to have consumed extensive amount of (jihadi) terrorist propaganda, AND/OR the weapon and target selection (e.g. consciously targeting certain groups in accordance with jihadi ideologies) is clearly indicative of a terrorist motive, whereas the latter also requires at least another criteria to be met.

The definition of terrorism has always been an intensively contested subject with a large variety of approaches, yet recent trends have made it even more challenging to distinguish terror attacks from violent criminality (murder, "amok"; see Corner 2018), particularly when mental health issues are also involved (see the debates around the Würzburg attack in Germany on 26 June 2021, Breninek 2021). While acknowledging these discussions, this dataset uses broad inclusion criterion in light of ongoing developments and an apparent shift in the nature of terrorism towards ideological flexibility and leaderless resistance. Both of these developments tend to re-shape the phenomenon into something that increasingly deviates from traditional definitions of terrorism established earlier in a different context. It thereby also captures events that may not show up in the statistics of authorities due to these relying on narrower, legal definitions of terrorism.

The dataset covers both attack-level variables and individual-level variables (i.e. perpetrator profiles). The following variables are included: date and location of attack, weapon(s) used, target(s), number of perpetrators, name of perpetrators, "kunya" of perpetrators (if available), status of perpetrators after the attack (KIA, arrested, convicted, fled), number of casualties (dead/injured), terrorist group affiliation, criminal history (Y/N; if yes: type of crime; if yes: criminal history related to terrorism/extremism Y/N), perpetrator being known to authorities as a potential terror threat prior to the attack (if yes: under surveillance Y/N), mental health issues (if yes: type of mental health issue [if known]), asylum seeker status (Y/N; if yes: status [request rejected/accepted], age, convert status

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(Y/N), citizenship, and employment. In terms of group affiliation, the attack was coded as related to a terrorist entity if any of the following conditions were met: credit claim by terrorist group, AND/OR Baya by perpetrator, AND/OR membership of perpetrator confirmed by authorities, AND/OR attack being inspired by terrorist entity — confirmed by authorities, AND/OR linked to terrorist entity by authorities (e.g. communication with "official" group members and recruiters). While coding links to Daesh this way is disputed (Hegghammer & Nesser 2015: 21), the exclusively open-source nature of the dataset does not allow the link type to be further specified.

Before proceeding with the analysis, it is important to outline some limitations which are specific to open-source data. The data used is likely not exhaustive, has a larger share of unknown values for certain variables, and is affected by bias in reporting. Furthermore, the dataset has a relatively small number of cases, which is a characteristic issue in the field considering the rarity of terrorism, particularly when only considering jihadism. Given the focus of this paper, the short period covered may also affect findings, with many terrorist offenders being released only recently; however, as noted by other studies, lag time tends to be short. Another challenge in this context is that attempted recidivism is difficult to measure, as not all foiled plots are publicly reported. Finally, the largest caveat remains the unknown role played by terrorism recidivists in group attacks: the dataset covers both attack-level and individual-level variables, yet the open-source nature of the data makes it difficult to determine the specific role of terrorism recidivists in cells. Thus, conclusions drawn based on correlations (e.g. attacks by cells involving one terrorism recidivists and multiple other non-recidivists being more lethal, yet no definitive answer on whether terrorism recidivism was a key factor for that) are to be taken with caution.

The following analysis looks at the differences between the three sub-groups of the sample: terrorism recidivists, criminal recidivists (petty and violent crimes, but not terrorism-related crimes), and first offenders (no criminal record prior to the attack). As the sub-group of terrorism recidivists is extremely small, the statistical significance was tested using Chi-square tests (significant if $p < 0.1$) based on the differences between the three categories of criminal background, while the strength of associations between variables was tested using the statistical test Cramer's V.

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Description of the perpetrator sample

Within the covered period of 2014-2022, 105 jihadi terrorist attacks were found in total that fulfil the dataset's scope and inclusion criteria. These attacks claimed 3089 casualties, of which 2684 were injured and 405 were killed as a result of the attacks. Although "only" 11 (10.48% of all attacks) of these were perpetrated by cells (2-10 terrorists), such coordinated attacks account for 1013 *(32.79% of all)* casualties. The rest (94 attacks, 89.52% of the total sample) were carried out by single actors. In terms of group affiliation, 67 (63.8%) attacks were related to Daesh, one (0.95%) attack was claimed by al Qaeda in the Arabian Peninsula (AQAP), and the rest 37 (35.23%) were not affiliated with any terrorist entity (i.e. not claimed by any such entity, nor having any links to any such entity).

The composition of the perpetrator sample in terms of the presence and type of recidivism is as follows (see also Figure 1 below):

- Without recidivism: 76 individuals (57.14% of all perpetrators in the sample), responsible for 56.19% of all attacks;
- With criminal, non-terrorist recidivism: 45 individuals (33.83% of all perpetrators in the sample), with 33.3% of all attacks involving at least one non-terrorist recidivist;
- With terrorist recidivism: 12 individuals (9% of all perpetrators in the sample), with 10.5% of all attacks involving at least one terrorism recidivist.

Some of the terrorism- and extremism-related offences of the 12 individuals were related to travelling to Syria or Iraq or attempting to do so, although multiple other perpetrators from the sample followed the same course of action without leading to a criminal charge or being known to authorities before the attack. Two (16.66%) of the twelve terrorism recidivists can be described as FTFs due to their history of spending time in areas controlled by terrorist groups; with one of them having been to Syria, and the other to Yemen. Another three (25%) individuals from the terrorism recidivist sub-group attempted to travel to such areas, yet either failed or were stopped by authorities. The rest (58.33%) of this group has not known (or reported) history of attempting to or succeeding in travelling to third countries for

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terrorism-related purposes. Further terrorism-related offences in the terrorism recidivist sub-sample were plotting terror attacks, membership in terrorist organizations, supporting terrorist organizations, defending and/or glorifying terrorism, and possessing/spreading terrorist propaganda.
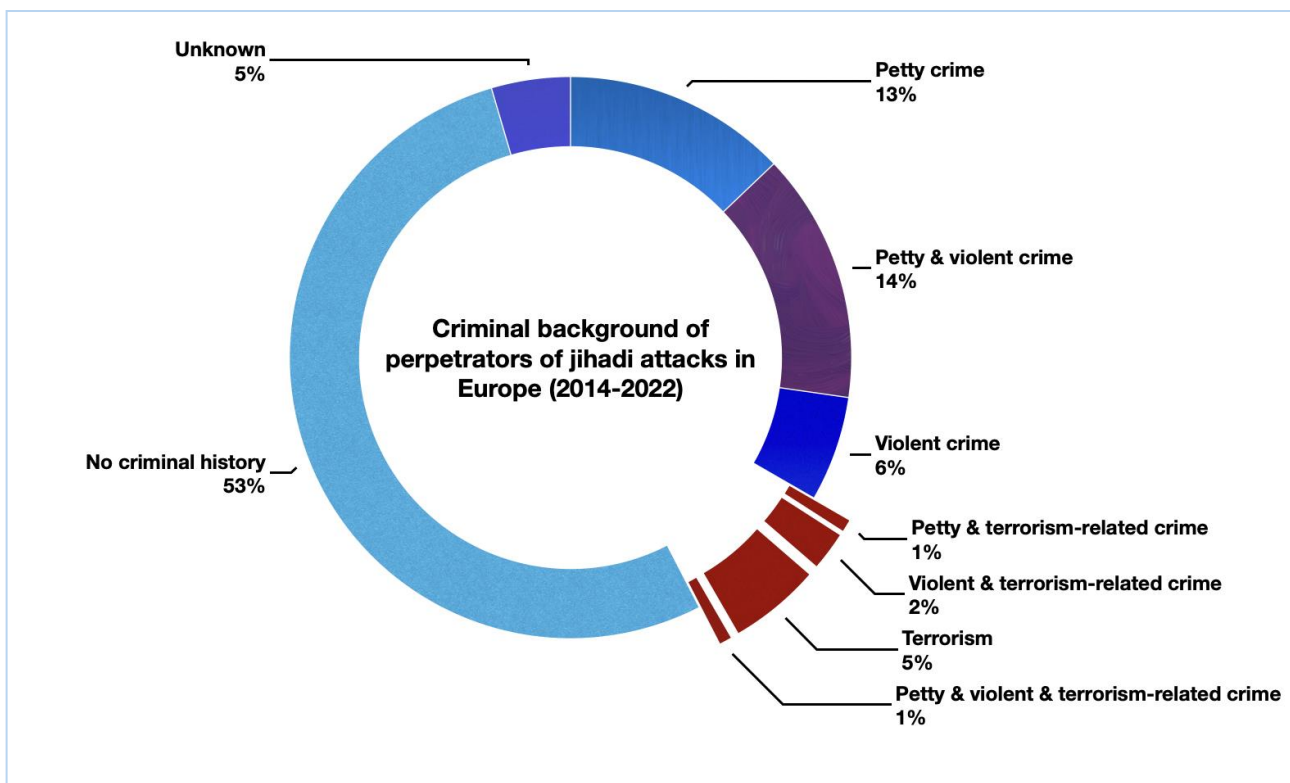

Figure 1: Criminal background of perpetrators of jihadi attacks in Europe (2014-2022), n=133

Terrorism recidivists appear to prefer working together with like-minded individuals in the context of attacks much more often than the two other sub-samples. The number of perpetrators per attack varies significantly based on the involvement of individuals with various criminal records: 36% of attacks involving a terrorism recidivist were carried out by multiple individuals. In comparison, only 2.86% of all attacks involving ordinary criminal recidivists can be categorized as group attacks, whereas the rate of multi-perpetrator attacks is somewhat higher (10.17%) among perpetrators with no criminal history. The association between the type of criminal background (i.e., whether first offender, ordinary recidivist,

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terrorism recidivist) and group attacks was found to be statistically significant (p=0.006) and medium strong (Cramer's V=0.309).

Given the above average tendency of terrorism recidivists to join forces with others, these groups' composition also tells that terrorism recidivists not only seem to be acting in groups more often, but when they do, they tend to team up with similarly experienced individuals, even if these were not formally convicted for terrorism beforehand. The 12 terrorism recidivists were involved in 11 attacks in total, out of which four were perpetrated by cells. These 11 attacks had a total of 23 perpetrators, i.e. 12 terrorism recidivists and 11 co-perpetrators. A key finding in this regard is that out of the 11 co-perpetrators of these attacks who did not have an *official* terrorism-related conviction, one individual (9% of co-perpetrators) had previous encounters with authorities due to being stopped from travelling to Syria, six individuals (54.5% of co-perpetrators) were in Syria, and one perpetrator (9% of co-perpetrators) was in Yemen, yet they were not convicted for this and thus do not officially count as terrorism recidivists. As for the other three co-perpetrators who have not been to or attempted to travel to conflict zones with active terrorist groups, two had a lengthy criminal record for petty and violent crimes, and the third one's identity and background are completely unknown.

Still, in many aspects, terrorism recidivists are not unique compared to other perpetrators. In line with findings by other studies, the average age of the 12 terrorism recidivists was 25.4 making this sub-group the youngest, compared to jihadi perpetrators with a non-terrorism-related criminal history that were 30.6 years old on average, and to jihadi perpetrators without any criminal record that were 27.2 years old on average. There were no converts among these 12 terrorism recidivist perpetrators, as opposed to 13.33% of perpetrators with a non-terrorism criminal record and 3.95% of perpetrators without a criminal history being converts. The association between the type of criminal background and convert status is statistically significant (p=0.086), but weak (Cramer's V=0.19). Similarly, the association between the type of criminal background and asylum seeker status is not statistically significant (p=0.118), with 16.67% of terrorism recidivists, 17.78% of criminal recidivists, and 27.63% of first offenders being asylum seekers.

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With regard to mental health, only one perpetrator (8.33%) out of the terrorism-recidivist sub-group had a known and diagnosed mental health issue (of unknown nature). At the same time, 40% of the perpetrators with a non-terrorism criminal history had a mental health condition, while the rate of reported mental illnesses among individuals without a criminal record was 26.32%. In the latter two sub-groups, schizophrenia was the most prevalent diagnosis. The association between the type of criminal background and mental health issues was found to be statistically significant (p=0.068) and medium strong (Cramer's V=0.200).

In open-source data, the employment status of perpetrators tends to be underreported. Also in our sample, the rate of the perpetrators' employment status is only known in roughly half of the cases, namely 51.13%. In the case of terrorism-recidivists, 16.67% were employed before the attack, 8,33% were unemployed, 8.33% were students, 8.33% were still prisoners, and the employment status of the rest (58.33%) is unknown. For comparison, among those with a non-terrorist criminal record, 15.56% were employed, 33.33% were unemployed, 2.22% were students, and 48,89% are unknown; whereas 24.67% of those without a criminal history were employed, 12.9% were unemployed, 15.58% were students and the rest 46.75% are unknown. While the association between the type of criminal background and employment status is statistically significant (p=0.016), no meaningful conclusion can be drawn due to the high share of unknowns.

Terrorism recidivists do not appear to be any more or less prone to regular criminality than the rest of the sample, implying that they are neither dedicated ideologues solely focusing on terrorism-related activities, nor regular criminals that were radicalized to fight for a "higher cause". In 41.6% of the cases, the criminal history of the terrorism recidivists also includes a variety of crimes not related to terrorism or extremism. While 58.33% of terrorism recidivists have *only* been convicted for terrorism- or extremism-related crime(s), 8.33% had convictions for petty crimes (theft, drug-related offences, etc.), another 25% were convicted for violent crimes (assault, murder, etc.), and 8.33% had a criminal record for terrorism-related, petty, and violent charges at the same time. These rates are somewhat different compared to the sub-group of the 45 perpetrators with a non-terrorism-related criminal record, out of which 37.77% were convicted for petty crimes only, 17.77% for violent crimes only,

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2.22% for an unknown crime, while the rest 42.22% had an extensive criminal record for both petty and violent offences. However, the difference between terrorism recidivists and the rest of the sample in terms of criminality (besides terrorism-related crimes) is not statistically significant (p=0.760).

With a proven history of engagement in terrorism-related crimes, authorities tend to keep a close eye on terrorism recidivists, which not only appear to be prone to failure but could also fuel grievances. Oftentimes, authorities had prior knowledge about the radicalization of and related terrorism threat posed by a perpetrator(s) of jihadi attacks, considering their previous convictions, encounters with authorities, reports by citizens, or other suspicious activities. In France, for instance, authorities maintain a watchlist (known as the "fichier S", cf. FRANCE24, 2018) of individuals that pose a potential terrorist threat, yet not every individual on the list is under surveillance. This metric of being on the radar of authorities was strikingly high among terrorism recidivists, as 41.67% of these perpetrators were reportedly under surveillance before the attack, while another 50% were at least known to authorities as a potential threat. In comparison, only 15.56% of perpetrators with a non-terrorism-related criminal history were under surveillance, and another 51.55% were listed as a known potential threat. Among perpetrators without a criminal history, only 5.26% were subject to surveillance, and 22.37% were known to authorities as a potential threat. The association between the type of criminal background and being under surveillance was found to be statistically significant (p=0.001) and medium-strong (Cramer's V=0.321).

Description of the sample on the modus operandi and outcome of attacks

Turning to the attacks as the unit of analysis, there is a slight, rather negligible difference between attacks involving terrorism recidivists and the rest in terms of the attack being affiliated with Daesh. In the case of the 11 attacks involving at least one terrorism recidivist perpetrator, Daesh claimed credit for six (54.55%), two (18.18%) were reportedly inspired by Daesh, one (9%) was claimed by Al-Qaeda in the Arabian Peninsula (AQAP), and two (18.18%) had no links to any group. In comparison, Daesh claimed credit for 17 attacks (48.57%) involving at least one criminal recidivist, reportedly inspiring another six attacks

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(17.14%), whereas the remaining 12 attacks (34.29%) were not linked to Daesh at all. Finally, out of the remaining 59 attacks by 71 perpetrators without any criminal history, only 13 attacks (22%) were claimed by Daesh, 21 were inspired (35.59%), one attack (1.69%) was linked to Daesh by authorities, and the rest 23 attacks (38.98%) were not affiliated with the group. However, while attacks involving terrorism recidivists are somewhat more likely to be linked to Daesh than others, especially in terms of direct credit claims by the group, the association between criminal background and link to Daesh was not found to be statistically significant (p=0.695).

There are modest differences in the target selection, too, yet not extensive enough to draw meaningful conclusions: perpetrators' criminal background does not explain targeting in the dataset used for this paper. About 36.36% of the attacks involving terrorism recidivists have targeted authorities (police officers, soldiers), another 36.36% of the attacks targeted civilians indiscriminately, and 27.27% seemed to have a purposeful target selection, attacking specific civilian communities that are perceived as ideological enemies (e.g. specific journalists and teachers criticizing or mocking Islam and Islamic figures, Jewish and Christian communities and individuals, LGBTQI+ communities and individuals, Shia communities and individuals). Attacks involving non-terrorism recidivists targeted authorities in 36.84% of the cases, civilians in 47.37% of the cases, and specific civilian targets in 15.79% of the cases. In attacks by individual(s) without any criminal history, authorities were targeted in 35.94% of the cases, civilians in 45.31% of the cases, and specific civilians in 18.75% of the cases. As shown by the comparison, terrorism recidivists appear to have a somewhat more conscious target selection, however, this association between criminal background and targeting (p=0.932) is not statistically significant.

Regarding the choice of weapon, the numbers somewhat defy the hypothesis that terrorism recidivists are more experienced and have better access to resources. Terrorism recidivists have resorted to unsophisticated stabbings in the majority (66.67%) of attacks, while only using IEDs in 8.33% of attacks and guns in 25% of the attacks. In contrast, attacks involving non-terrorist criminals, but no terrorism recidivists, used IEDs in 13.15% of the cases, shootings made up another 26.31%, and stabbings had the largest share with 39.47%, while the rest of the attacks used a variety of other means (e.g. sabotage, arson; 5.26%) or

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were rammings (15.78%). Attacks involving individuals with no criminal history have the highest percentage of stabbings (63.49%), followed by IEDs and rammings (12.69% each), only one (1.58%) shooting, and other weapons (e.g. sabotage, arson; 9.52%). The association between the choice of weapon and criminal background is statistically significant (p=0.011) and medium strong (Cramer's V=0.3), meaning the differences in criminal record explain the means used for terror attacks to a certain extent.

Despite mostly resorting to unsophisticated weapons such as knives and axes, attacks involving terrorism recidivists still resulted in a significantly higher average of casualties (55.55/attack) than other attacks (43.6/attack in the case of attacks involving non-terrorist criminals, 16.1/attack in the case of attacks by perpetrators without a criminal background). To be exact, attacks involving terrorism recidivists resulted in 13.82 deaths on average (24.88% of all casualties by these attacks, with the rest being injured), which is notably higher than attacks involving criminal recidivists (3.3 deaths on average; 7.54% of casualties by these attacks) as well as attacks by perpetrators with no criminal history (2.3 deaths on average; 14.5% of casualties by these attacks). While the averages of the terrorism recidivist attack sample were expected to be somewhat skewed upwards due to the 2015 Paris attacks, the other two sub-samples also have considerable outliers (e.g. 2017 Manchester bombing, 2016 Nice attack, 2016 Brussels bombings) in terms of casualties, i.e. this alone does not explain the glaring difference.

Specificities of terrorism recidivists

Taking into account the variables with statistically significant differences between terrorism recidivists, criminal recidivists and first offenders, several trends emerge. Overall, terrorism recidivism appears to be associated with a higher tendency to act in groups, a larger impact of the attack despite the use of mostly unsophisticated weapons, a notably low rate of mental health issues and the apparent ability to evade surveillance. These findings suggest a higher level of professionalism and are discussed in more detail below.

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(1) Significantly higher tendency to act in groups

One of the most striking differences between the three sub-groups in terms of criminal record is terrorism recidivists' relatively high tendency to act in groups, which in turn appears to have a major impact on the sophistication of the plot. Attacks involving an individual(s) with a terrorism-related criminal history (share of group attacks: 36.36%) were about five times more likely to be carried out by at least two perpetrators compared to the rest of the attacks in the sample (share of group attacks: 7.4%). Out of the four plots by groups that had at least one terrorism recidivist, three can be considered sophisticated compared to the average of the sample, with one attack targeting a specific community using guns, one being a combination of shootings and IEDs at multiple locations targeting civilians, and one being a hostage-taking and stabbing targeting a specific community. Only one group attack involving a terrorism recidivist can be considered rather unsophisticated, being a stabbing targeting authority in a prison. Group attacks, in general, are rather well planned and thus "professional", compared to the high share of impulsive, unsophisticated attacks by single actors that are highly characteristic for the overall sample.

This can suggest a variety of things:

(1) individuals already radicalized before their conviction (leading to their conviction in the first place) are expanding their ("professional") network in prison, *and/or*

(2) those with a terrorism-related criminal history likely have a higher status within the scene and could be seen as more trustworthy for complex terrorist operations (incl. in the case of recruitment/instructions by Daesh), *and/or*

(3) the conviction might have been related to their involvement in established cells or groups (e.g. conviction for membership in a terrorist organization, or for travelling to Syria) in the first place, whereas this involvement continued upon their release.

Another factor hinting at professionalism besides the general tendency of terrorism recidivists to team up for attacks is the background of their co-perpetrators. Despite not being convicted for terrorism-related crimes, all co-perpetrators either traveled to a conflict zone to

join terrorist groups and/or had a criminal record for violent and/or petty crimes. This suggests that terrorism recidivists prefer experienced allies when it comes to terror attacks.

(2) High impact of attacks

Despite the surprisingly high share of stabbings carried out by terrorism recidivists, attacks by this perpetrator sub-group lead to the most casualties on average per attack (55.55) by far, as well as to the highest share of deaths (24.88%, i.e. 13.82 per attack) among casualties. While the casualty average per attack is comparably high (43.6) for attacks involving criminal recidivists, these operations are significantly less lethal, with only 7.54% of casualties being deaths, i.e. 3.29 per attack. This suggests that terrorism recidivists operate more "effectively", i.e. more professionally, compared to others, even if their choice of weapon is not particularly sophisticated. The reasons likely vary for each attack, ranging from access to more sophisticated weapons, better planning, and/or better/more training.

(3) Advanced skills to conceal intentions

Another trend potentially indicating a higher level of professionalism among terrorism recidivists is the substantially higher rate of perpetrators that were known to authorities or even under surveillance prior to the attack. Despite being on the radar of security agencies, these individuals still managed to carry out an attack. The notable gap between terrorism recidivists and others in terms of attention by authorities can be explained in two different ways: it either potentially hints at advanced skills to conceal their intentions and evade preventive measures, and/or it simply means that individuals convicted for terrorism-related offences are more likely to be on authorities' radar than others. Without knowing the share of successful and unsuccessful attack attempts while being on security agencies' watch, it is impossible to provide a definite answer. Further qualitative analysis of these cases could provide a more definite explanation for this finding, however, the data required for such investigations is likely to be classified.

(4) Significantly lower prevalence of mental health issues

Mental health issues rarely seem to be a factor for terrorism recidivists. It is vital to note that there is a wide variety of different mental health conditions, ranging from light to severe issues. Still, professionalism in terms of careful planning, preparation and execution of an attack while evading authorities requires serious effort and mental fitness in most cases. Particularly when acting in groups, mental hygiene is often considered to be a high priority to maintain operational security as well as for tactical reasons.

Contextualization and implications

The results of our analysis unsurprisingly confirm the overall comparatively lower rates of recidivism when it comes to terrorist offenders. At the same time, the article provides a more in-depth look into key variables relating to individual profiles and modus operandi, which confirm the initial assumption that terrorism recidivists tend to pose a more serious security threat. Criminal history, and in particular a conviction for terrorism-related crimes strongly correlate with the dimensions and impact of jihadi terror attacks, making "terrorism graduates" a key concern. Attacks carried out by terrorism recidivists result in significantly more casualties (and a higher share of deaths) than attacks by criminal recidivists and first offenders. While the exact mechanisms driving this trend remain blurry, the analysis above has found signs that terrorism recidivists might be more professional, as indicated by their higher likelihood to act in groups — albeit still only in a third of the cases —,mentally fit, and potentially better at evading preventive and surveillance measures of authorities.

Our results furthermore inform a number of current debates in the terrorism literature more broadly, in particular as they relate to mental health and unemployment. The latter is a variable on which open-source data is rarely available. At the same time, studies highlight the importance of an increased focus on unemployment in prevention strategies, such as in the case of youth (Adelaja & George 2020). Alternative data sources are thus necessary to more clearly ascertain the role of unemployment in radicalization processes. As regards mental health issues, recent research highlights their strong presence among jihadis (see for example Duits et al., 2022; Harris-Hogan et al., 2020). At the same time, studies also find a correlation

with unsophisticated and rather ineffective attacks (Harris-Hogan et al., 2020; RAN, 2021). Our results confirm this, and furthermore indicate that the prevalence of mental health issues might in fact be rather specific to lone actors.

While the quantitative nature of this paper does not allow for drawing definite conclusions on the exact reasons why recidivism might lead to more professionalism, a hypothesis is that prisons are not (just) hotbeds of radicalization but might (also) be hotbeds of professionalization. This could be attributed to a variety of factors, such as the exchange of know-how with criminals in prison, the networking aspect with organized criminals that could simplify access to weapons and further illegal activities, and the higher status within the jihadi scene upon release that presumably also results in more resources. Still, each case is different, and even the small group of terrorism recidivists is rather diverse. While the above-average tendency to act in groups supports the hypothesis of deeper networks and potentially a higher status within the scene, the envisaged access to resources seems rather irrelevant in the majority of the cases, as knives were used in an overwhelming share of these attacks. At the same time, the 2020 Vienna shooting by a terrorism recidivist was largely facilitated by other terrorism convicts in prison, that utilized their networks to purchase guns used for the attack.

It remains to be seen whether European authorities are up to the task of successfully deradicalizing and reintegrating (violent extremist) offenders, which will be a key factor in determining the future of jihadism in Europe. As the statistics above show, surveillance and watchlists cannot replace rehabilitation and reintegration measures, as such security measures have proven to be prone to failure or evasion. Moreover, with the number of potential terrorist offenders on the watchlist of European governments and many more soon to be released, surveillance measures are simply not viable long-term, as warned by a UK official:

> "Metropolitan police assistant commissioner Neil Basu […] warned further attacks would happen as police and the security services were dealing with 3,000 subjects of interest and could not 'watch all of them all the time'. […] 'But with 3,000 or so subjects of interest currently on our radar and many convicted terrorists soon due to be released from prison, we simply cannot watch all of them all the time.'" (Grierson 2020)

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Austria and Germany face similar issues regarding a lack of resources. According to the estimates of the Austrian press, approximately 20 personnel are needed for the permanent surveillance of a single individual (Thierjung 2017). With the latest estimates on the number of individuals potentially posing a terror threat in Austria (50-60) and Germany (630), this would require about 1100 (AUT) or 12 600 (GER) well trained law enforcement staff exclusively working on the around-the-clock observation of such individuals (Marchart & Schmid 2023; bpb 2022).

While these initial quantitative findings highlight the gravity of the issue as well as the most relevant aspects of it, additional qualitative research is needed to better understand the mechanisms behind the trend of professionalization among (terrorism) recidivists. For instance, while criminal recidivists also appear to carry out high-casualty attacks, not all of them have necessarily spent time in prison. Petty crimes, in particular, are rather unlikely to result in incarceration. In addition, quantitative research on the subject also requires more access to data, particularly biographies, as open-source data is oftentimes incomplete, especially regarding information on employment and education. These two have historically been important factors in numerous theories explaining terrorism. Mental health conditions are yet another aspect that appears to have gained relevance for jihadi terrorism recently, yet publicly available data on the particular diagnoses of perpetrators remains scarce, albeit for good reasons. As data protection and human rights considerations are crucial pillars of research, closer cooperation is required between researchers and authorities in this regard to gain a deeper understanding of the drivers behind the latest wave of jihadi terrorism in Europe, while still maintaining high ethical and legal standards.

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