

# The Hanau Terror Attack: Unraveling the Dynamics of Mental Disorder and Extremist Beliefs

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This case study is a detailed assessment of the paranoid schizophrenia and right-wing extremist beliefs of Tobias Rathjen, who amalgamated three low-base rate events: mass homicide, matricide, and suicide. The offender killed nine individuals during a terrorist attack in Hanau, Germany, on February 19, 2020, before murdering his mother and taking his own life. A comprehensive qualitative analysis of primary and secondary sources was conducted, with raw materials consisting of three written documents and three recorded videos, all authored and disseminated by the perpetrator prior to his attack. Open-source data were predominantly composed of the postmortem forensic psychiatric evaluation of the assailant, as well as minor interpellations between the German government and parliamentary groups, and to a lesser extent printed and online articles. We structured the analysis with the Terrorist Radicalization Assessment Protocol (TRAP-18) and found that Rathjen was positive for 94% of the TRAP-18 indicators. The motivations for his acts of violence were multifaceted, but his major psychiatric illness, paranoid schizophrenia with chronic delusions, was central in his progression to become a lone-actor terrorist. In addition to this internally formed psychotic-driven ideology, the perpetrator was influenced and inspired by external (i.e., online and offline) xenophobic and conspiratorial elements that gradually provided a secondary framework for his violent attack. The complex interplay of his delusions, obsessions, and extreme overvalued beliefs—which drove his fixation—reveal the difficulty of clinically understanding such a case, and also the necessity of doing so, to attempt to risk mitigate these types of subjects by threat assessment teams.

### **Public Significance Statement**

This postincident research applied a threat assessment instrument to the lone-actor terrorist Tobias Rathjen, who joined three statistically rare occurrences: mass homicide, matricide, and suicide. Ninety-four percent of the TRAP-18 warning behaviors were prevalent in this case, which was predominantly motivated by a severe mental disorder, paranoid schizophrenia, exacerbated by ideological and conspiratorial beliefs from the far-right cosmos.

**Keywords:** lone-actor terrorism, threat management, violence risk assessment, mental disorder, Terrorist Radicalization Assessment Protocol–18

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The authors would like to thank Henning Saß and Marcus Papadopoulos for their many valuable insights and discussions during the preparation of this study. J. Reid Meloy derives income from the training and

dissemination of the Terrorist Radicalization Assessment Protocol through Multihealth Systems, Inc. (<https://mhs.com>).

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On February 19, 2020, at 21:55:43, Tobias Rathjen (43) enters the bar La Votre, located at the Heumarkt in the central square of Hanau, a small town in the state of Hesse, Germany.<sup>1</sup> He opens fire with a legally borrowed pistol from a weapons store, a Czeska Shadow 2 Single Action, and kills one individual inside the establishment between 21:55:45 and 21:55:48 before fatally shooting a second victim with the same gun outside the premises. The perpetrator proceeds to the shisha bar Midnight at 21:55:55, which is approximately 25 yards away, where he murders the owner of the establishment between 21:55:57 and 21:55:58 and flees by foot to retrieve his vehicle on the Herrnstraße. He fires shots at an oncoming car between 21:56:11 and 21:56:13 with a SIG Sauer P226 pistol, which he legally owned, and drives with high speed from his parking spot at Kanaltorplatz toward Kesselstadt, Hanau, at 21:57:34. The driver of the hit automobile chases him while unsuccessfully attempting to reach the police several times. At the Kurt-Schumacher-Platz, which is 4 miles away from the first two crime scenes, the assailant thwarts and kills the driver of the vehicle that had followed him between 22:00:11 and 22:00:13. In the immediate aftermath, the offender enters Kiosk 24/7 at 22:00:25 and opens fire with the SIG pistol, killing an additional three victims between 22:00:27 and 22:00:29. A few seconds later, he bursts into the Arena Bar & Café, which is adjacent to the Kiosk 24/7 and situated in the same building, discharges several rounds and mortally wounds two individuals between 22:00:35 and 22:00:41. Within 5 minutes, Tobias Rathjen fires a total of 52 rounds, killing nine victims and injuring six; all casualties were either native Germans with foreign roots or immigrant backgrounds of Afghan, Bosnian, Bulgarian, Kurdish, Romanian, or Turkish descent.

After driving 0.25 miles to his family home in the Helmholtzstraße in Hanau where his vehicle is observed around 22:32, he murders his mother, Gabriele Rathjen, in her bed in the living room with two shots from the SIG Sauer and later commits suicide in the cellar of the house where his room was located (dpa, 2022; Der Spiegel, 2020; Deutscher Bundestag, 2020a, 2020b, 2021; Forensic Architecture & Forensics, 2022). Surveillance videos, witness reports, and various tips regarding the vehicle and license plate of the perpetrator prompt law enforcement to his place

of residence, which a SWAT unit enters at 03:00, suspecting potential explosives and having failed to establish a line of contact with the occupants (Hessenschau, 2020; Hessischer Landtag, 2020). The offender's father, Hans-Gerd Rathjen, is uninjured and reportedly slept through the gunshots in his house; no traces of gunpowder are discovered on him. The investigating authorities seize the Czeska Shadow 2 pistol and 500 rounds of ammunition in a backpack in the perpetrator's automobile, and the SIG Sauer P 226 pistol is discovered next to Rathjen's body (Der Generalbundesanwalt, 2020; dpa, 2022). According to the official autopsy report, the earliest time of death for Rathjen's mother was determined to be at 00:55, and the preliminary death certificate suggested between 02:00 and 04:00 (Forensic Architecture & Forensics, 2022). The offender's time of death was estimated to be between 02:00 and 03:00, according to his preliminary death certificate (Forensic Architecture & Forensics, 2022). After following over 300 leads and traces, interviewing more than 400 witnesses, and investigating several hundred pieces of evidence, The Office of the Federal Public Prosecutor determines that Tobias Rathjen prepared and conducted the act of violence alone, with no affiliations to a terrorist cell or organization (Der Generalbundesanwalt, 2021; Deutscher Bundestag, 2020a, 2020b).

## Terrorism in Germany

The International Centre for Counter-Terrorism (van Dongen et al., 2022) noted in their Terrorist Threat Assessment 2019–2021 that Germany suffered the highest number of terrorist attacks in absolute and relative numbers during this period, and that most of the right-wing extremism-related arrests during these years were located in

<sup>1</sup> At the time of publishing this research article, the investigations into the Hanau terror attack are ongoing, 3 years after the incident occurred. No official reports have been released by the investigating authorities, with most documents related to this case being classified. Unless cited otherwise, the description of this introductory timeline is based on the current status of the inquiry and draws upon responses from the President of the German parliament to written inquiries submitted by parliamentary groups (minor interpellations; Deutscher Bundestag, 2020a, 2020b, 2021), in addition to an independent timeline created by Forensic Architecture and Forensics (2022). German and English news media articles about the timeline and crime scenes appear to be contradictory at times.

Germany and the United States. The Federal Office for the Protection of the Constitution (Bundesamt für Verfassungsschutz, 2021, 2022) declared right-wing extremism as the most substantial threat to the democratic constitution in Germany in their annual reports in 2020 and 2021. In previous years, the domestic intelligence agency had designated Islamic terrorism as the biggest security threat, as the republic had encountered a number of jihadism-inspired attacks, such as the 2020 Dresden stabbing (Bureau of Counterterrorism, 2021), the 2016 Berlin Christmas market vehicle ramming (Böckler et al., 2017), and the 2011 Frankfurt airport shooting (Böckler et al., 2015). Recent fatal acts of violence fueled by far-right sentiments in Germany included the National Socialist Underground murders between 2000 and 2007 (Saha, 2021); the killing of proimmigrant politician Walter Lübcke at his home in Isthra, Hesse, in June 2019; and an attempted mass casualty event at a synagogue in Halle, Saxony-Anhalt, in October 2019 (Bureau of Counterterrorism, 2020a). When the perpetrator of this thwarted attack, Stephan Balliet, failed to enter the house of worship, he killed two individuals nearby.

### Mass Homicide–Matricide–Suicide

The case of Tobias Rathjen amalgamates three statistically rare occurrences: mass homicide, matricide, and suicide, with each event in itself being a low-base rate behavior. *Terrorism*, one form of mass homicide, is defined as:

The use or threat of action which is designed to influence the government or to intimidate the public or a section of the public, and/or the use or threat is made for the purpose of advancing a political, religious, [social] or ideological cause. (Gill et al., 2013, p. 2)

Terrorism caused 0.01%–0.08% of all deaths on a global scale from 1990 to 2017 (Richtie et al., 2022). Furthermore, only a small fraction (2%) of homicides in the United States are comprised of *parricides*, biological children killing their mothers, fathers, or near relatives; these data appear to be consistent with studies from other countries, including the United Kingdom, France, and Australia (Fegadel & Heide, 2016; West & Feldsher, 2010). *Suicide*, the act of intentionally killing oneself, constituted 1.3% of global deaths in 2019 (World Health Organization, 2020).

Committing suicide after killing one's parents or siblings is even rarer and more infrequent than parricides and siblicides themselves (Liem, 2010). In a review of homicide followed by suicide literature, it was concluded that “in samples of parricide perpetrators, none or very few commit or attempt to commit suicide after” (Liem, 2010, p. 159). Suicidal ideation, the thought or idea of lethal self-injury, is listed as a red flag warning behavior among the risk items of the Communications Threat Assessment Protocol–25, which describes that “those who plan to kill themselves no longer have any fear as to the consequences of their actions, and so are ‘free’ to act in an unconstrained manner” (James et al., 2021, p. 27).

The triangulation of mass homicide, matricide, and suicide illustrates the distinctiveness of Tobias Rathjen's actions and prompted us to look more deeply into his psychology. Preliminary study further yielded an ideological motivation, and to our knowledge, this is one of the first cases in criminology where a lone-actor terrorist attack has been joined with matricide and suicide. Furthermore, one stimulus for the present study was Gill et al. (2020, pp. 18–19), who stressed that more idiographic research—rather than nomothetic—is needed to understand the impact of psychiatric illnesses on targeted violence, which “could help untangle the relevance of mental health disorders in particular individuals who became violent extremists at particular moments in their life.”

To address this complex case, we charted a course that involved three lines of inquiry: first, a linguistic threat analysis (Kupper & Meloy, 2021) of Rathjen's written and spoken communications through the lens of the Terrorist Radicalization Assessment Protocol (TRAP-18; Meloy, 2017). We only focused on the raw data itself, the language evidence, which included one manifesto and two appendices, as well as three recorded videos. Second, a retrospective risk application of the TRAP-18 to the preattack behaviors of the Hanau terrorist, concentrating on primary and secondary sources, such as the postmortem forensic psychiatric evaluation of the perpetrator. This postincident exercise was conducted to “put flesh to the bone [and] help us understand the unique characteristics and commonly shared attributes of those who are ideologically motivated to commit violence toward noncombatants” (Böckler et al., 2015, p. 155). And third, an investigation into the intersection

between his delusions, obsessions, and extreme overvalued beliefs that were cognitive–affective drivers of his fixation (Meloy & Rahman, 2020). This was completed to examine the nexus between his psychopathology and ideology (Meloy & Yakeley, 2014)—a paranoid schizophrenia and a violence-justifying belief system typified by far-right sentiments and conspiracy theories. This latter approach heavily draws on the work of Rahman (2018) and Rahman et al. (2016, 2019, 2020) and his validation of methods to distinguish among delusions, obsessions, and extreme overvalued beliefs.

### Method

We conducted a comprehensive qualitative assessment of primary and secondary sources, with a focus on the development of a complex mental disorder as a “precursor to terrorism” (Borum, 2012) and the convergence of the lone-actor’s self-radicalization process.

### Primary Source Materials

Original and raw materials were comprised of an archived version of Tobias Rathjen’s website, <https://www.tobias-rathjen.com>, as well as his writings and recordings that were leaked prior to his act of violence, including a manifesto, two shorter appendices, and three recorded videos. We were unable to acquire a 58-min video that was authored in German and titled “Erklärung” [explanation]. All of the written and recorded files were transcribed, translated, and analyzed by the first author, Julia Kupper, who is a native German speaker.

Written files (all authored in German):

- 24-page manifesto: “Skript\_mit\_Bilder” [script with pictures]
- 9-page appendix: “Anhang\_1\_DFB” [Appendix 1 DFB; *DFB* is an abbreviation for *Deutscher Fußball-Bund*, the German Football Association]
- 7-page appendix: “Anhang\_2\_Irak\_-\_Afghanistan” [Appendix 2 Iraq—Afghanistan]

Spoken files:

- 1:43-min video, authored in English: “Video 2 (USA)”

- 18:09-min video, authored in German: “Video 3 (zu den Links)” [about the links]
- 9:02-min video, authored in German: “Video 4 (Schlussanmerkungen)” [final remarks]

### Secondary Source Materials

In addition, we completed an extensive analysis of secondary open-source data, which included a posthumous expert report of Tobias Rathjen by Saß (2022a), who conducted a forensic psychiatric evaluation of the perpetrator based on his biography and other materials at the behest of The Office of the Federal Public Prosecutor in Germany. We obtained additional information and clarifications in private communications with Saß (personal communication, March 6–June 28, 2022b). Furthermore, several minor interpellations, written questions submitted by parliamentary groups on a particular topic to the president of the German parliament, which are forwarded to and answered by the federal government, were examined. These interrogatives and responses are published in a printed article on a weekly basis and function as an oversight and scrutiny of the executive branch (Deutscher Bundestag, n.d.). The documentation included inquiries from the center-left Bündnis 90/Die Grünen (Alliance 90/The Greens) and the far-right Alternative für Deutschland (Alternative for Germany) parties between July 2020 and April 2021 (Deutscher Bundestag, 2020a, 2020b, 2021). Additionally, we consulted electronic and print media, such as publications from *CTC Sentinel* (Crawford & Keen, 2020) and the *International Centre for Counter-Terrorism* (van Dongen et al., 2022).

### The TRAP-18

This retrospective study applied the eighteen indicators of the Terrorist Radicalization Assessment Protocol (Meloy, 2017) to Tobias Rathjen’s behaviors prior to the Hanau incident in an effort to enhance the prevention and mitigation of targeted violence attacks. The TRAP-18 is a structured professional judgment instrument for the operational threat assessment of lone-actor terrorism subjects, developed by the third author and first published in Meloy, Roshdi, et al. (2015). The theoretical and clinical foundations can be found in Meloy and Yakeley (2014) and Meloy et al. (2012). The TRAP-18 consists of two sets of

variables: eight proximal warning behaviors and 10 distal characteristics. These behavior-based indicators were utilized as a classification system to categorize and code the primary and secondary sources in a threefold analytic process.

First, based on a previous study (Kupper & Meloy, 2021), we conducted a linguistic threat analysis of the primary sources to determine the prevalence of TRAP-18 warning behaviors in Rathjen's original files, which were published before the incident. In the preceding research, the first and third authors took a novel approach and retroactively applied the TRAP-18 to 30 written and spoken manifestos, authored and leaked by lone offenders prior to committing targeted violence attacks that were motivated by extreme ideologies and/or personal grievances (Kupper & Meloy, 2021). In this original study, 17 out of 18 warning indicators (94%) were coded in the language evidence of these assailants, disregarding what an external investigation might have revealed about the cases. The presence and absence of TRAP-18 indicators were measured and counted by systematically investigating the occurrences of these content categories within the text, only focusing on the words, phrases, and sentences itself. An indicator was coded as present if it was measured at least once in the data, no matter how often it appeared within the text.<sup>2</sup> We applied the same methodology in this study.

Second, the proximal warning behaviors and distal characteristics were applied to the open-source data, which entailed the forensic psychiatric evaluation, several minor interpellations, as well as online and printed publications involving the Hanau attack. A behavior was coded as present if the authors were in agreement that the definition of an indicator, as outlined in the TRAP-18 manual (Meloy, 2017), complied with the offender's actions. Ambiguity was addressed in biweekly video calls between the first and third authors from February to May 2022 until consensus was reached.

Third, we investigated the complex interplay of his delusions, obsessions, and extreme overvalued beliefs that drove his fixation (Meloy & Rahman, 2020) to examine the nexus between Rathjen's psychopathology and ideology (Meloy & Yakeley, 2014). This was completed to assess if and how the offender's motivating forces to commit his mass attack were dynamically affecting each other or operating independently.

## Crime Scene Visitation

While our study was being peer-reviewed, the first author had the opportunity to visit the crime scenes in Hanau on August 26, 2022. This site visitation was conducted to enhance the comprehension of the case and event dynamics by verifying the accuracy, credibility, and reliability of the third-party information utilized throughout this study (Mohandie & Meloy, 2013). Prior to visiting the site, Kupper reviewed the data provided in the introduction of this article and noted key locations and timestamps of the acts of violence on the night of February 19, 2020. Her main objective was to review the spatial and temporal evidence in a real-world context.

The first author's discovery journey started at the bars *La Votre* and *Midnight* at the *Heumarkt*—the first crime scenes—which are located in very close proximity to each other and only separated by one building. When she walked around the corner to the *Krämerstraße*, she spotted the “Initiative 19. Februar Hanau,” a solidarity movement to support the victims' families and survivors, which has collaborated with independent investigative agencies to clarify open questions. They provided her with a comprehensive brochure of a timeline created by *Forensic Architecture* and *Forensis* (2022), which she subsequently utilized to corroborate the data of the minor interpellations (*Deutscher Bundestag*, 2020a, 2020b, 2021) that were used as a baseline for the introduction of this study in a detailed, comparative assessment. Furthermore, Kupper drove to the second crime scenes at the *Kurt-Schumacher-Platz* in *Kesselstadt*, which she executed in approximately 5 min in daytime traffic on a Friday afternoon. Tobias Rathjen reportedly sped there in 2.5 min; considering the variables that he conducted his attack around 22:00 on a Wednesday evening with little to no traffic and was a native of Hanau, it is feasible that he completed the trip in half that time. Upon arrival, she inspected the location where the driver of the car that had followed the offender was killed, in addition to the entrance of the *Kiosk 24/7* and *Arena Bar & Café*, which were located in the same building.

<sup>2</sup> The reader is advised to consult the original article (Kupper & Meloy, 2021) for specific coding examples (p. 182) and an extensive list of three textual samples for every TRAP-18 indicator (pp. 194–199).

Similarly to the first two bars, the kiosk and café were inaccessible, as they had been closed down; thus, the first author was limited to inspect all localities externally. Kupper's last stop was the third crime scene: Rathjen's family house in the Helmholtzstraße, which was a 1-min drive from the previous site. Her after-the-fact data collection verified the correctness, plausibility, and thoroughness of the data obtained from the external sources about the sequence and timing of the events.

## Results

### Proximal Warning Behaviors

Proximal warning behaviors typically occur closer to a potential attack and can appear in the form of online and offline ("on the ground") operations; threat assessors are advised to pay attention to both when investigating a subject.

### Pathway

Behaviors related to researching, planning, preparing, and implementing strategies and tactics for an attack are categorized under the *pathway* proximal warning behavior (Meloy, 2017). Although Tobias Rathjen's affinity for weapons appears to have begun in his youth, it was not until his late thirties that he actively engaged in shooting sports as a hobby (Gezer et al., 2021; Saß, 2022a, p. 8). In 2012, he joined the shooting club Diana Bergen-Enkheim near Frankfurt, a 15-min drive from one of the crime scenes and his family home in Hanau, where he practiced regularly and was described as an inconspicuous, quiet loner by fellow members (Der Tagesspiegel, 2020; Saß, 2022a, p. 8). In April 2013, the assailant submitted his first application for a *Waffenbesitzkarte*—a gun ownership card—to the Bundesverwaltungsamt, the Federal Office of Administration, and received it 3 months later (Deutscher Bundestag, 2020a; Gezer et al., 2021, p. 10). In Germany, a gun ownership card differs from a firearms license: The former enables an individual to possess a weapon and ammunition, but the items must be transported in such a way that they are not ready for access or fire (Deitert, n.d.).

In May 2014, the perpetrator purchased and registered his first pistol, a SIG Sauer P226, caliber 9 mm (Deutscher Bundestag, 2020a,

p. 10), which killed five victims during his attack and subsequently became the weapon of choice for his suicide. In October 2018, he added a second handgun, a Walther PPQ, caliber .22, to his gun ownership card, which was not deployed during his act of violence (Deutscher Bundestag, 2020a, p. 10). Between 2014 and 2018, Rathjen practiced at the *Königlich Privilegierte Hauptschützengesellschaft* (the royal privileged main shooting society) outside of Munich, Bavaria, where he resided at the time (Saß, 2022a, p. 8). It has been reported that within this time frame, he stored his legally owned weapons without the knowledge of the responsible authorities, as his primary residence was still registered in his hometown (Hanauer Anzeiger, 2020).

At the beginning of 2019, Rathjen returned to Hanau, moved back in with his parents and increased his preparation activities. A forensic investigation of the offender's electronic materials revealed that he started formulating theories for his written and spoken communications in the spring of 2019 (Saß, 2022a, p. 9). As such, the offender created the text file for the document "script with pictures" in April 2019, which would later serve as his manifesto (Deutscher Bundestag, 2021, p. 6; Saß, 2022a, p. 9). Within the next 4 months, he contacted various illustrators to design the graphics for his narrative, while obtaining quotes for developing a website where he could publish his writings and recordings preattack (Deutscher Bundestag, 2021, p. 6; Saß, 2022a, p. 9). Investigating authorities stated that Rathjen recorded his first video in a professional studio in Munich on July 12, 2019, utilizing a teleprompter for his scripted explanations (Saß, 2022a, p. 9). However, in one of his subsequent videos, the perpetrator stated that he taped the initial video in December 2019 (Rathjen, 2020e).

During the summer of 2019, Rathjen applied for his third and final gun ownership card, the European Firearms Pass, which he acquired on August 21, 2019, and would allow him to take his firearms abroad (Deutscher Bundestag, 2020a, p. 10, 2021, p. 11).

Subsequently, he attempted to partake in five pistol and assault rifle trainings at a shooting range in Slovakia, led by a former member of the U.S. Special Forces (Haschnik, 2021; Saß, 2022a, p. 8). This was likely because using war weapons—such as fully automated firearms—is generally prohibited in Germany, due to the

*Kriegswaffenkontrollgesetz*, the War Weapons Control Act (Bundesministerium der Justiz, 1961). In addition, according to §6 and 7 of the *Allgemeine Waffengesetz-Verordnung*, the General Ordinance on the Weapons Acts, civilians are typically not allowed to engage in tactical combat training with rifles as part of sports marksmanship in Germany (Bundesministerium der Justiz, 2003).<sup>3</sup> This might explain why Rathjen chose to undertake a dynamic course with moving targets and assault rifles outside of his home country.

It was disclosed that he experienced numerous difficulties at two courses in June and September 2019, including improper handling of his pistol, and being unfocused and sweating excessively during a rifle class, which ultimately led to him being blacklisted by the company (Deutscher Bundestag, 2021, p. 6; Saß, 2022a, p. 9). Saß (2022a, p. 9) has theorized in his expert report that the failures could have been caused by a stress reaction in an alien environment or generated by a preexisting psychological disorder. On the other hand, members of the Diana Bergen-Enkheim shooting club reported that Rathjen appeared polite and courteous while completing 24 shooting training sessions that year, practicing 2–3 times per week (Fuchs et al., 2020; Saß, 2022a, p. 8). By December 2019, he had finalized three more videos, two of which were taped in his room situated in his parental home in Hanau (Deutscher Bundestag, 2021, p. 6).

In the postmortem psychiatric evaluation, the perpetrator is described as having planned and prepared his act of terror meticulously, rationally, and prudently for several months (Saß, 2022a, pp. 2, 9). Though investigators have not been able to clarify at what exact point in time the suspect decided to commit his violent attack (Deutscher Bundestag, 2021, p. 5), he conducted online searches for schools in the Frankfurt area as potential targets toward the end of January 2020 (Saß, 2022a, p. 9). A detective chief superintendent of the German Federal Criminal Office, the Bundeskriminalamt, testified in an inquiry that Rathjen compiled sketches, plans, and to-do lists in February 2020, preparing for a mass casualty event motivated by racist sentiments (Backhaus-Arnold & Haschnik, 2022). These materials included flip charts that detailed operational sequences for an incident that planned to target locations with a high concentration of immigrants, including shisha bars (Deutscher

Bundestag, 2021, p. 5). According to these notes, the perpetrator aimed to kill five victims at the first crime scene, La Votre, and two more at the second location, the Midnight bar, before proceeding onto additional places at the other side of the Heumarkt where he planned to murder multiple individuals (Haschnik, 2021).

Roughly 2 weeks before the attack, the assailant borrowed a Czeska Shadow 2 Single Action—a pistol with higher precision than his other firearms—from an authorized weapons store (Deutscher Bundestag, 2020a, p. 10, 2021, p. 6), which he subsequently used to kill three victims during his rampage. The arms' dealer stated that Rathjen had the appropriate paperwork that enabled him to legally test out a gun for up to 1 month; he appeared “completely normal” and was dressed respectably; thus, there was no reason for him to withhold the pistol from the assailant (Spiegel Panorama, 2020).

Rathjen uploaded his three texts and four videos to his website <https://www.tobias-rathjen.de> on February 4 and 13 and began spray-painting the domain name on seven locations in and around Hanau (Backhaus-Arnold & Haschnik, 2022). Approximately 1 week prior to the attack, he scouted at least three possible sites for his terrorist act, including a betting office on February 15, 2020—one of the other locations became a subsequent crime scene (Der Spiegel, 2020; Deutscher Bundestag, 2020a, p. 3, 2021, p. 5). During his act of violence, Rathjen targeted two venues that were in close proximity to each other at the Heumarkt in Hanau and another location approximately 4 miles away at the Kurt-Schumacher-Platz in Kesselstadt. Targeting several sites—and therefore heightening the risk of being detected—has been deployed by other lone-actor terrorists motivated by far-right sentiments, such as Anders Breivik and Brenton Tarrant. Duplicating the modus operandi from previous attackers could be a sign of a contagion or copycat effect (Kupper et al., 2022). Two simultaneous attack sites have also been utilized by other terrorist groups, such as al Qaeda (Bergen, 2012), to both maximize casualties at the scenes and confusion by first responders.

<sup>3</sup> Special regulations are in place for armed forces and law enforcement (cf. §55 Waffengesetz and §15 Kriegswaffenkontrollgesetz), who are entitled to utilize these types of firearms within the framework of their legal mandate.

### Fixation

A pathological preoccupation with a person or cause, linked with a deterioration of social and/or occupational functioning, characterizes the *fixation* warning behavior (Meloy, 2017). It has been clinically observed and theoretically proposed that fixation can be driven by three specific cognitive–affective drivers: delusion, obsession, and/or extreme overvalued belief (Meloy & Rahman, 2020). The complex mental state of Tobias Rathjen prior to committing his act of terror reflected the manifestation of all three drivers.

**Delusion.** The perpetrator’s first signs of delusion—nonfactual certainties often accompanied by visual or auditory hallucinations (Meloy & Rahman, 2020)—date back to January 15, 2002, when Rathjen filed a criminal complaint with the Bayreuth police in Bavaria, 18 years before the attack (Rathjen, 2020a, p. 17; Saß, 2022a, p. 4). He had fallen in love with a fellow student in the spring of 2001, whom he falsely referred to as his girlfriend, despite the young woman not reciprocating his feelings (Saß, 2022a, p. 4). In the charge, he accused her father of illegal surveillance, bugging and monitoring his apartment; the responding officers deemed his behavior very suspicious and admitted him to a medical clinic (Saß, 2022a, p. 4). The neurologist on duty suspected a “schizophrenic psychosis with paranoid components” and instructed the admission to a psychiatric hospital, due to self-endangerment (Deutscher Bundestag, 2020a, 2020b, p. 3; Saß, 2022a, p. 4). During the intake, Rathjen expressed difficulties studying and preparing for exams and alluded to sleep and concentration disruptions (Saß, 2022a, p. 4), which could have been the first signs of his academic deterioration. In addition, he stated that the girl’s parents hired a detective to follow him and had installed sound and image surveillance in his apartment, which he described as “psychological rape” (Saß, 2022a, p. 4).

The findings of his psychiatric evaluation indicated that he suffered from a “long-standing delusion associated with delusional moods, ideas, and perceptions, embedded in themes of surveillance, observation, spying, and persecution” (Saß, 2022a, p. 4). The clinic continued to state that the disorder appeared to be the result of a pathological development with no signs of violent intentions toward others or himself and that they were not able to confirm the schizophrenic psychosis, which the

first neurologist had diagnosed (Saß, 2022a, p. 4). After Rathjen’s father threatened to press charges against the hospital with a lawyer, Tobias Rathjen was released the same evening because his disorder was not advanced enough for compulsory inpatient treatment (Saß, 2022a, p. 4). In his manifesto (Rathjen, 2020a, p. 17), the offender described the incident merely with these words: “In January 2002, I went to the police for the first time to file a complaint for illegal surveillance. Unfortunately, I did not reach my goal.”

In March 2003, Rathjen authored a letter to the young woman he had fallen in love with, which was filled with paranoid and delusional accusations of surveillance (Saß, 2022a, p. 5). It also pioneered his idea of being monitored by a secret organization since birth (Saß, 2022a, p. 5)—a concept that would come up repeatedly in the following years. In November 2004, the assailant filed a second criminal complaint to the police in his hometown, Hanau, because of a “violation of the confidentiality of the word,” which evidenced that his mental disorder had intensified significantly since his psychiatric admission 2 years prior (Rathjen, 2020a, p. 17; Saß, 2022a, p. 5). Rathjen now suspected that a powerful organization, operating at local, state, and federal levels, systematically surveilled him, including employees at the university where he studied (Saß, 2022a, p. 5). He once more captured his disappointment in his manifesto (Rathjen, 2020a, p. 17): “In the fall of 2004, I filed another complaint, this time at a different police station, and was turned away again.”

It was not until 2019, when Rathjen began increasing his pathway-related activities, that his intense delusions reemerged from his inner world and became abundantly noticeable to the external environment. In June that year, he had an unplanned encounter with a former classmate that involved a conversation on persecutory delusions and secret organizations, and he hired various detectives to seek evidence for his theories about the clandestine entity (Gezer et al., 2021; Saß, 2022a, pp. 9–10). Reportedly, he expected collaborations from Germany’s federal domestic and foreign intelligence agencies, the military counterintelligence service, and the chancellor; however, all detective agencies declined to work with him (Backhaus-Arnold & Haschnik, 2022; Gezer et al., 2021; Saß, 2022a, p. 9).

Simultaneously, the offender recorded his first and most extensive “justification” video, where he



speculated that the starting point of his surveillance was not at his birth—as previously assumed—but that his parents or even grandparents could have already been exposed to the monitoring (Saß, 2022a, p. 8). Moreover, his manifesto now stated that the surveillance had expanded to thousands of German citizens (Rathjen, 2020a, p. 1). On November 8 and 10, 2019, the subject filed two criminal complaints “against an unknown secret service organization” that controls human brains to regulate certain world affairs; one to the Office of the Federal Prosecutor in Karlsruhe, Baden-Württemberg, and the other one to the public prosecutor’s office in Hanau, Hesse (Deutscher Bundestag, 2020a, p. 6; Rathjen, 2020a, p. 17; Saß, 2022a, p. 7).

The perpetrator noted in these complaints and his manifesto that this was the “third and final attempt” (Rathjen, 2020a, p. 17) after his futile efforts in 2002 and 2004, and demanded that his charges should be investigated with the highest priority (Saß, 2022a, p. 7). Saß (2022a, p. 7) described in his expert report on Rathjen that the extensive documents, which presumably took several months to prepare, can be seen as confirmation of his heightened delusional disorder. Fused with this were additional indicators of occupational deterioration: In both complaints, the lone-actor stated that he resigned from his position in Munich, Bavaria, to devote his full attention to solving the criminal offenses committed by the secret organization (Saß, 2022a, p. 6).

Rathjen’s delusional fixation also appeared in visual forms: By the end of 2019, he had recorded the remaining three videos, which included numerous references to his nonfactual notions. For instance, when addressing “all Americans” in his second video, he speaks of “invisible secret societies” being in control of the United States by means of “mind control” and “deep underground military bases” (Rathjen, 2020d). His third video incorporated remote viewing—“an ability that goes beyond mind reading, mind control, and manipulating the brain”—and satanist individuals, who “sexually abuse, torture, kill, and eat small children,” and the secret organization being involved in all of it (Rathjen, 2020e). Not having received a response from the authorities, the offender hired two lawyers in December 2019 to request a status update related to his complaint at Hanau’s prosecution office, and again followed up on his own on January 6, 2020 (Saß, 2022a, p. 7). Deprived of a reply,

Rathjen expressed his disappointment in his fourth video, noting that he followed up about a complaint that he submitted in 2004 “last week” (Rathjen, 2020f). Much to his frustration, the case number no longer existed and the file had been deleted; thus, he was unable to retrieve any information about the charge or receive external verification about his theories involving the surveillance (Rathjen, 2020f).

Within the same time frame, the perpetrator was in contact with at least one private detective because he felt “stalked and spied out,” and was referred to a remote viewing expert in Austria, whom he was in contact with until shortly prior to the attack; nonetheless, he could not help him (Deutscher Bundestag, 2020a, p. 7; Rathjen, 2020a, p. 17; Saß, 2022a, p. 9). In a personal communication with Saß (personal communication, March 6–June 28, 2022b), the forensic psychiatrist stated that Rathjen’s “uncorrectable conviction to be a personal victim of a secret organization since his birth was a psychotic delusion.” The belief that the subject and others’ existence and physical integrity had been threatened and invaded (James et al., 2021) appears to be the most prominent cognitive–affective driver for his subsequent act of terror. Rathjen expressed this in his own words in the opening lines of his manifesto (Rathjen, 2020a, p. 1): “The central point of my message is the activity of a so-called ‘secret service.’”

**Obsession.** Evidence of persistent, unwanted, and intrusive, but nondelusional, ideas and thoughts that cause anxiety are the building blocks of obsession. These features are noticeable throughout Tobias Rathjen’s manifesto (2020a). His narrative begins with several harmless personal experiences from his adolescence that resulted in an “aversion” toward certain ethnic groups, such as “Turks, Moroccans, Lebanese, and Kurds” (Rathjen, 2020a, p. 5)—he predominantly targeted victims with these types of backgrounds during his attack. These events included “deliberately provoked fights on the way home from school or stupid confrontations at the disco,” which he labeled as “harmless” because they did not result in any “personal damage in the form of injuries or the loss of valuables” (Rathjen, 2020a, p. 5). However, anecdotes from classmates and newspaper articles painted a much darker picture, which included “physical or even knife attacks,” and caused “the most serious injuries or even deaths” (Rathjen,

2020a, p. 5). A severe and decisive incident occurred during his apprenticeship, when he witnessed “a bank robbery firsthand” (Rathjen, 2020a, p. 5). When the police subsequently took his witness statement to identify potential suspects, approximately 90% of them were “non-Germans,” including “southerners, i.e., Turks and North Africans” (Rathjen, 2020a, p. 5). Thus, the author deduced: “since comparable experiences had not been made with ‘Germans,’ I had already come to a conclusion for myself at this point” (Rathjen, 2020a, p. 5).

What followed was a notable shift in tone, angrier and more emotional, merged with strident opinions and increasingly negative characterizations of his target groups, which has also been observed in other studies of targeted violence offenders (Meloy, 2017; Meloy et al., 2012). Rathjen now reported that he asked himself “the fundamental question of why these ethnic groups are in my country at all,” that the appearance of “these people” is to be “rejected instinctively,” and that they “have not proven themselves to be high-performing historically” (Rathjen, 2020a, p. 5). Conversely, he noted that his own nation produced “the best and most beautiful this world has to offer,” consolidating the “us vs. them” mentality, an important framework for understanding a violent extremist mindset (Berger, 2018). The subject concluded that a “complete expulsion of these people from our country can no longer be a solution, since the existence of certain ethnic groups is in itself a fundamental mistake and the problem will only shift to future generations,” as they would not “voluntarily reduce” their reproduction and already exist in large numbers (Rathjen, 2020a, p. 6). Thus, the perpetrator stated in his pamphlet (Rathjen, 2020a):

The following nations must be completely destroyed: Morocco, Algeria, Tunisia, Libya, Egypt, Israel, Syria, Jordan, Lebanon, the complete Saudi peninsula, Turkey, Iraq, Iran, Kazakhstan, Turkmenistan, Uzbekistan, India, Pakistan, Afghanistan, Bangladesh, Vietnam, Laos, Cambodia and up to the Philippines. And this would only be the rudimentary clean-up. After that the final cleansing must begin, this concerns the remaining African states, South and Central America, the Caribbean and of course my own nation, referring to non-purebred and invaluable people. (p. 6)

It appears that his xenophobia developed into continuous and more dominant, anxious, and fearful thoughts of the same topic over time, contributing to the intensity of his fixation and challenging his resistance to commit a violent attack. Nevertheless, these perceptions were independent

of his delusions concerning the secret organization (Saß, personal communication, March 6–June 28, 2022b).

**Extreme Overvalued Belief.** We think that Rathjen’s early obsessions concerning his discomfort with immigrants were ego *dystonic*—unwelcomed and not viewed as part of the self—and evolved into an ego *syntonic* extreme overvalued belief system, which was eventually welcomed and viewed as part of the self. The transition between these cognitive–affective drivers could have occurred after he discovered the great replacement and other conspiracy narratives as part of his online radicalization. As Rahman (2018) has noted,

An extreme overvalued belief is shared by others in a person’s cultural, religious, or subcultural group (including online). The belief is often relished, amplified, and defended by the possessor of the belief and should be differentiated from a delusion or obsession. Over time, the belief grows more dominant, more refined, and more resistant to challenge. The individual has an intense emotional commitment to the belief and may carry out violent behavior in its service. (p. 2)

Over time, the belief becomes increasingly binary, simplistic, and absolute.

The perpetrator proclaimed on the final page of his manifesto that his attack “is to be understood as a double strike against the secret organization and against the degeneration of our people” (Rathjen, 2020a, p. 24), which he also reinforced in one of his videos (Saß, 2022a, p. 10). Nonetheless, it has emerged that the xenophobic and racist components of his pamphlet were not part of the criminal complaints filed in November 2019, though they included critical remarks on how Germany should manage immigration issues and crimes committed by foreigners (Deutscher Bundestag, 2020b, p. 4; Saß, 2022a, p. 10). Saß (2022a, p. 7) noted in his analysis that the documents for the criminal charges differed from the manifesto (Rathjen, 2020a), for instance there were small edits in the introduction, as well as an additional one and a half pages added to the final section. Most significantly, the manifesto incorporated a more radical and complex discussion on foreigners and migrants (Saß, 2022a, p. 7). We think that the assailant concealed this stance in both criminal charges to heighten the probability of a successful act of violence, deliberately siloing the exact details of his plan to avoid alarming the authorities of his impending attack. As explored under *pathway*, it is evident that

Rathjen authored and filed these complaints in the same year that he ramped up his firearms-related activities and composed other written and spoken communications, which included the xenophobic elements that were later published on his website. How this presence of beliefs justified the subject's intent to conduct a terror attack will be scrutinized under the distal characteristic *framed by an ideology*.

Again, the complexity and uniqueness of Rathjen's proximal warning behavior of *fixation* is that it eventually contained all three cognitive-affective drivers: delusions, obsessions, and extreme overvalued beliefs. These three drivers originated at different times in his internal world, dynamically interacted with one another, and were all motivational elements in his eventual targeted attack.

### Identification

The proximal warning behavior *identification* marks a critical operational shift from fixation on a person or cause to perceiving oneself as a "pseudo commando," developing a "warrior mentality," or lionizing previous attackers (Meloy, 2017). *Pseudocommando* has been defined as a fixation on firearms combined with committing raids after long deliberation (Dietz, 1986). The core difference between fixation and identification, simply put, is psychological movement from pre-occupation to a new self-identity: What the person thinks about all the time to whom s/he becomes.

Tobias Rathjen was described as a "Waffennarr" ("gun fanatic") by various German newspapers (Haschnik, 2020; Maxwill, 2020). As alluded to under *pathway*, the subject was attracted to weapons early on and began practicing with guns 8 years before the attack. However, it has also been reported that in the year 2000, when he was in his twenties, the offender threatened a black acquaintance after a heated argument at a large private party by drawing a gas pistol on him (Haschnik, 2020; Saß, 2022a, p. 3).

His strong association with weapons and military topics also emerged during the postincident inquiry: The police discovered numerous national, right-wing conservative, and historical revisionist books while conducting a search of his parental home (Saß, 2022a, p. 6). According to investigative files, between 2013 and 2019, the perpetrator ordered printed works on the history of the German military and the Waffen-SS—the combat

**Figure 1**  
*Lone Wolf*



*Note.* This image of a "lone wolf" was part of Tobias Rathjen's webpage that hosted his manifesto and two appendices. See the online article for the color image of this figure.

branch of the Schutzstaffel—as well as speeches by Adolf Hitler and war memoirs of a field marshal of Nazi Germany's armed forces during World War II (Saß, 2022a, p. 6). Furthermore, he purchased publications on the American and British intelligence services and intelligence warfare against Germany, among other military propaganda (Saß, 2022a, p. 6). An analysis of Rathjen's computer revealed that he searched for SS uniforms and placed orders beginning in April 2019, approximately 9 months prior to his attack (Deutscher Bundestag, 2021, p. 7).

Moreover, his grandiose, violent fantasies and warrior mentality were publicly disclosed on the perpetrator's website: The homepage displayed a large bald eagle—often representing strength, courage, and freedom—and the webpage that hosted his manifesto and two appendices included a large image of a blue-eyed wolf, likely in reference to a cunning and lethal *lone wolf* (Figure 1).<sup>4</sup> This sensationalist threat assessment term was commonly utilized to refer to lone-actor terrorists; however, scholars advocate for discontinuing the

<sup>4</sup> The Halle synagogue shooter, Balliet (2019, p. 4), for instance raised the question "Are you a Lone wolf?" in an unpublished self-interview. See also Hamm and Spaaij (2017).

use of this phrase, as particularly younger males appear to be captivated with the dramatic, cruel, and oftentimes romantic notion of becoming a “lone wolf” (Meloy, 2017; Schuurman et al., 2019).

The *identification* warning behavior can also occur in the form of identifying oneself as an agent to advance a particular cause or belief system (Meloy, 2017), a thread woven across all of Rathjen’s written and spoken communications. For example, the first page of his manifesto states the following (Rathjen, 2020a):

This is a message to all Germans! (...) The focus of my proclamation is the activity of a so-called “secret service.” (...) Thousands of German citizens are being monitored by a secret organization. This is happening for no apparent reason. When I talk of “monitoring,” I primarily refer to acoustic and visual surveillance in private homes, in rooms at workplaces, and other locations where people hang out. Thus, I don’t mean cameras that are visible in public places or stores of any kind. There are people that work for this “secret service,” and they are able to read the thoughts of other individuals and in addition, they can “log into” them and to a certain extent carry out some form of “remote controlling.” What Edward Snowden revealed a few years ago is a “kid’s birthday party” in comparison to this. (p. 1)

Arguably having cultivated fantasies of power and omnipotence (Böckler et al., 2017), the perpetrator continued this notion toward the end of his manifesto (Rathjen, 2020a):

Therefore, one of my main concerns is that a future central surveillance of the population will never be implemented or the already existing one will be exposed and eliminated. (...) The main purpose of my proclamation is to map out and summarize the following: humanity on this planet is fooled by a very small “elite,” which has a secret knowledge that is deliberately withheld from the broad mass. (p. 23)

Moreover, he reinforced this message in one of his appendices (Rathjen, 2020c, p. 7): “There are organizations, which have a specific knowledge and techniques that they do not share with the broad mass.” He also broadened his scope to “all Americans” in a video message where he declared that “your country is under control of invisible secret societies” (Rathjen, 2020d).

Contrary to other contemporary lone offenders motivated by race or ethnicity, Rathjen did not publicly idolize previous assassins; instead, he admired “whistleblowers.” His cause and self-identity were to be an agent of transparency—a whistleblower—that revealed the illegal and

immoral monitoring and manipulations of humanity by a secret organization to the “broad mass,” which he disclosed in his third and fourth videos (Rathjen, 2020e, 2020f):

*Video 3:* “I would like to take advantage of this situation and do my part to make sure that everyone knows about this. Especially here in the so-called civilized nations of Europe and America.”

*Video 4:* “The broad mass, so to speak, face a wall and behind this wall are many, many truths. Several whistleblowers have already come forward in the past. Edward Snowden is the most famous example. (...) So, there are obviously truths here that are hidden from most people, hidden from the broad mass. And these whistleblowers have made sure that this wall has cracks. It has not collapsed yet, but it has cracked. I would like to contribute to the cracking of this wall with my work and create bigger cracks that will result in its collapse. At some point it must collapse, so that the truth about the history of humanity and the universe with all its secrets is revealed to the broad mass. (...) The truth will come to light; it is only a matter of time. Or to put it another way: the truth will set you free.”

The last sentence is a translation of Rathjen’s original phrase “Wahrheit macht frei,” a derivation of “Arbeit macht frei” (“work will set you free”)—a slogan that appeared on the entrance of Auschwitz and several other Nazi concentration camps, for example, Buchenwald near Weimar, Thuringia. This is also the exemplar biblical quotation of the American intelligence agency, the CIA: “ye shall know the truth, and the truth shall make you free.” This closing phrase is a paramount example of the complexity of Rathjen’s motivations and reflects the interconnectivity of his racist and delusional components that motivated his terroristic act.

### *Novel Aggression*

Progressing further into operational space, subjects may test their ability to carry out an upcoming terroristic attack by committing an unrelated act of violence for the first time, which is defined as *novel aggression* (Meloy, 2017). In a multidimensional scaling study of 33 North American terrorists and 23 nonattackers, *novel aggression* did not cluster with other proximal warning behaviors in two-dimensional space (Goodwill & Meloy, 2019). This remote positioning suggests a lower frequency and lesser co-occurrence with other indicators.

Approximately 1½ years prior to Tobias Rathjen’s mass shooting, two events could have demonstrated his *novel aggression*. The first one

occurred in May 2018 at Hanau's youth center "Juz," which is located in Kesselstadt, 200 yards away from the perpetrator's second crime scene and on the same street as his parental home. A group of teenagers with migration backgrounds were having a barbecue when a masked man wearing a vest with protective plates, roughly 5.9 ft tall, unexpectedly jumped out of the bushes and pointed an assault rifle at them (Haschnik, 2020). The male threatened and advised them to escape, stating that he would otherwise kill them; one of the youths had military experience and disclosed that the weapon appeared to be authentic (Haschnik, 2020). The police were not able to identify the attacker and it remains unclear if the gunman was in fact Rathjen. However, a few days prior to the attack it was reported that the perpetrator sprayed his website address on the ground in close proximity to the youth center (Backhaus-Arnold & Haschnik, 2022; Haschnik, 2020). Though the data suggest that this incident may have reflected Rathjen testing out his ability to carry out an attack—practicing the confrontation with a weapon toward non-white Germans—we cannot say with certainty that it was him.

The second example is more tangible and occurred in the summer of 2018 when police were called to a vacation home in Iffeldorf, Bavaria (Saß, 2022a, p. 6), approximately 1 hr south of Munich, the perpetrator's place of residence at the time. Upon arrival, they encountered Rathjen and a sex worker, who reportedly feared for her life after the subject threatened her and presented a variety of weapons, including a rifle and knife, BDSM equipment, and other sex toys (Backhaus-Arnold & Haschnik, 2022; Haschnik, 2022b; Saß, 2022a, p. 6). Additionally, he showed her a screenplay that entailed ideas for how they would spend the night together, with the script ending in the woman's death (Backhaus-Arnold & Haschnik, 2022). Consensual sexual acts had taken place, but the escort declined to be filmed by the subject (Saß, 2022a, p. 6). Rathjen had also demanded that she danced "as if it would be her last time," allegedly a reference to a horror film in which a woman's dead body is found in the final scenes (Haschnik, 2022b). When police searched the premises, they were unable to find any weapons.

Although both events display a lack of actual physical force, there appears to be evidence that Rathjen threatened violence that could have resulted in psychological harm, injury, or death.

Thus, we decided to code this proximal warning behavior as present.

### ***Energy Burst***

An acceleration in frequency or variety of activities related to an attack—final preparations in the hours, days, or weeks prior to an event—are attributed to the warning behavior *energy burst* (Meloy, 2017). The subject feels as if time is running out and needs to operate faster to complete all necessary tasks for the impending act of violence.

As discussed under *pathway* and *identification*, Tobias Rathjen increased his attack-related activities in 2019: He intensified his weapons' training at the shooting range in his hometown and abroad; authored his written materials and recorded his spoken ones; submitted two additional criminal complaints and hired lawyers to request status updates; and contacted a "remote viewing" expert. This level of vigor, range of activities, and increase in pace were not present in prior years. Yet, his final weeks blazed with intensity and were filled with crucial online and on the ground operations, such as searching for and scouting potential target locations in both virtual and actual reality. Moreover, the perpetrator created to-do-lists, plans, and sketches for rapid tactical successions; leased a firearm for the incident; leaked his communications on his website and spray-painted its domain name in close proximity to the subsequent crime scenes.

### ***Leakage***

Communicating an intent to conduct an attack against a target to a third party defines the warning behavior *leakage* (Meloy, 2017). Third party here refers to a person(s) or group that is not directly involved in the act of violence—that is, the offender or target—and can include a physical or digital audience. In a recent review of international literature on leakage in politically and religiously motivated terrorist attacks, researchers concluded that up to 90% of perpetrators engaged in some kind of leakage prior to their acts (Dudenhoefer et al., 2021); such revelations can be used as an effective measure to prevent these types of incidents.

Tobias Rathjen's website was registered in August 2019 and visited 560 times until authorities deleted it the day after the mass casualty event (Backhaus-Arnold & Haschnik, 2022;

Saß, 2022a, p. 3; Saß, personal communication, March 6–June 28, 2022b). It was categorized into four webpages: “ZUR PERSON” (about me), “LINKS,” “DOWNLOADS,” and “VIDEOS,” with additional sub-links comprised of content related to data privacy and an imprint (Rathjen, 2020g). The latter listed the offender’s home address in Hanau and his contact details, including a cell phone number and email address. The “ZUR PERSON” (about me) section contained a brief biography, stating that he was born in 1977 and brought up in Hanau, Hesse, Germany, where he completed the first stages of his education. After graduating high school, he performed 1 year of civilian service, a social alternative to conscription, and completed a subsequent apprenticeship as a banker in nearby Frankfurt, Hesse. In the winter semester of 2000, he began his studies in business administration in Bayreuth, Bavaria, which he finalized in the spring of 2007.

The “LINK” section encouraged visitors to “complete the picture with: David Paulides, Emery Smith, Courtney Brown, Corey Goode”—well-known conspiracy theorists—noting that “something very big is being kept hidden from mankind” (Rathjen, 2020g). The page concluded with nine links to conspiratorial websites and videos on time travel, remote viewing, and satanic, sexual child abuse.

The “DOWNLOADS” segment consisted of links to three separate documents, all composed in Rathjen’s mother tongue German:

- “Skript\_mit\_Bilder” [script with pictures]
- “Anhang\_1\_DFB” [Appendix 1 DFB; *DFB* is an abbreviation for *Deutscher Fußball-Bund*, the German Football Association]
- “Anhang\_2\_Irak\_-\_Afghanistan” [Appendix 2 Iraq—Afghanistan]

The “VIDEOS” section contained four buttons to the following visuals:

- “Video 1 (Erklärung)” [explanation]
- “Video 2 (USA)”
- “Video 3 (zu den Links)” [about the links]
- “Video 4 (Schlussanmerkungen)” [final remarks]

Tobias Rathjen uploaded all of these written and spoken materials to his website in the days leading up to the act of violence: He embarked

on a journey through his life in an attempt to offer explanations and justifications for the Hanau attack, while revealing information about his mental disorder and violence-justifying ideologies to his readership. Though much attention has recently been paid to perpetrators who publish their communications on fringe forums, such as the imageboards *4chan* or *8chan*, it is not uncommon for targeted violence offenders to release their messages on personal websites. Examples include Sebastian Bosse (Emsdetten School Shooting, 2006; motivated by grievances), George Sodini (Collier Township Shooting, 2009; fueled by incel ideology), and Joseph Stack (Austin Suicide Attack, 2010; driven by antigovernment sentiments).<sup>5</sup>

On February 13, 2020, Rathjen created a YouTube account titled “Enthüllungsplattform” (uncovering platform) and uploaded “Video 2 (USA)” the following day (Fuchs et al., 2020; Hurtz et al., 2020; Social Blade, n.d.). The recording was removed 1 day after the attack; however, by that time, it had received more than 1,000 views and hundreds of comments (Hurtz et al., 2020). His writings and videos were also circulated on *Kohlchan*, a German-language discussion board and offspring of *4chan* (Baele et al., 2021). Shortly prior to the incident, the subject was exceedingly concerned with the publication of his materials and instructed his father to “manage his legacy” after his death (Saß, 2022a, p. 10). In addition, he contacted a private detective he had attempted to hire previously, requesting him to publish his website postmortem (Backhaus-Arnold & Haschnik, 2022).

Although Rathjen’s delusional disorder was in full bloom by the time he composed the written and spoken communications, the overall language of these files is cohesive and coherent. Various sections in the perpetrator’s writings are analytical and eloquent with minimal grammatical or orthographical mistakes. Videos 2, 3, and 4 appear natural and unscripted with the offender directly staring into the camera, scarcely misspeaking or correcting himself; Video 1 was reportedly taped at a professional studio using a teleprompter (Saß, 2022a, p. 9).

In terms of authorship, we observed many examples of interconnectivity across the offender’s messages, which suggests that they likely all

<sup>5</sup> See Kupper and Meloy (2021).

originate from Rathjen, despite each file having different thematic focal points. For instance, lexical and syntactic overlap was detected in the opening lines of his manifesto and the second video: “This is a message to all Germans” (Rathjen, 2020a, p. 1) versus “This is my personal message to all Americans” (Rathjen, 2020d). Furthermore, the topic “remote viewing” appears in the manifesto, as well as in Videos 3 and 4, and he speaks about “satanism” and the secret organization torturing, killing, and eating children in Videos 2 and 3. His manifesto and Appendix 2 refer to the links on his website: “I would like to refer to further secrets, which can be found as links on my homepage” (Rathjen, 2020a, p. 23) and “I would like to refer to the links on my homepage” (Rathjen, 2020c, p. 7). Moreover, the title of his third video is “about the links” (Rathjen, 2020e). Football strategies are alluded to in the manifesto and Appendix 1, with military plans discussed in the manifesto and Appendix 2. Foreigners committing crimes in Germany and solving the mysteries of the universe is mentioned in the manifesto and Video 4. As Rathjen spoke directly into the camera in Videos 2, 3, and 4, it can be assumed that he was also the author of the interlinked written materials.

In alignment with our previous study (Kupper & Meloy, 2021), which applied the warning behaviors of the TRAP-18 to the content of targeted violence manifestos, we performed the same analysis on only the primary source materials that Rathjen had created. The analysis confirmed the TRAP-18 indicators across all of his written and spoken communications ( $n = 6$ ); a summary can be found in Table 1. In total, 11 out of 18 TRAP indicators were measured in this sample: 50% of proximal warning behaviors and 70% of distal characteristics. The most frequent behaviors we detected across the language of Rathjen’s written and spoken files were: *fixation* (100%), *dependence on virtual community* (100%), and *identification* (66%). The indicators *pathway*, *novel aggression*, *energy burst*, *directly communicated threat*, *thwarting of occupational goals*, *greater creativity and innovation*, and *history of criminal violence* were absent in all documents.

The written manifesto (Rathjen, 2020a) contained the highest number of overall TRAP-18 behaviors (61%) with four proximal (*fixation*, *identification*, *leakage*, *last resort*) and seven distal characteristics (*personal grievances and*

*moral outrage*, *framed by an ideology*, *failure to affiliate with an extremist or other group*, *dependence on the virtual community*, *changes in thinking and emotion*, *failure of sexual-intimate pair bonding*, *mental disorder*). Appendix 1 (Rathjen, 2020b) and Appendix 2 (Rathjen, 2020c) were only coded for *fixation* and *dependence on virtual community*, as we noted clear signs of a pathological preoccupation with a specific cause in both communications, namely the success of the German national soccer team and the Afghanistan and Iraq wars. Both files were posted on his website, and thus signaled virtual interaction.

“Video 2” (Rathjen, 2020d) was the only message authored in the English language, and consisted of four proximal (*fixation*, *identification*, *leakage*, *last resort*) and five distal indicators (*personal grievances and moral outrage*, *framed by an ideology*, *dependence on the virtual community*, *changes in thinking and emotion*, *mental disorder*). “Video 3” (Rathjen, 2020e) included two proximal warning behaviors (*fixation*, *identification*) and also five distal characteristics (*personal grievances and moral outrage*, *framed by an ideology*, *dependence on the virtual community*, *changes in thinking and emotion*, *mental disorder*). “Video 4” (Rathjen, 2020f) consisted of two proximal behaviors (*fixation*, *identification*) and four distal ones (*personal grievances and moral outrage*, *framed by an ideology*, *dependence on the virtual community*, *mental disorder*). We argue that only his manifesto and “Video 2” (Rathjen, 2020a, 2020d) classify as “leakage” in its original sense (Meloy, 2017), as the other communications do not include an intent to do harm to a target through an attack.

In addition, we had coined the term *targeted violence manifesto* in our previous article and formulated the following definition (Kupper & Meloy, 2021):

A written or spoken communication intended to justify an act of violence against a specific target by articulating self-identified grievances, homicidal intentions, and/or extreme ideologies for committing an attack. Generally composed by a single author before the incident occurs, it sometimes expresses beliefs and ideas to violently promote political, religious, or social changes. (p. 6)

It appears that only two out of the six documents authored by the subject meet this description—the manifesto and “Video 2” (Rathjen, 2020a, 2020d)—as they include grievances, violence-justifying ideologies, and conspiracy theories, in

**Table 1***Prevalence of TRAP-18 Indicators Across Tobias Rathjen's Written and Spoken Materials (n = 6)*

Indicator	Manifesto	Appendix 1	Appendix 2	Video 2	Video 3	Video 4
Proximal warning behaviors						
Pathway						
Fixation	X	X	X	X	X	X
Identification	X			X	X	X
Novel aggression						
Energy burst						
Leakage	X			X		
Last resort	X			X		
Directly communicated threat						
Distal characteristics						
Personal grievance and moral outrage	X			X	X	X
Framed by an ideology	X			X	X	X
Failure to affiliate with extremist or other group	X					
Dependence on the virtual community	X	X	X	X	X	X
Thwarting of occupational goals						
Changes in thinking and emotion	X			X	X	
Failure of sexual-intimate pair bonding	X					
Mental disorder	X			X	X	X
Greater creativity and innovation						
History of criminal violence						

*Note.* TRAP-18 = Terrorist Radicalization Assessment Protocol.

addition to expressing homicidal intentions against a variety of fictional and actual targets. Though both appendices describe strategic and tactical elements for promoting changes in the German national soccer team and the Afghanistan and Iraq wars, there is a distinct lack of malicious and violent content toward a target or mention of an impending attack.

### **Last Resort**

Evidence of a violent action and/or time imperative defines the proximal warning behavior *last resort* (Meloy, 2017). This indicator is often triggered by an anticipated or actual occurrence that causes desperation or distress, such as a loss in love or work, and can emerge through words or actions (Dmitrieva & Meloy, 2021; Meloy, 2017).

In December 2017, Tobias Rathjen had received a formal warning from his employer, a consequence of an offensive sexual remark made to a female colleague (Saß, 2022a, p. 8). He submitted his resignation in the fall of 2018, but while attempting to withdraw the notice retroactively, the labor court reached a verdict to end his employment on December 31, 2018 (Backhaus-Arnold & Haschnik, 2022; Saß, 2022a, p. 8). It was reported that the offender failed to secure any further employment within

the next year, though he applied for several jobs in the Hanau and Frankfurt area until the end of 2019 (Saß, 2022a, p. 8).

After several thwarted attempts to receive external support from official, prosecutory authorities and unofficial detective agencies, Rathjen realized that in order to change the world, he must take personal, violent actions now. This internal, psychological box that he placed himself in is most clearly articulated in the final statement of his written manifesto (Rathjen, 2020a):

For all of the above stated reasons, *I had no choice* but to act as I did in order to gain the necessary attention. This *war* [i.e., attack] is to be understood as a *double strike* against the secret organization and against the degeneration of our nation. (p. 24)

Furthermore, in one of his videos (Rathjen, 2020d), he urged and encouraged his audience, the people of the United States of America, to take immediate action in response to his message that is accompanied by time compression:

If you don't believe the following, you better *wake up quick*. (...) *Wake up!* (...) The second step is *action*, *locate* these bases, *gather* masses of people together, and *storm* them. It's your *duty* as an American citizen to *end* this nightmare. *Fight now*.

If the video comments are consolidated with his subsequent acts of violence, we can deduct that



he was not only speaking to Americans but also himself. The time compression, urgency, and violence that are hallmarks of the *last resort* proximal warning behavior are evident in the words we have highlighted.

### ***Directly Communicated Threat***

Communicating a direct threat through any means to the target or law enforcement before the attack constitutes the proximal warning behavior of a *directly communicated threat* (Meloy, 2017). Although Tobias Rathjen spray-painted his domain address in the vicinity of his crime scenes within days prior to the attack, this action cannot be considered as a direct warning to the targets: His website, as well as his written and spoken materials, did not include any specific information on when, where, or how he would conduct his act of violence. Therefore, we coded this behavior as absent.

### **Distal Characteristics**

Distal characteristics are usually more remote to an incident and develop over time when compared to the proximal warning behaviors (Meloy et al., 2021). A helpful metaphor is that the distal characteristics are dark clouds gathering on the horizon—one does not know if they will constellate into a storm and whether the storm is moving closer; when even one proximal warning behavior is evident in a case, however, the storm is likely in one’s backyard (Meloy, 2017).

### ***Personal Grievance and Moral Outrage***

The personal grievance is expressed through the reaction to an acute loss in love or work, which usually includes feelings of anger, humiliation, and blaming others (Meloy, 2017). Moral outrage is typically defined by a vicarious identification with a suffering and victimized group concerning historical or contemporary religious or political events (Meloy, 2017).

Personal grievance is often the first exhibited behavior of a subject that embarks on the pathway to violence (Calhoun & Weston, 2003), and in Tobias Rathjen’s case, it arguably began with the termination of his employment in December 2018. In addition, his landlord ended his tenancy agreement in Munich in February 2019 after the police were deployed to his apartment; they were conducting a negligent arson investigation that

involved questioning him about burning several pornographic magazines next to a forest in Bavaria 6 months prior (Saß, 2022a, p. 6). These two events seem to have signaled a turning point for the offender: After moving back in with his parents, he began his attack-related planning and preparation in the spring of 2019.

With regard to moral outrage, the lone-actor terrorist usually does not experience the same kind of suffering of the victimized group with whom s/he identifies. It was Rathjen’s delusion, however, that was the point of origin for his torment: He was not only closely allied with the exploited group—in his mind, he was part of it. The subject’s group of enemies and victims gradually expanded during the course of 18 years: While it was only him being monitored by the father of his unrequited love in 2002, the delusion expanded and became a secret organization watching him since birth in 2003. One year later, it grew to an invisible, clandestine establishment operating at several governmental levels, methodically surveilling him. By 2019, he hypothesized that his predecessors could have already been affected by the espionage, which had multiplied to “thousands of Germans” (Rathjen, 2020a, p. 1), “all Americans” (Rathjen, 2020d), and finally “humanity” in its entirety (Rathjen, 2020a, 2020e, 2020f).

Throughout the perpetrator’s written and spoken communications, we identified both enemies and victims: The primary identified antagonist is the secret organization that conducts “central monitoring of humanity” (Rathjen, 2020a, p. 23; Rathjen, 2020d) through an ability that goes beyond “mind reading, mind control, and brain manipulation” (Rathjen, 2020a, 2020c, 2020d, 2020e, 2020f). These invisible societies deliberately withhold knowledge and the truth from the broad masses (Rathjen, 2020a, 2020f), even depriving the military of “spy techniques” (Rathjen, 2020c), with parts of the organization praising and worshipping the devil himself (Rathjen, 2020d, 2020e). The suffering groups under control of this secret organization are humanity as a whole (Rathjen, 2020a, 2020c, 2020d, 2020e, 2020f); and secondarily, smaller entities, that is, “Germans” (Rathjen, 2020a, 2020f) and “Americans” (Rathjen, 2020d), as well as children that are “sexually abused, tortured, killed, and eaten” (Rathjen, 2020d, 2020e).

The secondary enemies in his manifesto (Rathjen, 2020a) are non-whites, specifically

individuals that are not of Anglo-Saxon heritage—the theme of cleansing and purifying the world of them often foretells the apocalypse. In his final video (Rathjen, 2020f), the non-primary opponents are criminal immigrants that kill or attack Germans. Appendix 1 (Rathjen, 2020b) also portrays the German national soccer team and their coaching staff as the enemy, with Germans being the perceived victims because their team has been unable to win the UEFA Champions League or the FIFA World Cup in recent years. However, because the exploited group is not victimized or suffering in this specific example, we did not qualify it as an element of his moral outrage.

### ***Framed by an Ideology***

If a subject holds a belief system that justifies an intent to commit a violent act, s/he is framing the proposed actions with an ideology; this can include a political philosophy, religious belief, secular commitment, one-issue conflict, or an idiosyncratic justification (Meloy, 2017).

When the TRAP-18 was applied in a time sequence analysis of 125 lone-actor terrorists from Europe and North America (Meloy et al., 2021), the distal characteristic *mental disorder* preceded *framed by an ideology*, which we also detected in Tobias Rathjen. His mental disorder was central in his progression to become a solo terrorist: The symptoms of his psychotic delusion were politicized and used as a framework for his motivations. As such, the subject created a belief system that humanity is monitored and controlled by a secret organization through mind manipulation and other means, which, alongside other “secrets” of the universe, was withheld from the “broad masses.” This, in turn, encroached humanity’s freedom, including his privacy, intimacy, and physical integrity. As Rathjen (2020a) stated in his manifesto:

For example, one of the main consequences [of the intense monitoring] is that I have not had a wife/girlfriend all my life. Specifically in the last 18 years, I couldn’t have a woman because I knew I was being monitored. (...) I suffered some physical injuries that I also attribute to this “organization,” which is satanic or can be described as “a danger to public safety” in legal language. I would like to refrain from giving more specific details [about the injuries] at this point, as the truth will come to light in the future. (pp. 20–21)

The individualized, and in this case delusional, ideology affected others and Rathjen personally, which was part of the subject’s psychosis that drove his *identification* as a whistleblower and subsequent homicidal aggressor. It provided him with a “rational” explanation and justification for his attack. This type of framing is Orwellian (Orwell, 1950): A totalitarian system exists, which must be fought against—the ideology is totalitarianism, but instead of it framing his motivation, it is the ideological frame *against* which he becomes a warrior. This “nexus of psychopathology and ideology” (Meloy & Yakeley, 2014) is unusual but also concordant with a paranoid mindset wherein persecutors from without must be defended against.

Furthermore, a feedback loop between *framed by an ideology* and *fixation* was noted in the time sequencing study (Meloy et al., 2021, p. 22), which signaled that “the offender is cycling through the same indicators more than once in their entire attack sequence.” Typically, *framed by an ideology*—a distal characteristic—will precede *fixation*—a proximal warning behavior; however, Meloy et al. (2021) found that in a number of perpetrators, ideology can succeed fixation. We believe that this was the case with the Hanau shooter: His pathological fixation, specifically his delusion (being monitored by a secret organization) influenced his subsequent obsession (xenophobia and racism) and developed into an extreme overvalued belief system (far-right sentiments and conspiracy narratives) that moved him further along the pathway of violence. Rathjen’s racism and prejudice gradually developed into a secondary belief system that provided a less prominent motivational framework for his violent attack against immigrants.

An investigation into Rathjen’s past had revealed ambiguous witness statements concerning his political stances. For instance, various individuals he interacted with in his childhood and youth universally denied that he expressed any far-right sentiments (Saß, 2022a, p. 6). One of the lead detectives from the Bundeskriminalamt, the German Federal Criminal Office, testified that hardly anyone made statements about his political views, with the chairman of his shooting club in Hanau stating that the offender never expressed racist thoughts and was friendly to fellow members with foreign roots (Haschnik, 2022b). One newspaper narrated that the perpetrator assisted a disabled black neighbor on

several occasions and also played in a soccer team that consisted of mainly immigrants (Deutscher Bundestag, 2020a, p. 1; Flade & Mascolo, 2020).

Saß (personal communication, March 6–June 28, 2022b) has theorized that Rathjen’s xenophobic and racist stances may have had roots in his youth and existed since adolescence but were not ardent until 2–3 years prior to the attack. Thus, it appears that his right-wing attitudes slowly progressed and consolidated into an extreme world view in later years (Saß, 2022a, p. 11). These viewpoints may have been inflamed by his father, who was suspicious of foreigners; both believed that governmental institutions favored migrants at the expense of the German population (Saß, 2022a, p. 2; Saß, personal communication, March 6–June 28, 2022b). In 2017, for instance, the older Rathjen expressed xenophobic remarks at Hanau’s citizen center when he was served by a black employee, sarcastically asking if he “was in Africa” or at the “immigration office” (Haschnik, 2022a).

Nevertheless, in a response authored by the president of the German “Bundestag” to an inquiry of a parliamentary group, it was stated that several witnesses disclosed Rathjen had made xenophobic statements since 1997 (Deutscher Bundestag, 2021, p. 7). As such, the perpetrator made pejorative comments about foreigners during his bank apprenticeship from 1997–1999 and for instance stated that headscarf-wearing women were out of place in Germany (Saß, 2022a, p. 6). Another colleague reported that Rathjen had been furious about immigrants talking loudly in the subway (Saß, 2022a, p. 6). Around 2009, after the offender had completed his studies in Bayreuth, a work colleague remembered that the subject refused to watch German national soccer games on TV because the team included predominantly Arab and African players (Saß, 2022a, p. 6). Furthermore, he declined to eat doner kebab—a popular Turkish dish that can be found across Germany—and noticed that Rathjen only listened to extreme right-wing music (Saß, 2022a, p. 6). Last, he had taken an interest in the colleague’s library, primarily focusing on literature that was related to World War II and the national socialist movement (Saß, 2022a, p. 6).

From 2014 to 2018, Rathjen worked in a multicultural environment in Munich where he was seemingly friendly with many colleagues that had a migration background; nonetheless, his coworkers and supervisors observed an overall dislike of foreigners (Saß, 2022a, p. 7). When

the incident with the sex worker occurred in the summer of 2018, the woman disclosed to the police that Rathjen had expressed hostile sentiments toward immigrants, apparently stating if a boat full of refugees is sinking, it should not be rescued (Haschnik, 2022b). The assailant’s written and spoken materials also contained evidence of his race-based, antiimmigration beliefs, which were intended to justify his crime. However, popular far-right conspiracy narratives, such as “the great replacement,” “white genocide,” or “ethnopluralism,” only arise rudimentarily in his documents (Deutscher Bundestag, 2021).

### ***Failure to Affiliate With an Extremist or Other Group***

This distal characteristic refers to experiences of rejecting or being rejected by an extremist or other group with whom the subject attempted to affiliate (Meloy, 2017); it can also refer to humanity as a whole, which may be the seeds of a misanthropic ideology (Kupper & Meloy, 2021).

Tobias Rathjen was an only child, described as “normal, cheerful, bright, cheeky, and enthusiastic about soccer” by a relative (Saß, 2022a, p. 3). However, during his school years, it was reported that he was an introverted loner, peculiar, and quiet without many friends, often the victim of bullying (Saß, 2022a, pp. 3–4). In Rathjen’s adolescence, he was often perceived as aggressive, argumentative, and arrogant by classmates, with mood swings and a “tendency toward unpredictable actions that were difficult to understand” (Saß, 2022a, p. 3). According to neighbors, the subject’s mother was a “loving, kind, caring woman” that suffered under her husband’s difficult nature, who was choleric, strict, and overly correct (Saß, 2022a, p. 3). Rathjen did not receive many visitors in his youth and the family became increasingly isolated, due to the opinionated and quarrelsome dad (Saß, 2022a, p. 4).

During his bank apprenticeship in Frankfurt, a colleague described him as “rebellious and stubborn,” whereas his training certificate painted him as an extraordinarily committed, effective, friendly, and responsible person (Saß, 2022a, p. 3). When he studied in Bayreuth, one of his university lecturers reported that he was “ambitious, goal-oriented, and competitive,” but also an isolated loner with misanthropic and derogatory tendencies (Saß, 2022a, p. 4). At his various workplaces, Rathjen was characterized as an

introverted, isolated, and arrogant loner but “professionally competent and committed” by several colleagues and supervisors (Saß, 2022a, p. 5). During his last job in Munich, coworkers described him as choleric, displaying erratic mood swings, and lacking empathy (Saß, 2022a, p. 5). These witness statements suggest that Rathjen experienced difficulties and rejections throughout his personal and professional life, with an inability to connect with and be accepted by society. Part of his public attack may have been motivated by a desire for recognition, something that had been repeatedly denied to him.

According to the Federal Bureau of Investigation, in November 2018, Rathjen traveled from Munich, Germany, to Denver, Colorado, and declared that his destination was a camp that may have had connections to the Knights Templar (Saß, 2022a, p. 9). The Knights Templar were originally an order of Christian knights, founded amidst the first of nine crusades in Jerusalem in the 11th century and later existed in every European nation. Anders Breivik, an extreme right lone-actor terrorist from Norway, declared in his manifesto that he was a “Justiciar Knight Commander” for the Knights Templar in Europe (Breivik, 2011). During the 2017 white supremacist rally in Charlottesville, North Carolina, flags with templar crosses were waved in the crowd (Millar & Costa Lopez, 2021). Brenton Tarrant, the Christchurch mosque shooter from 2019, also included references to the Knights Templar in his manifesto: “I did contact the reborn Knights Templar for a blessing in support of the attack” (Tarrant, 2019, p. 10) and “I have only had brief contact with Knight Justiciar Breivik, receiving a blessing for my mission after contacting his brother knights” (Tarrant, 2019, p. 18). The German government stated in one of the parliamentary inquiries (Deutscher Bundestag, 2020b, p. 6) that there are currently no indications that this trip was conducted for ideological reasons, including Rathjen’s radicalization and planning of an attack. As there is no clear evidence that the offender attempted to affiliate with this group, we only focused on our discussion of his general rejection by society to code this distal characteristic as present.

### *Dependence on the Virtual Community*

Behaviors related to utilizing the internet for virtual interaction and/or digital learning is

evidence of a *dependence on the virtual community* (Meloy, 2017). Tobias Rathjen’s use of the online sphere was multifaceted: He accessed ideological content, reinforced parts of his beliefs, researched potential and actual targets, prepared for the attack, and disseminated his written and spoken materials via digital means (Gill, 2015). In addition to his delusional belief system that formed internally, it appears that the offender cherry-picked words and phrases from external (i.e., online) violence-justifying propaganda to fit his needs for an act of terror. As discussed under *fixation*, Rathjen’s use of his early delusions to fuel his later extreme overvalued beliefs could have transpired after he discovered far-right conspiracy narratives in the cosmos of the internet. The concept of conspiracy theories is that they are socially shared by a subgroup, with more than one person believing them; this is a criterion that differentiates it from the clinical paranoia of a single person which can have many psychological or medical causes.

In the Hanau case, the perpetrator first believed that only he was the victim of a large-scale operation carried out by a secret society, which gradually expanded to humanity as a whole; several conspiracy narratives could have reinforced his beliefs that superior and overpowering antagonists control the world (Saß, 2022a, p. 10). Within the fear-inducing “great replacement” conspiracy theory, for instance, white Europeans are allegedly substituted by non-whites in their countries (such as Rathjen’s victims), while the “QAnon” conspiracy myth advocates that a cabal of cannibalistic and satanic sex abusers operate an international children sex trafficking ring. Such global conspiracies are often fundamentally antisemitic and have roots in previous centuries such as the belief that a Zionist Operated Government controls the globalist world order (Miller-Idriss, 2020).

Saß (2022a, pp. 9–11) has argued in his post-mortem examination of Rathjen that he was likely influenced by a variety of ideological frameworks from cyberspace, including “the great replacement” and elements from QAnon. Dittrich (personal communication, March 10, 2022) highlighted that although the perpetrator echoed some of the QAnon viewpoints, there is no clear connection between him and the movement, and a lack of evidence that he was a true QAnon believer. Furthermore, less well-known conspiracy theories, such as “remote viewing,” could have

strengthened his delusional belief system, while components of the incel culture might have fortified his misogynistic viewpoints. We agree that it is plausible that Rathjen's act of terror was inspired and influenced by a salad bar or cafeteria ideology that synthesized the low-hanging fruit of isolated conspiracy narratives, which in turn presented him with an "answer in his search for explaining his paranoid experiences" (Saß, 2022a, p. 11). This is a clear example of the exacerbation of clinical paranoia by a subcultural cocktail of conspiracy theory instantly available via the internet.

However, in contrast to other contemporary perpetrators motivated by extreme right-wing sentiments, Rathjen was not part of an intricate far-right online ecosystem, which often includes digital activity on the "chans"—for example, *4chan* and *8chan*—or instant messaging social platforms, such as *Discord*. This might have been because of his age: He was significantly older (age 43) than offenders such as Brenton Tarrant (28), John Earnest (19), Patrick Crusius (21), Philip Manshaus (21), Stephan Balliet (27), and Payton Gendron (18) during the time of their attacks. Moreover, Rathjen's spoken and written materials did not display the same form of intertextuality that we discovered across 10 assailants that conducted far-right attacks on an international stage (Kupper et al., 2022). For example, he did not reference the names of notorious same-genre authors; instead, his role models were "whistleblowers" that had revealed a variety of "truths" to the broad masses, such as Edward Snowden. Nor did he copy structural components or cite textual elements from previous manifestos, or include a self-interview in a question-and-answer format (Kupper et al., 2022). Despite alluding to ideological elements from far-right conspiracy narratives in a rudimentary fashion, Rathjen did not mention them by name in his manifesto (e.g., "white genocide"), and his released documents did not contain any channel-related language, such as "shitposting."

As noted in one of the parliamentary inquiries, the offender "did not attempt to explain the selection of his victims or the place of the attack in an explicit political context" (Deutscher Bundestag, 2020a, p. 9). Unlike previous terrorists, Rathjen also did not announce his act of violence on an online platform minutes before his impending attack. Instead, he uploaded his communications to his personal website 1–2 weeks prior to his

act, and instructed his father and a private detective to spread his written and spoken materials after his death (Saß, 2022a, p. 10; Saß, personal communication, March 6–June 28, 2022b). Furthermore, he did not attempt to livestream his act of violence or scribble the names of previous attackers on his firearms (Kupper et al., 2022). Meloy and Gill (2016) found that less virtual community interactions correlated with a greater likelihood of a successful attack, a finding that applies to the Hanau shooter.

It appears that Rathjen's main objective was to publicize his delusional ideology to reveal the machinations of a secret organization, which in his mind monitored and manipulated humanity. In contrast to previous offenders, his primary goal was not to spread his racist ideologies and actions transnationally, inspire contagion and copycat attacks, or signal belonging to this specific community of international right-wing extremists and terrorists (Kupper et al., 2022), which is why he probably authored most of his communications in his native language German (Rathjen, 2020a, 2020b, 2020c, 2020e, 2020f). Nevertheless, his second video, the "personal message to all Americans" (Rathjen, 2020d), was recorded in English. We argue that he was fascinated with the United States, and thus compiled an individual warning to U.S. citizens to encourage them to stand up against the "invisible secret societies" (Rathjen, 2020d). When the assailant was 15 years old, he was an exchange student in Florida and also traveled to the United States in 1993 and 1995, in addition to his trip to Denver in 2018 (Saß, 2022a, p. 3). He reportedly mentioned to various individuals that he planned to immigrate to the United States at some point (Saß, 2022a, pp. 8–9). Furthermore, most of his German-language documents contained references to North America: In his manifesto (Rathjen, 2020a), the perpetrator discussed a strategy for the United States to stay the leading global power. His delusions convinced him that there was a connection between him and the 9/11 attack, while his thoughts—monitored by the secret organization—contributed to policy recommendations in the United States ("even some slogans I had developed, like 'America First, Buy American and Hire American'") and inspired several Hollywood films (Rathjen, 2020a, pp. 17, 20, 23). Appendix 1 (Rathjen, 2020b) incorporated a military strategy for Iraq and Afghanistan, with parts of it involving the United States.

Appendix 2 stated that new fitness trainers from the United States should be hired to get the German national soccer team back in shape (Rathjen, 2020c, p. 3), while Video 3 included the statement that his goal is to reveal the truth to the “so-called European or American civilized nations” (Rathjen, 2020e).

Rathjen had a parasitic relationship to the internet before his death, while the internet had a saprophytic relationship to Rathjen after his death: The attack and attacker were commemorated as a win against immigrants and Western governments on various platforms.

On several German far-right channels on Telegram, the assailant was celebrated as a hero and praised in the so-called “Saints Culture of Terrorgram” (Kriner & Ihler, 2022)—for instance by the “Bowlcast,” whose name stems from Dylann Roof’s unusual bowl haircut. Roof conducted an extreme right motivated mass shooting at a church in Charleston, South Carolina, in 2015. The Bowlcast declared: “It is with great honor that bowl patrol announces the newest member of the Saint pantheon. Heil Tobias Rathjen, slayer of kebab, the mad Deutscheman first big saint of 2020. Please charge for him” (Telegram, 2020a). Das Right Archive (Telegram, 2020b) posted that “survivors and loved ones still live in fear. Saint Rathjen’s legacy of terror lives on” and “2/19 HAPPY SAINT TOBIAS RATHJEN DAY.” Nonetheless, in other far-right corners of the digital sphere, the Hanau attack received ambivalent responses. On *Neinchan*, a dark web derivative of *8chan*, some users created meme threads in Rathjen’s honor, while others derided him as a “schizo” and ridiculed his niche conspiracy theories (Crawford & Keen, 2020, p. 6). On other forums he was mocked as a “useless failure” because he failed to explicitly reference any radical right-wing conspiracy theories and it was stated that “he will not inspire any imitators,” making “white terrorists look like idiots” (Hurtz et al., 2020). Furthermore, the main involuntary celibate forums discussed that Rathjen was wrongly accused of being an “incel,” which denigrated their movement; users in one thread concluded that he was primarily driven by a mental disorder (Jasser et al., 2020).

### ***Thwarting of Occupational Goals***

This indicator refers to any major setbacks or failures in a planned academic or occupational

career (Meloy, 2017). Tobias Rathjen attended elementary school from 1983 to 1987, followed by high school from 1987 to 1996, both in his hometown Hanau, after which he completed 1 year of civilian service from 1996 to 1997, and an apprenticeship as a banker in Frankfurt, Hesse, from 1997 to 1999 (Saß, 2022a, p. 3). He proceeded to study business administration at the University of Bayreuth in Bavaria from 2000 to 2005, where he experienced the first signs of concentration and sleep difficulties, which could have been caused by his developing schizophrenia (Saß, 2022a, pp. 3–4). However, two witnesses reported that there was also an enormous pressure from Rathjen’s parents for him to succeed at school and university, as his “social advancement was of great importance to the family” (Saß, 2022a, p. 3). Unable to cope with the increasing pressure, the perpetrator failed multiple exams and only achieved weak grades during his studies and in his diploma thesis, though he never failed to radiate ambition and self-confidence toward his aspiring professional success (Saß, 2022a, pp. 3–4). In a conversation with a neighbor, Rathjen reportedly mentioned in a self-assured manner that he would be driving a Porsche by the age of 40 and be on the board of directors at a company (Saß, 2022a, p. 3), both of which he was unable to achieve.

After passing his diploma exam in April 2007, he pursued a professional career from 2008 to 2018 (Saß, 2022a, p. 5). This included self-employment as a sales representative and several jobs in the customer service, finance, and insurance sectors across Hesse, Baden-Württemberg, and Rhineland-Palatinate (Saß, 2022a, p. 5). His longest engagement was in Munich where he worked as a customer service representative for an internet portal from 2014 to 2018 (Saß, 2022a, p. 5). Though he was perceived as an arrogant and isolated loner by his colleagues and supervisors in most of his jobs, his work ethic was described as professionally competent, energetically engaged, and goal-oriented (Saß, 2022a, pp. 5–7). His final position was terminated at the end of 2018 and Rathjen failed to secure further employment, despite submitting several job applications in close proximity to his hometown until 2 months prior to his attack (Saß, 2022a, p. 6). In the criminal complaints, which he submitted in November 2019, he indicated that he had “resigned in Munich in order to devote all of his attention to solving a crime” (Saß, 2022a, p. 6),

referring to the illegal activities of the secret organization.

Saß (2022a, p. 9) concluded that the life of Tobias Rathjen was filled with difficulties and failures in the months prior to the shooting in Hanau, with the perpetrator's bank accounts overdrawn by 34,000 Euros. However, it was not only him that experienced major setbacks in his occupational career: It appears the thread of economic instability wove through the perpetrator's entire family. His mother reportedly lost her job as a kindergarten teacher in 2016, in all likelihood due to her illness (Saß, 2022a, p. 3). According to Rathjen's manifesto (2020a, p. 20), his father was unable to continue his employment as a manager because of the secret organization and was subsequently jobless for several years, which put an immense financial strain onto the family. Rathjen's father supposedly received a small pension and had to work fulltime as a 70-year-old (Saß, 2022a, p. 3), which likely magnified the burden of the mother's illness and need for care.

### *Changes in Thinking and Emotion*

This is the most complex indicator within the TRAP-18 and focuses on three areas: interpersonal style of communicating with others, internal fantasies, and changes in emotional states toward unbelievers (Meloy, 2017). As commenced under *thwarting of occupational goals* and other warning behaviors, Tobias Rathjen increasingly struggled with diverse difficulties in 2019. After moving back in with his parents at the beginning of that year, the offender started taking care of his mother and continued to do so until the matricide, due to his father's unwillingness to engage a professional care worker (Saß, 2022a, p. 9). Rathjen's mother had a neurological disorder, which had her confined to bed and in constant need of care for many years (Saß, 2022a, p. 11; Saß, personal communication, March 6–June 28, 2022b). A relative described the situation at his parental home during a visit on January 25, 2020—less than 4 weeks prior to the attack—as overwhelming (Saß, 2022a, p. 9). Her illness and subsequent care likely affected Rathjen deeply; while he attempted to manage his futile adventure in Munich, he was deprived of his job and home within a relatively short time span. We think that Rathjen's internal fantasies became more violent and grandiose during this time, and he shifted

from being a victim to evolving into a warrior, from passively suffering to actively avenging. His actual real-world failures in conjunction with his idealization of whistleblowers depleted his healthy narcissism in day-to-day experiences, and his self-admiring linking fantasies with these nonfictional role models turned him into a soldier of truth, aiming to reveal the illegal schemes of the secret organization to humanity.

In addition, as noted in the “obsession” discussion under *fixation*, the offender self-narrated his changes in attitude regarding foreigners and immigrants in his manifesto (Rathjen, 2020a, pp. 5–6). He was increasingly attracted to gaining power over non-whites and embracing his moral authority as a white German, with his beliefs becoming more binary, simplistic, and absolute, ultimately resulting in a willingness to homicidally aggress against them (Meloy, 2017). We see his emotions closely tracking the work of Matsumoto et al. (2015) concerning a shift from only anger, to anger, contempt, and disgust as predictors of political violence:

- *Anger* (a strong feeling of hostility): “One of the topics of our conversation was criminality, or more generally, the bad behavior of certain ethnic groups, namely Turks, Moroccans, Lebanese, Kurds, etc. (...) At that time, we had similar personal experiences, which resulted in a dislike of these ethnic groups and we were therefore of similar opinion in this respect.” (Rathjen, 2020a, p. 5)
- *Contempt* (the feeling that another is rightfully devalued due to their inferiority): “First, I asked myself the fundamental question of why these ethnic groups are in my country at all? The appearance of these people is to be rejected instinctively and, moreover, they have not proven themselves to be high-performing in their history.” (Rathjen, 2020a, p. 6)
- *Disgust* (a feeling of physical revulsion aroused by something which can contaminate or poison): “The following nations must be completely destroyed: Morocco, Algeria, Tunisia, Libya, Egypt, Israel, Syria, Jordan, Lebanon, the complete Saudi peninsula, Turkey, Iraq, Iran, Kazakhstan, Turkmenistan, Uzbekistan, India, Pakistan, Afghanistan, Bangladesh, Vietnam, Laos, Cambodia and up to the Philippines. And

this would only be the rudimentary clean-up. After that the final cleansing must begin, this concerns the remaining African states, South and Central America, the Caribbean and of course my own nation. (...) If there was a button available to make this a reality, I would press it immediately. (...) I would eliminate all these people, even if we are talking about several billions, it has to be done.” (Rathjen, 2020a, p. 6)

The need to purify and cleanse the environment of “pollutants,” “toxins,” or “diseases” is often a conscious motivation for participation in such an apocalyptic event. The contaminants are viewed as an imminent existential threat by the violent true believer (Meloy, 2018). We think that Rathjen’s paranoid belief system depicted his enemy as both an external threat *and* a contaminant and toxin within—what we would consider persecutory introjects—compelling a need to violently purify his body and that of his mother from which it came in the form of matricide and suicide after his mass attack.

### ***Failure of Sexual-Intimate Pair Bonding***

This distal characteristic refers to a historic failure to form lasting intimate relationships, with the sexualization of violence being a secondary component (Meloy, 2017). Numerous lone-actor terrorists have failed to form a sexual-pair bond from puberty until their incarcerations or deaths (Meloy & Gill, 2016).

The postmortem evaluation of Tobias Rathjen (Saß, 2022a, pp. 4, 6) concluded that the perpetrator did not have any close friendships, intimate partnerships, or unpaid sexual relationships during his lifetime, likely due to his difficulties to connect or affiliate with others. According to a neighbor, she never observed him socializing with a girl or woman, and reported that he treated his car, a BMW, like a treasure, cleaning it every day and referring to it as “his wife, his baby” (Saß, 2022a, p. 3). One of his colleagues from the bank apprenticeship stated that the perpetrator made derogatory comments about women on several occasions, and Rathjen would talk only sporadically about a long-distance relationship to later coworkers, though there was no proof that a girlfriend existed (Saß, 2022a, pp. 3, 6). When he was admitted to the psychiatric facility in 2002, he mentioned that he had fallen in love with a

female student in 2001; however, she did not reciprocate his feelings (Saß, 2022a, p. 4). Saß (2022a, pp. 1–4) has argued that this first and only erotic love interest was likely the initiator of his delusions, as the disappointment profoundly touched and emotionally destabilized him.

Rathjen (2020a, p. 13) expressed in his writings that he was pleased when he encountered the young, attractive student during his first semester, but that the meeting was “controlled by this ‘secret organization,’” which he was unaware of at that time. Eventually, he attributed his failures to form any enduring sexual relationships to his lifelong monitoring by this clandestine entity, claiming that he was deprived of privacy and intimacy and never had a “wife/girlfriend all my life, solely because for the last 18 years I couldn’t get a wife because I knew I was being watched” (Rathjen, 2020a, p. 13). The paranoid defense against an enduring sexual-pair bond is rarely clinically and academically explored (Alperin, 2001).

Furthermore, a forensic investigation of the assailant’s electronic devices unveiled that the offender stored a variety of kinky, sexual role play videos on his computer, which entailed transvestite, sodomitic, and masochistic elements (Saß, 2022a, p. 6). Rathjen also frequently engaged with prostitutes and escort ladies, which could suggest a “certain unfulfillment and a preference disorder in the area of sexuality and intimacy” (Saß, 2022a, p. 6). During the incident with the escort in August 2018, the sex worker associated his BDSM tools and weapons with “tremendous use of force” (Haschnik, 2022b). According to the testimony of a police officer who was called to the scene that night, Rathjen had several videos of himself on his phone, wearing a woman’s wig, dresses, and artificial breasts (von Bebenburg, 2022). When they searched the house, they also noticed a bag filled with a woman’s wig and female clothes (von Bebenburg, 2022). We know nothing more concerning his transsexual, transgender, or transvestite fantasies.

In the Hanau case, the following components appear to have substituted for the absence of a sexual-pair bond and might have rationalized certain parts of Rathjen’s delusional ideology: the unusual choice of pornography; the exclusive use of unbonded sources to fulfill sexual gratification; and the sexualization of weapons (Meloy, 2017).

A secondary explanation as to why Rathjen and other lone-actor terrorists are intimately isolated



could be their high expectations of their counterparts, an unwillingness to compromise “perfect.” This is often a clinical manifestation of narcissistic psychopathology: the idealization of the object which will invariably disappoint. Rathjen expressed this in his manifesto (2020a):

I’ll come back to the conversation I had with my colleague from my banking apprenticeship [in 1999], which of course also dealt with the topic “women.” First of all, I have to say that I hadn’t had any steady girlfriends up to that point, because I didn’t like most of their “appearances” or more specifically, I had particularly high standards. Since every human being has the desire not to be alone or the desire to find the right partner, the state of nonfulfilment can inhibit joy and performance. That’s how I felt from the age of 15 to 22. However, I certainly could have compromised more often, taking a less good-looking woman who I kind of got along with. But this was out of the question—I wanted the best or nothing. (p. 13)

Nevertheless, these statements do not indicate that Rathjen perceived himself as being “involuntarily celibate” or belonging to the *incel* movement. Jasser et al. (2020) have argued that the offender’s entitlement of not wanting to settle for anything “but the best” shows a sexist, objectifying view of women, which is a common perspective in misogynist online forums. However, we argue that the Hanau attack was not stimulated by a dislike or hatred toward women, or that it was motivated by a resentment about his thwarted intimate relationships. This is contrary to other far-right terrorists of recent years (e.g., Stephan Balliet, the Halle synagogue shooter), whose rationale to attack was to a certain extent driven by misogynistic or antifeminist elements. These sentiments often stem from “the great replacement” conspiracy narrative where modern women are blamed for the downfall of the white race due to alleged low birth rates (Deutscher Bundestag, 2021, p. 11); and at a deeper level is a return to the paranoid defense against intimacy. The origins of such a grievance are oftentimes a deeply hurtful personal rejection, which is then target dispersed to all young, attractive women (Collins & Clark, 2021).

### **Mental Disorder**

Evidence of a major psychiatric illness by history or in the present defines this distal characteristic (Meloy, 2017). A recent study of more than 3,000 lone-actor terrorists has highlighted that approximately one-third have a mental

disorder diagnosis when clinically examined (Gill et al., 2020), while an article on 52 mass murderers revealed that 23% were mentally ill (Stone, 2015). Furthermore, in a data set of 172 mass shooters, psychosis played a major role in 11%, a moderate role in 9%, and a minor role in 11% of cases (Peterson et al., 2022). García-Andrade et al. (2019) previously examined the TRAP-18 in an empirical study with a sample of 44 patients with a severe mental illness, which included diagnoses of schizophrenic spectrum and delusional disorders, and found excellent postdictive validity.

In Tobias Rathjen’s case, the symptoms of his intense, paranoid delusion were the primary driver for his attack in Hanau; xenophobic and racist ideologies later amplified his fixed and false beliefs (Saß, 2022a, p. 1). The perpetrator’s posthumous psychiatric analysis disclosed that there were no signs of a mental disorder in his childhood and adolescence, with no indications of medical problems during his school, apprenticeship, civilian service, or work activities (Saß, 2022a, pp. 2–4). However, suspicious, argumentative, and egocentric personality traits may have existed since youth (Saß, 2022a, p. 1). It was not until 2001, when Rathjen was in his mid-twenties, that signs of a serious psychiatric illness surfaced (Saß, 2022a, p. 4); major mental disorders often stay hidden until early adulthood. The first signs of his delusions appeared in a criminal complaint that he filed in January 2002, when he alleged that the father of a fellow student, whom he had fallen in love with but did not reciprocate his feelings, illegally surveilled his apartment. Thereupon, he was admitted to a medical clinic, where the responding neurologist suspected a “psychosis of the schizophrenic type with paranoid contents,” and ordered him to a psychiatric facility (Saß, 2022a, p. 4). The clinic’s psychological report did not confirm the schizophrenic psychosis of the first examination, but concluded with a diagnosis of a delusional disorder with “extensive thought disorders” and “systematized delusions associated with delusional moods, ideas, and perceptions” of being persecuted and monitored (Saß, 2022a, p. 4).

According to the Schneiderian concept and its traditions in the work of Karl Jaspers and Kurt Schneider, *Wahnwahrnehmungen* (delusional perceptions) are first rank symptoms of schizophrenia, where a certain perception—mostly

visual—is linked with a delusional belief by the patient (Saß, personal communication, March 6–June 28, 2022b). Saß (2022a, p. 11) has argued that the psychiatrists were likely cautious diagnosing Rathjen with the more serious disorder of “schizophrenia” instead of the delusional disorder, as it would have had severe ramifications for his status as a student. However, it needs to be pointed out that this would also have had a significant impact on his ability to legally purchase three weapons in subsequent years, some of which were utilized during his terrorist act. The psychiatrist informed the subject that his symptoms would progress if not treated, and there was no evidence of Rathjen undergoing any treatment in the following years (Saß, 2022a, pp. 4–5).

In May 2002, a senior physician evaluated the offender’s fitness to drive and noted in the psychiatric report that “there were no mental health disorders that were significant for the suitability to drive a motor vehicle” (Saß, 2022a, p. 5). Nonetheless, his delusions intensified within the next 2 years, as is evident in a second criminal complaint that was filed in November 2004 (Saß, 2022a, p. 5); Rathjen now had the suspicion that a powerful secret organization was monitoring him. The authorities failed to involve the health department and his mental disorder remained undetected and untreated. Although there appears to have been an external latency phase between 2005 and 2018, there was an immense internal expansion of his paranoid delusional system across time and space, which became discernible in his final criminal complaints to the federal and public prosecutors’ offices in November 2019 (Saß, 2022a, pp. 5, 7, 11). These documents now included clear signs of the perpetrator’s false sensations—such as auditory and visual hallucinations—on top of his fixed and false beliefs, which resulted in him embarking on a mission to liberate humanity of the illegal activities of the secret organization. By this time, Rathjen also displayed ego disorders, thought outbursts, and psychotic memory distortions (Saß, 2022a).

Saß (2022a, pp. 11–12) concluded in his forensic psychiatric report that the perpetrator suffered from a “chronic paranoid schizophrenia” with a “paranoid delusional system” at its forefront and “accentuated personality traits with narcissistic, schizoid, and paranoid elements.” Many psychological functions remained intact and unimpaired until the subject’s self-inflicted death

and did not lead to a “continuous disintegration of the entire personality,” as seen in other cases (Saß, 2022a, p. 12). One component of Rathjen’s dangerousness was indeed his ability to hide the majority of his inner life from the outside world; moreover, his grandiose delusions did not interfere with his operational planning and execution of the act of terror (Saß, 2022a, pp. 1, 10, 12).

Psychological and psychiatric research has demonstrated that major mental disorders, such as schizophrenia, have an inherited biological basis and do occur most often among first-degree blood relatives, through either patrilineal or matrilineal transmission (Meloy, 1996). This suggests that Rathjen could have been genetically vulnerable to his psychosis and that environmental stressors—in his case, the emotional stress generated by a disappointment in love, in combination with pressure to succeed at university (Saß, 2022a, p. 10)—resulted in the development of a delusional system in early adulthood. Although the offender’s mother had a neurological disorder that forced her to be in constant need of care, it was reported that she was mentally unimpaired until her death; but Rathjen’s father displayed various difficult personality traits, including disputatious and resentful attitudes toward others, suggesting paranoid personality traits (Saß, 2022a, p. 2; Saß, personal communication, March 6–June 28, 2022b). The mayor of Hanau testified in an inquiry that there were several instances where the older Rathjen attracted negative attention and presented his “querulous character” (Haschnik, 2022a).

We argue that the perpetrator’s father could have genetically transmitted a predisposition for psychiatric illness; however, Saß (2022a, p. 5) has highlighted that there was not a complete “folie à deux,” a shared delusional disorder where fixed and false beliefs are held by two persons closely associated with each other. In the Hanau case, it appears that the younger Rathjen was the original author and initiator of the delusional themes, which were partly adopted and accepted by his father, who expressed solidarity and support for his son when he got in trouble because of his delusions (Saß, 2022a, p. 5; Saß, personal communication, March 6–June 28, 2022b). Most noticeable, the older Rathjen also filed a criminal complaint in 2004 that entailed his entire family being spied on by state institutions, which he suggested could have stemmed from his previous job at an U.S. company or family members from

the former German Democratic Republic (Saß, 2022a, p. 5).

Furthermore, father and son shared similar racist sentiments against foreigners and migrants, and later delusions involving the secret organization; nevertheless, Tobias Rathjen's "highly dynamic delusional disorder" was the primary factor for his decision to commit the Hanau shooting (Saß, 2022a, pp. 2, 10; Saß, personal communication, March 6–June 28, 2022b). When the older Rathjen was on trial for accusing Hanau's mayor of voter deception among other things in 2021, a psychiatric expert diagnosed him with "combat paranoia"—he continuously felt persecuted and discriminated, and anyone could become an enemy that he had to fight (Haschnik, 2022a). Nonetheless, the Deutscher Bundestag (2021, p. 12) has stated that the investigations into his father did not reveal any evidence that he was involved in encouraging or inciting his son, nor did he assist in planning or carrying out the event. This conforms with a press release from the Office of the Federal Public Prosecutor (Der Generalbundesanwalt, 2021), which clarified that the offender acted alone.

### ***Greater Creativity and Innovation***

This indicator is measured in two ways: The creative part assesses if a major aspect of the planned, thwarted, or committed terror attack is original and has not been carried out in this manner in contemporary times (Meloy, 2017). The innovative component evaluates if a contagion or copycat effect would likely occur, inspiring others to imitate the attack or the attacker (Kupper et al., 2022; Meloy, 2017).

The modus operandi of Tobias Rathjen's terrorism attack was not novel per se, since he shot and killed civilians with firearms in several public locations. However, we argue that the subject applied tactical "outside the box" thinking when he intentionally targeted shisha bars, late-night cafes, and a 24/7 kiosk in two specific parts of his hometown. Nuran David Calis, the son of an Armenian-Jewish immigrant family from Turkey, has described that these places are often the only spots non-whites can visit after being denied entry into the "normal" clubs and bars in Germany (Nobrega et al., 2021). These types of locations had not been chosen by previous assassins that targeted non-white minorities. Furthermore, as highlighted in the introduction, the

amalgamation of mass homicide, matricide, and suicide is extremely unique. There is no evidence that Rathjen's modus operandi has been mimicked by other offenders to date.

### ***History of Criminal Violence***

This final distal characteristic encompasses evidence of instrumental criminal violence in the subject's past wherein s/he has demonstrated a capacity and willingness to engage in predatory behavior; such history may make it easier to repeat violent actions in the form of a terrorist attack (Meloy, 2017). This indicator may negate the coding of the proximal warning behavior *novel aggression*.

According to media reports, Tobias Rathjen appeared in 15 police and prosecutorial files over the years, in one-third of them as a defendant (Gezer et al., 2021). For instance, in 2002, the perpetrator filed a criminal complaint about psychological rape in Bayreuth, Bavaria and resisted the police when he was subsequently committed to a psychiatric hospital (Backhaus-Arnold & Haschnik, 2022; Saß, 2022a). He allegedly butted a law enforcement officer with his head, angrily rushed out of the treatment room, only to be contained and handcuffed on the ground floor by four officers (Gezer et al., 2021). Furthermore, a chief superintendent of the Bundeskriminalamt testified that in the same year, there was a lawsuit against Rathjen for harassing a fellow student—the one he had fallen in love with—and spreading conspiracy narratives (Backhaus-Arnold & Haschnik, 2022).

In 2007, during his final year of studies, he assaulted a security guard at the University of Bayreuth, which resulted in him being banned from entering the premises (Backhaus-Arnold & Haschnik, 2022; Gezer et al., 2021). In 2010, the German Customs Investigation Services in Essen, North Rhine-Westphalia, investigated the offender for drug smuggling; however, it is reported that the case was dismissed due to negligibility (Gezer et al., 2021). A few months later, Rathjen and his father were charged with welfare fraud and accused of stealing 3,300 Euros of benefits, but the investigation was again closed because of insignificance (Backhaus-Arnold & Haschnik, 2022; Gezer et al., 2021).

In March 2018, there was a second inquiry into drug smuggling, and the incident with the sex worker occurred in August 2018 (Gezer et al.,

2021; Saß, 2022a). When responding officers searched the vacation home, they discovered remainders of a joint, and Rathjen was subsequently investigated for violating the narcotics' law (cannabis) and testified as a witness against the escort's prohibited practice of prostitution (Backhaus-Arnold & Haschnik, 2022; Saß, 2022a). He was not charged for threatening the sex worker, although she was panicked, feared for her life, and described the perpetrator as a "psychopath" (Haschnik, 2022b). Moreover, within the same month, the assailant was accused of negligent arson because he set fire to a pile of pornographic magazines near a forest in Ebersberg, Bavaria; an accelerant was found on site (Saß, 2022a). When law enforcement interrogated him at his apartment in Munich, he admitted to the charge; but because the police officers failed to inform him that he was the accused before he confessed, the prosecutor dropped the case (Gezer et al., 2021).

We believe that the assaults against the police officer in 2002, the university's security guard in 2007, and the sex worker in 2018 qualify for this behavior to be coded as present. In addition, because there was no clear act of premeditated violence, we were able to code this behavior as well as *novel aggression*.

## Discussion

### The TRAP-18

Preceding case studies that applied the proximal warning behaviors or the complete TRAP-18 retroactively involved one thwarted and seven successful lone-actor terror attacks across Germany, Norway, Sweden, and the United States. Between five and seven proximal warning behaviors were present in all research articles, with some reports including an analysis of distal characteristics, which were prevalent between five and nine times in each case. The acts of violence were primarily fueled by the following ideologies:

#### 1. Jihadism:

- Fort Hood shooting in 2009, Malik Nidal Hasan (Meloy & Genzman, 2016)
- Frankfurt airport attack in 2011, Arid Uka (Böckler et al., 2015)
- Berlin Christmas market attack in 2016, Anis Amri (Böckler et al., 2017)

- Little Rock recruiting office shooting in 2009, Abdulhakim Mujahid Muhammad (Tassin & Allely, 2022)
- #### 2. Race and/or ethnicity:
- Norway attacks in 2011, Anders Breivik (Meloy, Habermeyer, et al., 2015)
  - Trollhättan school attack in 2015, Anton Lundin Pettersson (Erlandsson & Meloy, 2018)
  - Foiled U.S. Coast Guard attack, Christopher Hasson (Dmitrieva & Meloy, 2021)
- #### 3. Involuntary celibates (incel):
- Tallahassee yoga studio attack in 2018, Scott Paul Beierle (Collins & Clark, 2021).

Allely and Wicks (2022) noted in their feasibility and utility review of the TRAP-18 that further motivational and cultural validation of the tool is imperative. As previous case studies that captured terrorist attacks in Germany focused on jihadism, we were keen to apply the instrument to an act of targeted violence that was predominantly motivated by a major psychiatric disorder—paranoid schizophrenia—but also included ideological and conspiratorial components from the far-right cosmos.

Tobias Rathjen was coded for 17 out of 18 TRAP indicators (94%), with seven out of eight proximal warning behaviors (88%) and 10 out of 10 distal characteristics (100%) being present. The only behavior that was not identified in the Hanau terror attack is *directly communicated threat*, which was also not present in any of the other case studies mentioned above. Most perpetrators do not want to risk lowering their probability of success by warning the target—a tactical decision to preserve the plan for the event. In a study involving 33 subjects who carried out a lethal act of terror and 23 persons of concern who were successfully risk managed in the United States, direct threats were the least frequent proximal warning behavior, only occurring in 18% of all attackers but in 82% of non-attackers (Meloy et al., 2019). These results correlate with findings from other empirical research involving the TRAP-18, such as a German sample of offenders who were convicted of Islamist activities (Böckler et al., 2020): only 8% exhibited behavioral patterns related to the communication of a direct threat. Goodwill and Meloy (2019) also recorded a low frequency of this behavior in their multidimensional scaling study that visualized

the relationship among the TRAP-18 indicators. The overall data for directly communicated threats among lone-actor terrorists is typically <20% (Meloy & Gill, 2016).

### Nexus of Psychopathology and Ideology

In an earlier psychoanalytic case study of one of the Boston marathon bombers, Tamerlan Tsarnaev, the second and third authors (Cotti & Meloy, 2019) assessed the perpetrator's motivating forces through the lens of "the nexus of psychopathology and ideology." Though Tsarnaev's attack was to a great degree framed by jihadism, he also experienced auditory hallucinations and delusions in the form of feelings of persecution and thought control by invisible forces.

Tobias Rathjen showed evidence of a genuine psychopathology, which was fused with xenophobic and racist elements; nonetheless, it appears that both themes remained independent from each other (e.g., the immigrant targets did not collude with the secret authority in his worldview). The delusion convinced the assailant that he was a personal victim of a large-scale conspiratorial persecution by the clandestine organization, whereas his ideological and conspiratorial thinking formed a fanatical commitment (Saß, personal communication, March 6–June 28, 2022b). However, this case study also demonstrates that the three cognitive-affective drivers of fixation—delusion, obsession, and extreme overvalued belief—can coexist in one individual, and are valuable nodes for clinical assessment in a person at risk for a targeted attack (Meloy & Rahman, 2020).

This might explain why Rathjen researched varying potential targets, including schools, up until 2 weeks before the attack, and highlights the multiple ways mental disorder and radical world views dynamically affect each other. It remains unclear if he attempted to single out schools with a high percentage of immigrant children, similar to the Trollhättan and Aztec–High school shootings in Sweden and New Mexico in 2015 and 2017. Saß (2022a) reached similar conclusions in his forensic psychiatric evaluation of the perpetrator:

(...) it has not been identified why and when his hostile attitudes, which were initially related entirely to the secret organization that persecuted him, led to him change his direction and attack foreigners, at least based on the current state of knowledge. Even if influences from the

conspiratorial and radical right-wing cosmos of the internet certainly played a major role in Mr. R.'s case, the decisive point remains that (...) [they were] massively deformed by the paranoid schizophrenic disorder. (...) From a psychopathological viewpoint, both dimensions were inseparably interwoven. (...) the delusion massively limited his ability to reflect on his own pathologically deformed world view, to critically weigh his subjective interpretation against the general ideas of right and wrong, and finally to use this to form a rational will. (pp. 11–12)

This deduction was also supported by the investigating authority, the Bundeskriminalamt, when one of their lead detectives testified that the offender's mental illness and political thinking were "directly intertwined" (Backhaus-Arnold & Haschnik, 2022).

We think there is a unique set of psychosocial stressors that incited Rathjen to commit his acts: the internal worrying caused by the psychosis; the mother's suffering due to her illness; the enduring inability to connect with and be accepted by others; and the unanticipated loss of employment and housing. Acute and chronic stressors are very common among targeted attackers and mass murderers (Hempel et al., 1999; Silver et al., 2018), as they are among most individuals at some point in their lives. But in the case of Rathjen, the *sensitivity* of these stressors coalesced and contributed to the decision to be violent, as well as the emergence of *specificity* in the pathway and other proximal warning behaviors. But for the observable proximal warning behaviors, research indicates that there would be no threat of targeted violence (Allely & Wicks, 2022; Meloy et al., 2021). As Meloy (2017) wrote,

The presence of any one [proximal] warning behavior indicates that the case should be actively risk managed. This is called a Warning, and the weather analogy is the potentially imminent presence of the storm in the observer's backyard. Warning behaviors should compel a sense of urgency in those assessing and risk managing subjects of concern. (p. 8)

TRAP-18 research has so far indicated both high sensitivity and high specificity (Böckler et al., 2020; Vargen & Challacombe, 2022).

### Mass Homicide–Matricide–Suicide

In an earlier article, Hempel et al. (1999) coined the term *bifurcated mass murderers*, referring to cases where offenders first kill a family member (parricide) and then proceed to carry out a mass murder. For this study, we expand the description to include the following:

*Bifurcated mass murderer*—a perpetrator who kills one or more family members before, during, or after committing a targeted violence attack, which can be motivated by personal grievances and/or extreme ideologies.

Although these types of incidents rarely occur, we identified the following events through extensive research, which illustrate our expanded definition of *bifurcated mass murderers*:

- 21-year-old *Philip Manshaus* killed his Chinese adoptive stepsister (sororicide) before attempting to conduct a mass shooting at a mosque in Bærum, Norway, on August 10, 2019. He was overpowered by several worshippers, captured, and indicted for terrorism and murder (Bureau of Counterterrorism, 2020b).
- 24-year-old *Connor Betts* murdered nine people, including his brother (fratricide), during a mass shooting in downtown Dayton, Ohio, on August 4, 2019. He was fatally shot by responding law enforcement officers (Lindgren, 2021).
- 20-year-old *Adam Lanza* killed his mother (matricide) before committing a school shooting in Newtown, Connecticut, on December 14, 2012, which left 27 people, mostly children, dead. As first responders arrived, he committed suicide (Office of the Child Advocate State of Connecticut, 2014).
- 15-year-old *Kipland Kinkel* murdered his parents (parricide) before conducting a school shooting in Springfield, Oregon, on May 21, 1998. He was subdued by students after killing two of his classmates and later convicted for murder and attempted murder. During his arrest, he attempted suicide-by-cop but was instead pepper sprayed by a police officer (Barak, 2003, p. 623).
- 16-year-old *Luke Woodham* killed his mother (matricide) before committing a school shooting in Pearl, Mississippi, on October 1, 1997, killing two students. He was held at gunpoint by the school's assistant principal until law enforcement detained him and was subsequently convicted of murder and attempted murder (Langman, 2015, p. 31).
- 25-year-old *Charles Whitman* killed his mother (matricide) and wife (uxoricide) before conducting a mass shooting at the University of Austin, Texas, on August 1,

1966, which left 14 people dead. He was fatally shot by responding law enforcement officers (Texas Governor's Fact-Finding Committee, 1966).

- 23-year-old *John Gilbert Graham* killed his mother (matricide) and 43 others by detonating a bomb in his mother's suitcase during her flight near Longmont, Colorado, on November 1, 1955. He was arrested and convicted of first-degree murder (Federal Bureau of Investigation, n.d.).
- 38-year-old *Ernst August Wagner* killed his wife and four kids (familicide) before arbitrarily setting four houses on fire and shooting at people as they escaped from their burning homes in Mühlhausen an der Enz, Germany, on September 4, 1913, which left 12 people dead. He was overpowered by villagers, arrested, but found not guilty by reason of insanity (Carter et al., 2018; Saß, 2022a).

After committing his act of terror and before killing himself, Rathjen also murdered his mother. Considering the current corroborations, clear motivations for the unplanned matricide are not apparent at the present time. However, there is suggestive evidence that he did not kill her out of spite or hatred—instead, he wanted to avoid abandoning her after his self-inflicted death, as he had been the one taking care of her (Saß, personal communication, March 6–June 28, 2022b). It appears that the assailant wanted to liberate his mother from the suffering caused by her chronic health condition; the aftermath of his attack may have added further stress and pain to her (Saß, 2022a, p. 11). The perpetrator's deed contradicts a statement made in his first video, in which he conveyed good wishes to both of his parents, telling them they should not be saddened about his death (Saß, personal communication, March 6–June 28, 2022b). When he recorded that video in 2019, it was apparently not his intention to kill his mother, and the matricide appears to have been a spontaneous act upon his return from the terror attack (Saß, 2022a, p. 11; Saß, personal communication, March 6–June 28, 2022b) and may be related to an act of purification, as we noted earlier.

Rathjen's suicide could be interpreted as the final, grandiose act to spread his delusional ideology and reveal the truth about the secret organization, or a martyr-style fantasy of self-sacrifice

due to some of his personality traits (Saß, 2022a, p. 11). In addition, it appears that his self-induced death was a defensive reaction to an imminent threat (Meloy, 2018), the continuous persecution of the secret organization—caused by his intense delusions—that resulted in great internal suffering. The U.S. National Institute of Mental Health, n.d.) has listed feeling hopeless, trapped, anxious, agitated, or full of rage as warning behaviors for suicide.

It is evident that the offender had planned his self-induced annihilation prior to conducting his act of terror. As such, we detected two indirect references to the perpetrator's contemplation to commit suicide in his manifesto: "I will now describe why I know that I am monitored by a secret service and why the confirmation of what I say is extremely important, even though I will not be around to witness it" (Rathjen, 2020a, p. 1); and "The following generations can now check whether I was right or not" (Rathjen, 2020a, p. 8). Corresponding to this were written requests addressed to his father, which were discovered in the parental home and contained instructions on how to manage his "legacy," particularly the publication of his written and spoken materials (Saß, 2022a, p. 10, Saß, personal communication, March 6–June 28, 2022b). The assailant also contacted a private detective to ensure his website was disseminated postmortem (Backhaus-Arnold & Haschnik, 2022).

Though the homicide–suicide dynamic has been apparent in many mass attack cases, there is a dearth of research surrounding the lethal self-injury aspect (Hempel et al., 1999; Meloy et al., 2001). A retrospective suicide risk assessment of Tobias Rathjen could provide additional understanding of the Hanau shooting and further explore his motivations for the suicide and matricide.

### Threat Management

Prevention does not require prediction. In other words, extremely low-base rate events, such as this case, preclude accurate prediction as to whether or not a targeted attack will occur; yet preventive steps can decrease the *risk* of such attacks in a person of concern. Prevention begins with the recognition that both *teams and tools* are required. Multidisciplinary threat mitigation teams are composed of police and mental health professionals to prevent targeted acts of violence. Tools refer to the

use of structured professional judgment instruments to assess risk, which are far superior to individual unstructured judgments, which often rely on subjective anecdotal experience. In this case, the perpetrator displayed 94% of TRAP-18 warning indicators prior to his attack, and in any threat team setting—if the dots had been collected, connected, and believed—he would have been considered a *high risk* for violent offending, even though the target and the timing would remain unknown. However, Rathjen was quite secretive, which may have precluded discovery of his planning and preparation. Moreover, the fact that he was so organized despite his delusional thinking is notable. It underscores the clinical fact that psychotic individuals can be quite organized within their delusional belief system, and such a belief system may actually eliminate any motivational ambivalence because of the certainty of their delusions.

We also recognize that the legal framework in Germany is different from that in the United States. For example, due to privacy policies, information can only be shared between law enforcement and intelligence agencies if serious crimes or threats of serious crimes are involved. In this case, we noted multiple minor offenses and investigations that involved numerous police and prosecuting agencies and mental health institutions across Bavaria, Hesse, and North Rhine-Westphalia. Since each of the responding authorities only had fragments of data available, they were unable to create a holistic view of the case across police and mental health jurisdictions. Once again, it appears that siloing of information among agencies—and perhaps deliberate siloing by Rathjen himself—as well as the failure to conceptualize his behaviors as markers on a *pathway* to violence, contributed to his successful attack. As Sherlock Holmes said, "you see, but you do not observe" (Doyle, 1892). For example, a more collaborative approach might have prevented him from legally acquiring several firearms and practicing with them at public shooting ranges across two states. We suggest that security authorities may use this retrospective case study to identify which proximal warning behaviors could have been shared and assessed collectively in a threat management approach.

The mental health treatment of Rathjen perhaps presents insurmountable problems. Although schizophrenia is a treatable condition in the majority of cases with antipsychotic medications,

recognition of the disorder by the patient as a lifelong affliction and the need to take medication is often not an easy task. Sometimes long-acting injectable medications, widely used in public outpatient clinics, can help with the noncompliance issues. Medication alone, however, is not the answer. Successful treatment of a chronic and major mental disorder often necessitates additional psychological and social support, typically underfunded in the public sector. In the United States, these tasks are usually carried out by the psychologists and social workers, while the psychiatrist is relegated to an intermittent medication management role. Another significant problem is that psychiatry education now largely focuses on neurobiology and psychopharmacology, and little attention is paid to the internal psychodynamics of the patient or his social and family milieu—both critical elements for treatment success. There are many excellent textbooks on the standard of care for treatment, including *Gabbard's Treatments of Psychiatric Disorders* (2014).

The task of understanding the relationship between major mental disorder, radicalization, and violence begins with case studies such as this one. There are no studies that involve combined samples of these types of individuals and applied treatment outcomes; in fact, there is little consensus concerning the successful treatment of radicalized individuals. The march of science is slow, but often begins with the observation and deep analysis of the single individual.

### Limitations

This study contained a variety of limitations. We were unable to obtain the first video that Tobias Rathjen recorded and published on his website, despite the fact that we utilized a substantial amount of law enforcement connections, extremism experts' and media contacts in Germany and the United States. In addition, we did not gain access to any investigative files from the Bundeskriminalamt (the Federal Criminal Police Office of Germany); it can be assumed that the documents are classified, as the final investigation had not been completed at the time when this study was submitted.

A recent feasibility and utility study on the TRAP-18 highlighted that previous research often relied on secondary sources (Allely & Wicks, 2022), which we mediated by predominantly

focusing on Rathjen's written and spoken materials, as well as the forensic psychiatric report on him, to enhance the reliability and validity of this article. As this was a retrospective case study, there could be concerns that the authors were vulnerable to hindsight and confirmatory bias. In addition, the research lacks measurement of interrater reliability, as only the first author, Julia Kupper, coded the behavioral indicators in the source materials. The third researcher, Dr. Reid Meloy, is the developer of the TRAP-18 itself and receives income from the training and distribution through license to Multi-Health Systems (<https://www.mhs.com>). However, we sought to minimize these biases with careful assessments and interpretations of the data, in addition to providing sufficient evidence and discussions for every indicator, regardless of it being coded as present or absent.

### References

- Allely, C. S., & Wicks, S. J. (2022). The feasibility and utility of the Terrorist Radicalization Assessment Protocol (TRAP-18): A review and recommendations. *Journal of Threat Assessment and Management*, 9(4), 218–259. <https://doi.org/10.1037/tam0000179>
- Alperin, R. M. (2001). Barriers to intimacy: An object relations perspective. *Psychoanalytic Psychology*, 18(1), 137–156. <https://doi.org/10.1037/0736-9735.18.1.137>
- Backhaus-Arnold, Y., & Haschnik, G. (2022, April 2/3). Terror in Hanau. *Frankfurter Rundschau*, 78, Article D2.
- Baele, S. J., Brace, L., & Coan, T. G. (2021). Variation on a theme? Comparing 4chan, 8kun, and other chans' far-right "pol" boards. *Perspectives on Terrorism*, 15(1), 65–80. <https://www.jstor.org/stable/10.2307/26984798>
- Balliet, S. (2019). *Your F&A guide* [Unpublished document].
- Barak, G. (2003). *Violence and nonviolence: Pathways to understanding*. SAGE Publications. <https://doi.org/10.4135/9781452231716>
- Bergen, P. (2012). *Manhunt*. Crown Publishers.
- Berger, J. M. (2018). *Extremism*. MIT Press. <https://doi.org/10.7551/mitpress/11688.001.0001>
- Böckler, N., Allwinn, M., Metwaly, C., Wypych, B., Hoffmann, J., & Zick, A. (2020). Islamist terrorists in Germany and their warning behaviors: A comparative assessment of attackers and other convicts using the TRAP-18. *Journal of Threat Assessment and Management*, 7(3–4), 157–172. <https://doi.org/10.1037/tam0000150>
- Böckler, N., Hoffmann, J., & Meloy, J. R. (2017). "Jihad against the enemies of Allah": The Berlin



- Christmas market attack from a threat assessment perspective. *Violence and Gender*, 4(3), 73–80. <https://doi.org/10.1089/vio.2017.0040>
- Böckler, N., Hoffmann, J., & Zick, A. (2015). The Frankfurt airport attack: A case study on the radicalization of a lone-actor terrorist. *Journal of Threat Assessment and Management*, 2(3–4), 153–163. <https://doi.org/10.1037/tam0000045>
- Borum, R. (2012). Radicalization into violent extremism I: A review of social science theories. *Journal of Strategic Security*, 4(4), 7–36. <https://doi.org/10.5038/1944-0472.4.4.1>
- Breivik, A. (2011). *2083: A European declaration of independence*.
- Bundesamt für Verfassungsschutz. (2021). *Verfassungsschutzbericht 2020*. Bundesministerium des Innern und für Heimat. [https://www.bmi.bund.de/SharedDocs/downloads/DE/publikationen/themen/sicherheit/vsb-2020-gesamt.pdf?\\_\\_blob=publicationFile&v=6](https://www.bmi.bund.de/SharedDocs/downloads/DE/publikationen/themen/sicherheit/vsb-2020-gesamt.pdf?__blob=publicationFile&v=6)
- Bundesamt für Verfassungsschutz. (2022). *Verfassungsschutzbericht 2021*. Bundesministerium des Innern und für Heimat. [https://www.verfassungsschutz.de/SharedDocs/publikationen/DE/verfassungsschutzberichte/2022-06-07-verfassungsschutzbericht-2021.pdf?\\_\\_blob=publicationFile&v=2](https://www.verfassungsschutz.de/SharedDocs/publikationen/DE/verfassungsschutzberichte/2022-06-07-verfassungsschutzbericht-2021.pdf?__blob=publicationFile&v=2)
- Bundesministerium der Justiz. (1961). *Ausführungsgesetz zu Artikel 26 Abs. 2 des Grundgesetzes (Gesetz über die Kontrolle von Kriegswaffen)*. <https://www.gesetze-im-internet.de/krwaffkontrg/KrWaffKontrG.pdf>
- Bundesministerium der Justiz. (2003). *Allgemeine Waffengesetz-Verordnung (AWaffV)*. <https://www.gesetze-im-internet.de/awaffv/BJNR212300003.html>
- Bureau of Counterterrorism. (2020a). *Country reports on terrorism 2019: Germany*. U.S. Department of State. <https://www.state.gov/reports/country-reports-on-terrorism-2019/germany/>
- Bureau of Counterterrorism. (2020b). *Country reports on terrorism 2019: Norway*. U.S. Department of State. <https://www.state.gov/reports/country-reports-on-terrorism-2019/norway/>
- Bureau of Counterterrorism. (2021). *Country reports on terrorism 2020: Germany*. U.S. Department of State. <https://www.state.gov/reports/country-reports-on-terrorism-2020/germany/>
- Calhoun, F. S., & Weston, S. W. (2003). *Contemporary threat management: A practical guide for identifying, assessing and managing individuals of violent intent*. Specialized Training Services.
- Carter, G., Berman, H., Adshead, G., Berko, Z., Bose, S., Barbe, C., & Barbe, J. (2018). *Violent states and creatives states (2 volume set): From the global to the individual*. Jessica Kingsley Publishers.
- Collins, C., & Clark, J. (2021). Using the TRAP-18 to identify an incel lone-actor terrorist. *Journal of Threat Assessment and Management*, 8(4), 159–173. <https://doi.org/10.1037/tam0000167>
- Cotti, P., & Meloy, J. R. (2019). The Tamerlan Tsarnaev case: The nexus of psychopathology and ideology in a lone actor terrorist. *Journal of Threat Assessment and Management*, 6(3–4), 138–158. <https://doi.org/10.1037/tam0000120>
- Crawford, B., & Keen, F. (2020). The Hanau terrorist attack: How race hate and conspiracy theories are fueling global far-right violence. *CTC Sentinel*, 13(3). <https://ctc.westpoint.edu/hanau-terrorist-attack-race-hate-conspiracy-theories-fueling-global-far-right-violence/>
- Deitert, F. (n.d.). *Die Waffenbesitzkarte*. Alle Schützenvereine. <https://www.alle-schuetzenvereine.de/waffenbesitzkarte/>
- Der Generalbundesanwalt. (2020). *Mitteilung zum Stand des Ermittlungsverfahrens wegen des Anschlages in Hanau am 19. Der Generalbundesanwalt beim Bundesgerichtshof*. <https://www.generalbundesanwalt.de/SharedDocs/Pressemitteilungen/DE/2020/Pressemitteilung2-vom-20-02-2020.html>
- Der Generalbundesanwalt. (2021). *GBA: Einstellung der Ermittlungen wegen des Anschlages in Hanau vom 19. Der Generalbundesanwalt beim Bundesgerichtshof*. <https://www.presseportal.de/blaulicht/pm/14981/5101005>
- Der Spiegel. (2020). Amoklauf in Hanau: Programm eines Rassisten. *SPIEGEL TV*. <https://www.youtube.com/watch?v=FrPYCKIjE8>
- Der Tagesspiegel. (2020). Wer war Tobias Rathjen? Was über den Täter von Hanau bekannt ist. *Der Tagesspiegel*. <https://www.tagesspiegel.de/politik/wer-war-tobias-rathjen-was-ueber-den-taeter-von-hanau-bekannt-ist/25566016.html>
- Deutscher Bundestag. (2020a). *Antwort der Bundesregierung auf die Kleine Anfrage der Abgeordneten Dr. Konstantin von Notz, Dr. Irene Mihalic, Filiz Polat, weiterer Abgeordneter und der Fraktion BÜNDNIS 90/DIE GRÜNEN* [Drucksache 19/19678]. <https://dserver.bundestag.de/btd/19/196/1919678.pdf>
- Deutscher Bundestag. (2020b). *Antwort der Bundesregierung auf die Kleine Anfrage der Abgeordneten Martin Hess, Dr. Bernd Baumann, Dr. Gottfried Curio, weiterer Abgeordneter und der Fraktion der AfD* [Drucksache 19/21102]. <https://dserver.bundestag.de/btd/19/211/1921102.pdf>
- Deutscher Bundestag. (2021). *Antwort der Bundesregierung auf die Kleine Anfrage der Abgeordneten Dr. Konstantin von Notz, Dr. Irene Mihalic, Monika Lazar, weiterer Abgeordneter und der Fraktion BÜNDNIS 90/DIE GRÜNEN* [Drucksache 19/28808]. <https://dserver.bundestag.de/btd/19/288/1928808.pdf>
- Deutscher Bundestag. (n.d.). *Instruments of scrutiny*. [https://www.bundestag.de/en/parliament/function/scrutiny/instruments\\_scrutiny-245710](https://www.bundestag.de/en/parliament/function/scrutiny/instruments_scrutiny-245710)

- Dietz, P. E. (1986). Mass, serial and sensational homicides. *Bulletin of the New York Academy of Medicine*, 62(5), 477–491.
- Dittrich, M. (2022). *Personal communication, March 10, 2022.*
- Dmitrieva, A. M., & Meloy, J. R. (2021). Troubled waters: Domestic terrorism threat in the U.S. coast guard and the TRAP-18. *Journal of Threat Assessment and Management*. Advance online publication. <https://doi.org/10.1037/tam0000170>
- Doyle, A. C. (1892). *A scandal in Bohemia. The adventures of Sherlock Holmes*. Dover Publications.
- dpa. (2022). U-Ausschuss: Oberstaatsanwältin verweigert Aussage. *Zeit Online*. <https://www.zeit.de/news/2022-03/31/u-ausschuss-hoert-zeugen-zu-polizeieinsatz-und-ermittlungen>
- Dudenhofer, A.-L., Niese, C., Görgen, T., Tampe, L., Megler, M., Gröpler, C., & Bondü, R. (2021). Leaking in terrorist attacks: A review. *Aggression and Violent Behavior*, 58, Article 101582. <https://doi.org/10.1016/j.avb.2021.101582>
- Erlandsson, Å., & Meloy, J. R. (2018). The Swedish school attack in Trollhättan. *Journal of Forensic Sciences*, 63(6), 1917–1927. <https://doi.org/10.1111/1556-4029.13800>
- Federal Bureau of Investigation. (n.d.). *Jack Gilbert Graham*. <https://www.fbi.gov/history/famous-case/s/jack-gilbert-graham>
- Fegadel, A. R., & Heide, K. M. (2016). NIBRS and SHR: A comparison of two national homicide databases with respect to parricide. *Victims & Offenders*, 13(2), 235–256. <https://doi.org/10.1080/15564886.2016.1246392>
- Flade, F., & Mascolo, G. (2020). Anschlag in Hanau: Gefährliche Botschaften. *Süddeutsche Zeitung*. <https://www.sueddeutsche.de/politik/anschlag-hanau-rechtsextremismus-abschlussbericht-bka-1.4859441>
- Forensic Architecture & Forensis. (2022). *19. Februar 2020, Hanau: Zeitleiste der Nacht des Anschlags*.
- Fuchs, C., Geisler, A., Polke-Majewski, K., Sundermann, T., Venohr, S., & Zacharakis, Z. (2020). Was wir über den Angriff von Hanau wissen. *Zeit Online*. <https://www.zeit.de/gesellschaft/zeitgeschehen/2020-02/gewalttat-hanau-schuesse-rassismus-taeter-motiv>
- Gabbard, G. (2014). *Gabbard's treatments of psychiatric disorders* (5th ed.). American Psychiatric Publishing.
- García-Andrade, R. F., Rendón-Luna, B. S., Prieto, B. R., Martínez, V. V., Téllez de Meneses, E. M., & Rodríguez, E. F. (2019). Forensic-psychiatric assessment of the risk of terrorist radicalisation in the mentally ill patient. *Spanish Journal of Legal Medicine*, 45(2), 59–66. <https://doi.org/10.1016/j.rml.2019.01.003>
- Gezer, Ö., Hunger, B., & Neshitov, T. (2021). Attentäter von Hanau besaß zwei Waffenbesitzkarten—Trotz Zwangseinweisung. *Spiegel Panorama*. <https://www.spiegel.de/panorama/gesellschaft/attentaeter-von-hanau-drei-waffenscheine-trotz-zwangseinweisung-a-44fe1fd4-1dfd-435b-8bf6-d98eed94bb23>
- Gill, P. (2015). *Lone-actor terrorists*. Routledge. <https://doi.org/10.4324/9781315766348>
- Gill, P., Clemmow, C., Hetzel, F., Rottweiler, B., Salman, N., Van Der Vegt, I., Marchment, Z., Schumann, S., Zolghadriha, S., Schulten, N., Taylor, H., & Corner, E. (2020). Systematic review of mental health problems and violent extremism. *Journal of Forensic Psychiatry & Psychology*, 32(1), 51–78. <https://doi.org/10.1080/14789949.2020.1820067>
- Gill, P., Horgan, J., Hunter, S., & Cushenbery, L. (2013). Malevolent creativity in terrorist organizations. *The Journal of Creative Behavior*, 47(2), 125–151. <https://doi.org/10.1002/jocb.28>
- Goodwill, A., & Meloy, J. R. (2019). Visualizing the relationship among indicators for lone actor terrorist attacks: Multidimensional scaling and the TRAP-18. *Behavioral Sciences & the Law*, 37(5), 522–539. <https://doi.org/10.1002/bsl.2434>
- Hamm, M. S., & Spaaij, R. (2017). *The age of lone wolf terrorism*. Columbia University Press.
- Hanauer Anzeiger. (2020). *Nach rechtsradikalem Anschlag in Hanau: eine Spur führt nach Bayern*. <https://www.hanauer.de/hanau/hanau-anschlaege-rechtsradikal-rechter-terror-mord-waffe-muenchen-90010039.html>
- Haschnik, G. (2020). Hanau: rechtsextremer Attentäter war schon vor dem Anschlag auffällig. *Frankfurter Rundschau*. <https://www.fr.de/rhein-main/main-kinzig-kreis/hanau-ort66348/hanau-rechtsextremer-attentaeter-schon-anschlag-auffaellig-13752901.html>
- Haschnik, G. (2021). Hanau: rassistischer Attentäter wollte noch mehr Menschen töten—neue Details enthüllt. *Frankfurter Rundschau*. <https://www.fr.de/rhein-main/main-kinzig-kreis/hanau-ort66348/attentaeter-von-hanau-wollte-noch-mehr-opfer-90200940.html>
- Haschnik, G. (2022a). Anschlag in Hanau: ein “querulatorischer Charakter.” *Frankfurter Rundschau*. <https://www.fr.de/rhein-main/main-kinzig-kreis/hanau-ort66348/anschlag-in-hanau-ein-querulatorischer-charakter-91500921.html>
- Haschnik, G. (2022b, April 23/24). Kritik an Polizeieinsatz [Criticism of police operation]. *Frankfurter Rundschau*, 78(94), Article D6.
- Hempel, A. G., Meloy, J. R., & Richards, T. C. (1999). Offender and offense characteristics of a nonrandom sample of mass murderers. *The Journal of the American Academy of Psychiatry and the Law*, 27(2), 213–225.
- Hessenschau. (2020). *100 Tage nach dem rassistischen Terror: Der Anschlag von Hanau—eine Chronologie*. <https://www.hessenschau.de/gesellschaft/100-tage-nach-dem-rassistischen-terror-der-anschlag-von-hanau---eine-chronologie,hanau-anschlag-chronologie-100.html>

- Hessischer Landtag. (2020). 20. Wahlperiode, 35. Sitzung, 20 [Plenarprotokoll 20/35]. [https://hessischer-landtag.de/sites/default/files/scald/files/035\\_PL.pdf#page=3](https://hessischer-landtag.de/sites/default/files/scald/files/035_PL.pdf#page=3)
- Hurtz, S., Hoppenstedt, M., & Munzinger, H. (2020). Was über den mutmaßlichen Täter bekannt ist. *Süddeutsche Zeitung*. <https://www.sueddeutsche.de/politik/hanau-taeter-tobias-r-1.4806272>
- James, D. V., MacKenzie, R. D., & Farnham, F. R. (2021). *Communications threat assessment protocol-25: Guidelines for the initial assessment of problematic communications*. Theseus Risk Management.
- Jasser, G., Kelly, M. & Rothermel, A.-K. (2020). *Male supremacism and the Hanau terrorist attack: Between online misogyny and far-right violence*. International Centre for Counter-Terrorism. <https://www.icct.nl/publication/male-supremacism-and-hanau-terrorist-attack-between-online-misogyny-and-far-right>
- Kriner, M., & Ihler, B. (2022). *Analysing terrorgram publications: A new digital zine*. Global Network on Extremism and Technology. <https://gnet-research.org/2022/09/12/analysing-terrorgram-publications-a-new-digital-zine/>
- Kupper, J., Christensen, T. K., Wing, D., Hurt, M., Schumacher, M., & Meloy, J. R. (2022). The contagion and copycat effect in transnational far-right terrorism: An analysis of language evidence. *Perspectives on Terrorism*, XVI(4), 4–26. <https://www.universiteitleiden.nl/binaries/content/assets/customsites/perspectives-on-terrorism/2022/issue-4/kupper-et-al.pdf>
- Kupper, J., & Meloy, J. R. (2021). TRAP-18 indicators validated through the forensic linguistic analysis of targeted violence manifestos. *Journal of Threat Assessment and Management*, 8(4), 174–199. <https://doi.org/10.1037/tam0000165>
- Langman, P. (2015). *School shooters: Understanding high school, college, and adult perpetrators*. Rowman & Littlefield Publishers.
- Liem, M. (2010). Homicide followed by suicide: A review. *Aggression and Violent Behavior*, 15(3), 153–161. <https://doi.org/10.1016/j.avb.2009.10.001>
- Lindgren, T. (2021). *Investigative report on the August 4, 2019 attack in Dayton*. Federal Bureau of Investigation. <https://www.fbi.gov/contact-us/field-offices/cincinnati/news/press-releases/investigative-report-on-the-august-4-2019-attack-in-dayton-ohio>
- Matsumoto, D., Frank, M., & Hwang, H. (2015). The role of intergroup emotions in political violence. *Current Directions in Psychological Science*, 24(5), 369–373. <https://doi.org/10.1177/0963721415595023>
- Maxwill, P. (2020). Psychogramm eines Terroristen. *Spiegel Panorama*. <https://www.spiegel.de/panorama/justiz/hanau-tobias-rathjen-wie-ein-bankkaufmann-zum-rechtsterroristen-wurde-a-7f673ad0-4437-42de-9c2b-af22288d7071>
- Meloy, J. R. (1996). Orestes in Southern California: A forensic case of matricide. *The Journal of Psychiatry & Law*, 24(1), 77–102. <https://doi.org/10.1177/009318539602400105>
- Meloy, J. R. (2017). *TRAP-18 user's manual Version 1.0*. Multi Health Systems.
- Meloy, J. R. (2018). Sexual desire, violent death, and the true believer. *Contemporary Psychoanalysis*, 54(1), 64–83. <https://doi.org/10.1080/00107530.2017.1414577>
- Meloy, J. R., & Genzman, J. (2016). The clinical threat assessment of the lone-actor terrorist. *The Psychiatric Clinics of North America*, 39(4), 649–662. <https://doi.org/10.1016/j.psc.2016.07.004>
- Meloy, J. R., & Gill, P. (2016). The lone-actor terrorist and the TRAP-18. *Journal of Threat Assessment and Management*, 3(1), 37–52. <https://doi.org/10.1037/tam0000061>
- Meloy, J. R., Goodwill, A., Clemmow, C., & Gill, P. (2021). Time sequencing the TRAP-18 indicators. *Journal of Threat Assessment and Management*, 8(1–2), 1–19. <https://doi.org/10.1037/tam0000157>
- Meloy, J. R., Goodwill, A. M., Meloy, M. J., Amat, G., Martinez, M., & Morgan, M. (2019). Some TRAP-18 indicators discriminate between terrorist attackers and other subjects of national security concern. *Journal of Threat Assessment and Management*, 6(2), 93–110. <https://doi.org/10.1037/tam0000119>
- Meloy, J. R., Habermeyer, E., & Guldemann, A. (2015). The warning behaviors of Anders Breivik. *Journal of Threat Assessment and Management*, 2(3–4), 164–175. <https://doi.org/10.1037/tam0000037>
- Meloy, J. R., Hempel, A. G., Mohandie, K., Shiva, A. A., & Gray, B. T. (2001). Offender and offense characteristics of a nonrandom sample of adolescent mass murderers. *Journal of the American Academy of Child & Adolescent Psychiatry*, 40(6), 719–728. <https://doi.org/10.1097/00004583-200106000-00018>
- Meloy, J. R., Hoffmann, J., Guldemann, A., & James, D. (2012). The role of warning behaviors in threat assessment: An exploration and suggested typology. *Behavioral Sciences & the Law*, 30(3), 256–279. <https://doi.org/10.1002/bsl.999>
- Meloy, J. R., & Rahman, T. (2020). Cognitive-affective drivers of fixation in threat assessment. *Behavioral Sciences & the Law*, 39(2), 170–189. <https://doi.org/10.1002/bsl.2486>
- Meloy, J. R., Roshdi, K., Glaz-Ocik, J., & Hoffmann, J. (2015). Investigating the individual terrorist in Europe. *Journal of Threat Assessment and Management*, 2(3–4), 140–152. <https://doi.org/10.1037/tam0000036>
- Meloy, J. R., & Yakeley, J. (2014). The violent true believer as a “lone wolf”—Psychoanalytic perspectives on terrorism. *Behavioral Sciences & the Law*, 32(3), 347–365. <https://doi.org/10.1002/bsl.2109>
- Millar, K. M., & Costa Lopez, J. (2021). *Conspiratorial medievalism: History and hyperagency in the far-right Knights Templar security imaginary*.

- Politics*. SAGE Publications. <https://doi.org/10.1177/02633957211010983>
- Miller-Idriss, C. (2020). *Hate in the homeland: The new global far right*. Princeton University Press
- Mohandie, K., & Meloy, J. R. (2013). The value of crime scene and site visitation by forensic psychologists and psychiatrists. *Journal of Forensic Sciences*, 58(3), 719–723. <https://doi.org/10.1111/1556-4029.12135>
- National Institute of Mental Health. (n.d.). *Warning signs of suicide*. U.S. Department of Health and Human Services. <https://www.nimh.nih.gov/health/publications/warning-signs-of-suicide>
- Nobrega, O. S., Quent, M., & Zipf, J. (2021). *Rassismus. Macht. Vergessen. Von München über den NSU bis Hanau: symbolische und materielle Kämpfe entlang rechten Terrors*. Transcript Verlag.
- Office of the Child Advocate State of Connecticut. (2014). *Shooting at Sandy Hook Elementary School*. <https://portal.ct.gov/-/media/OCA/SandyHook11212014pdf.pdf>
- Orwell, G. (1950). *1984*. Penguin Books.
- Peterson, J. K., Densley, J. A., Knapp, K., Higgins, S., & Jensen, A. (2022). Psychosis and mass shootings: A systematic examination using publicly available data. *Psychology, Public Policy, and Law*, 28(2), 280–291. <https://doi.org/10.1037/law0000314>
- Rahman, T. (2018). Extreme overvalued beliefs: How violent extremist beliefs become “normalized.” *Behavioral Sciences*, 8(1), Article 10. <https://doi.org/10.3390/bs8010010>
- Rahman, T., Hartz, S., Xiong, W., Meloy, J. R., Janofsky, J., Harry, B., & Resnick, P. (2020). Extreme overvalued belief. *The Journal of the American Academy of Psychiatry and the Law*, 48(3), 319–326.
- Rahman, T., Meloy, J. R., & Bauer, R. (2019). Extreme overvalued belief and the legacy of Carl Wernicke. *The Journal of the American Academy of Psychiatry and the Law*, 47(2), 180–187.
- Rahman, T., Resnick, P. J., & Harry, B. (2016). Anders Breivik: Extreme beliefs mistaken for psychosis. *The Journal of the American Academy of Psychiatry and the Law*, 44(1), 28–35.
- Rathjen, T. (2020a). *Skript mit Bildern (manifesto)*.
- Rathjen, T. (2020b). *Anhang 1 DFB (appendix 1)*.
- Rathjen, T. (2020c). *Anhang 2 Irak-Afghanistan (appendix 2)*.
- Rathjen, T. (2020d). *Video 2 (USA)*.
- Rathjen, T. (2020e). *Video 3 (zu den Links)*.
- Rathjen, T. (2020f). *Video 4 (Schlussanmerkungen)*.
- Rathjen, T. (2020g). *Website*. <https://www.tobias-rathjen.com>
- Richtie, H., Hasell, J., Mathieu, E., Appel, C., & Roser, M. (2022). *Terrorism. Our world in data*. <https://ourworldindata.org/terrorism#what-share-of-deaths-are-from-terrorism>
- Saha, M. (2021). *NSU: What you need to know about Germany's neo-nazi terror group*. Deutsche Welle. <https://www.dw.com/en/nsu-germany/a-39777036>
- Saß, H. (2022a). Zur Amalgamierung von Psychose, rassistischer Ideologie und Verschwörungsdenken beim Terrorakt von Hanau. *Forensische Psychiatrie, Psychologie, Kriminologie*, 16(2), 101–113. <https://doi.org/10.1007/s11757-022-00709-9>
- Saß, H. (2022b). *Personal communications, March 6–June 28, 2022*.
- Schuurman, B., Lindekilde, L., Malthaner, S., O'Connor, F., Gill, P., & Bouhana, N. (2019). End of the lone wolf: The typology that should not have been. *Studies in Conflict and Terrorism*, 48(8), 771–778. <https://doi.org/10.1080/1057610X.2017.1419554>
- Silver, J., Simons, A., & Craun, S. (2018). *A study of the pre-attack behaviors of active shooters in the United States between 2000 and 2013. Behavioral analysis unit*. Federal Bureau of Investigation, Department of Justice. <https://www.fbi.gov/file-repository/pre-attack-behaviors-of-active-shooters-in-us-2000-2013.pdf/view>
- Social Blade. (n.d.). *Tobias Rathjen*. [https://socialblade.com/youtube/channel/UCaHD4uPnkH3S2a0UOPjoO\\_w](https://socialblade.com/youtube/channel/UCaHD4uPnkH3S2a0UOPjoO_w)
- Spiegel Panorama. (2020). *Angriff in Hanau: Attentäter lieh sich Pistole kurz vor der Tat bei Waffenhändler*. *Spiegel Panorama*. <https://www.spiegel.de/panorama/gesellschaft/hanau-attentaeter-lieh-sich-h-pistole-kurz-vor-der-tat-bei-waffenh-a-f72f3d17-f488-4407-bf6a-fc3c4da5aa21>
- Stone, M. (2015). Mass murder, mental illness, and men. *Violence and Gender*, 2(1), 51–86. <https://doi.org/10.1089/vio.2015.0006>
- Tarrant, B. (2019). *The great replacement*.
- Tassin, C., & Allely, C. S. (2022). Application of the Terrorist Radicalization Assessment Protocol (TRAP-18) to the case of the Army–Navy recruiting center attacker in Little Rock, Arkansas. *Behavioral Sciences of Terrorism and Political Aggression*. Advance online publication. <https://doi.org/10.1080/19434472.2022.2118349>
- Telegram. (2020a). *Bowlcast*. <https://t.me/Bowlcast333/1361>
- Telegram. (2020b). *Das Right Archive*. <https://t.me/dasrightarchive/17430>
- Texas Governor's Fact-Finding Committee. (1966). *Texas governor's fact-finding committee report on the Charles J. Whitman catastrophe*. Texas State Archives. [https://txarchives.org/tslac/finding\\_aids/50095.xml](https://txarchives.org/tslac/finding_aids/50095.xml)
- van Dongen, T., Wentworth, M., & Arkhis, H. R. (2022). *Terrorist threat assessment 2019–2021*. International Centre for Counter-Terrorism. <https://www.icct.nl/sites/default/files/2022-12/Terrorist-Threat-Assessment-2019-2021.pdf>
- Vargen, L. M., & Challacombe, D. J. (2022). Violence risk assessment of Sovereign Citizens: An

- exploratory examination of the HCR-20 Version 3 and the TRAP-18. *Journal of Behavioral Science and Law*. Advance online publication. <https://doi.org/10.1002/bsl.2607>
- von Bebenburg, P. (2022). Begegnung mit dem Hanau-Attentäter: er ließ sich in Frauenkleidern filmen. *Frankfurter Rundschau*. <https://www.fr.de/rhein-main/main-kinzig-kreis/hanau-ort66348/begegnung-mit-dem-hanau-attentaeter-von-waffen-war-nie-die-rede-91550698.html>
- West, S. G., & Feldsher, M. (2010). Parricide: Characteristics of sons and daughters who kill their parents. *Current Psychiatry*, 9(11), 20–38. [https://cdn.mdedge.com/files/s3fs-public/Document/September-2017/0911CP\\_Article1.pdf](https://cdn.mdedge.com/files/s3fs-public/Document/September-2017/0911CP_Article1.pdf)
- World Health Organization. (2020). *The top 10 causes of death*. <https://www.who.int/news-room/fact-sheets/detail/the-top-10-causes-of-death>

Received July 7, 2022

Revision received November 30, 2022

Accepted January 26, 2023 ■