

Profiling the CB Adversary: Motivation, Psychology and Decision

OVERVIEW

This project, *Profiling the CB Adversary: Motivation, Psychology and Decision*, aims to:

- Comprehensively characterize the psychology (including motivations, judgment and decision-making) of violent non-state actors (VNSA) who have employed chemical and biological (CB) agents as weapons.
- Provide strategic guidance to the Chemical and Biological Defense Division of DHS (CBD) on incorporating findings about VNSA psychology into its programs aimed at assessing CB terrorism risk, reducing the likelihood of CB weapons use and mitigating the impacts of potential CB weapons attacks.

PROJECT BACKGROUND

An in-depth understanding of the motivations, psychology and decision-making of potential perpetrators of CB attacks is essential as analysts try to assess who is most likely to pursue a CB capability, why they would choose CB weapons and why we have not seen more attempts to acquire and use CB weapons against the homeland. To provide a thorough understanding of these issues, START sought to delve more deeply into the psychology of non-state CB adversaries by examining perpetrators of CB incidents both as individuals and members of organizations. As part of the overall effort to address the lack of quantitative support for many of the proposed explanations of VNSA CB motivations, START developed the Chemical and Biological Non-State Adversaries Database (CABNSAD) — presently available as a beta version.

FINDINGS

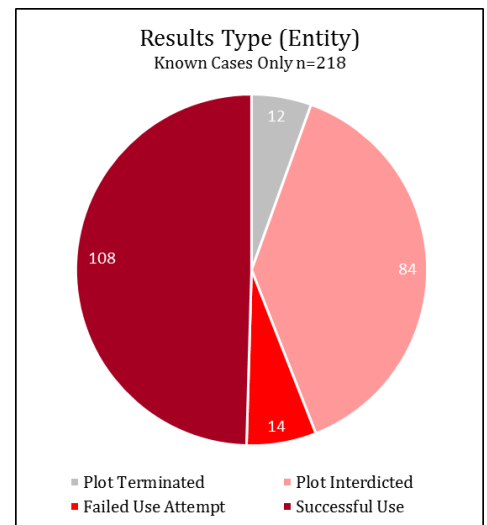
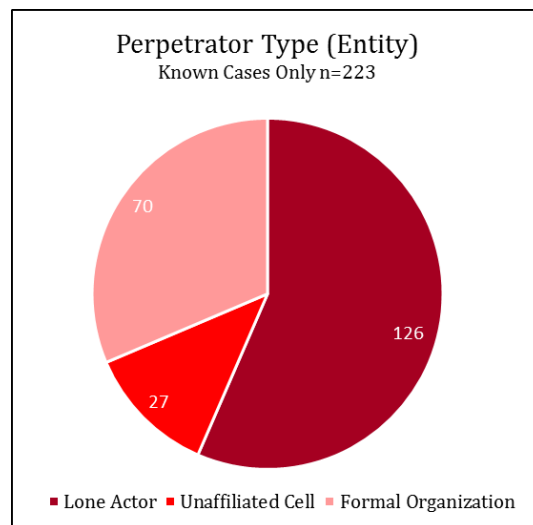
LITERATURE REVIEW

A review and analysis of the literature addressing CB perpetrators found that although there is significant coverage of environmental factors that may positively or negatively influence VNSA CB weapons use and pursuit, the literature largely glosses over potentially important drivers and barriers that could serve as differential indicators for VNSAs that are more positively or negatively motivated to pursue CB weapons. Key drivers and barriers that have been defined in the literature are generally poorly defined, unclear, and lack a quantitative basis of support. Additionally, environmental factors related to ideology identified in the largely theoretical literature have been increasingly undermined by larger quantitative studies of VNSAs.

CHEMICAL AND BIOLOGICAL NON-STATE ADVERSARIES DATABASE

CABNSAD is a global perpetrator-level dataset that brings together available open-source data on all identifiable previous non-state users and attempted users of CB weapons or devices. It was employed as a basis for the empirical analysis of the theoretical model developed as part of the project. The current build of CABNSAD exists in two variants:

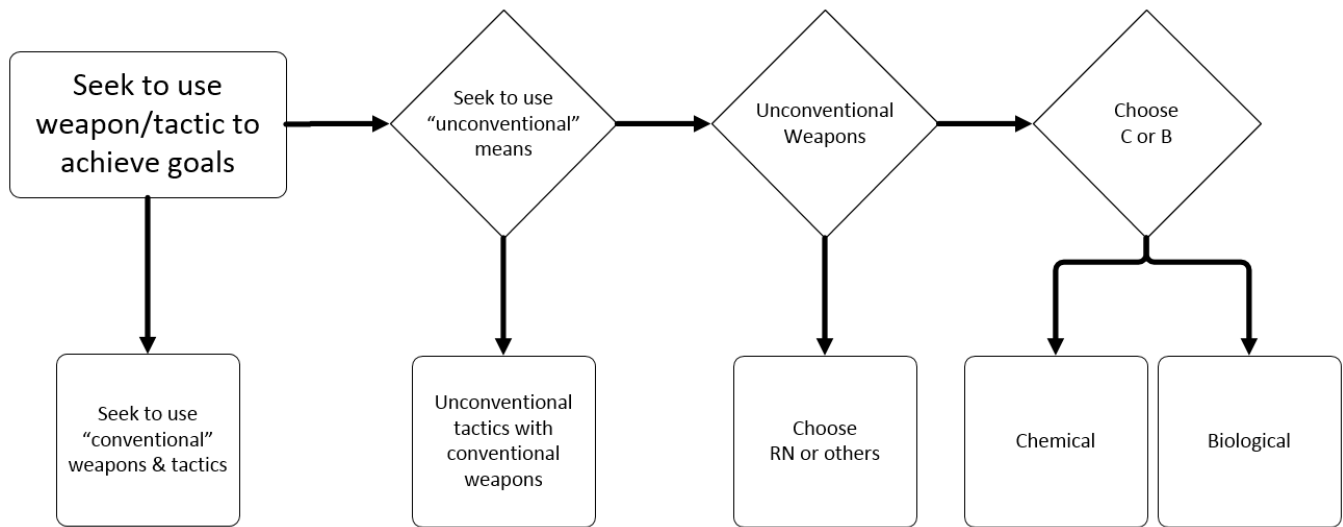
- recording all individual perpetrators; and
- aggregating multiple perpetrators that acted as members of a distinct organization into single entries while retaining individual entries for those perpetrators that acted independently of an organization.



START has identified 488 individual perpetrators associated with events taking place between 1932 and September 30, 2016. All but five of the recorded incidents involved perpetrators that were active after 1970 with the most common type of CB perpetrator being a lone actor unaffiliated with any larger organization. The remaining perpetrators were individuals who acted as part of organizations that ranged in size from small cells with two to nine members to large formal organizations such as Aum Shinrikyo with at least 20 members actively engaged in the group's CB activity.

Analysis of the CABNSAD data on perpetrator activity showed that approximately half of all perpetrators were able to progress to the point of a successful use an agent (defined as delivering CB material in some manner before escaping or being apprehended). The analysis showed that for lone actors, factors internal to each individual such as personality, genetics and mental health are generally more important than ideological factors. For individuals that were members of groups the ideology of the group and other collective factors became more important. An outlier, however, is the case of cults in which the organizational motivations and drivers are frequently determined by the preferences and drivers of an empowered individual.

PRELIMINARY PSYCHOLOGICAL “PROFILE” OF VNSAS



As part of the effort to develop a preliminary psychological “profile” of VNSAs who seek to acquire and use CB weapons, START conducted a competing effort focused on the question of why VNSAs might choose not to use CB weapons. The need for this effort was underlined by a recognition that CB terrorism represents only a tiny percentage of all terrorist attacks (0.23%). The frequency of CB agents use is only fractionally increased by consideration of non-ideologically motivated perpetrators, who represent approximately half of all identifiable CB perpetrators. Accordingly, the process of decision-making leading to CB, as opposed to other weapons use, was mapped. This served to identify points at which a VNSA was obliged to make a decision (implicit or explicit) to proceed towards utilizing a CB agent or instead adopting an alternative solution for achieving their goals.

A number of factors were identified as directly affecting (increasing or decreasing) the likelihood of a perpetrator proceeding through the various decision-making stages towards a decision to employ CB agents as opposed to one of the alternative available courses of action. A rough-order-of-magnitude weighting of these factors (partially illustrated below) was developed that can be applied to the development of psychologically based early-warning indicators. These early warning indicators can signal to observers (most pertinently intelligence and law enforcement officials) that an actor or set of actors possesses the motivation to acquire and/or use CB weapons. These can then be combined with existing information on the group or individual’s capabilities and resources to better assess the level of CB threat that they may represent.

The results of the various analyses conducted during the project combined to develop a preliminary psychological “profile” of VNSAs who seek to acquire and use CB weapons. The “profile” developed in the course of the research effort was a synthesis of known and expected psychological features of VNSAs who decide to pursue and use CB. This “profile” is limited in that it is not possible to develop a single psychological profile for all VNSAs who seek to acquire and use CB just

Factors Influencing CB Use Decision-making (Weighted)	
Chemical	
Proclivities (e.g., Fetish) Specifically towards Chemicals	+++
Leadership Background with Chemistry	+
Revenge for (Perceived) Previous Use	+++
Repudiation of Chemical Weapons	--
Rejection of Modern Technology	-
Leadership Aversion to Chemical Agents or the Effects Thereof	-
Constituency Intolerance of the Use of Chemical Weapons or the Effects Thereof	---
Ideological Drivers	+++

as it has proven impossible to develop a single psychological profile to explain all terrorists. That being said, there are a number of conclusions that can be drawn from an examination of past cases.

- Identified dispositional factors include relative youth and educational level.
 - Two-thirds (63.2%) of all identified actors were under the age of 40.
 - Where the education level of actors was known, most were found to have an undergraduate and/or postgraduate education (71.6%) suggesting that CB actors are likely to be better educated than the population as a whole.
- There was relatively little information available on the mental health status of actors but what is known suggests that CB actors fit the trend for other VNSAs in that severe mental illness excludes actors from these groups and degrades their ability to devise or implement plots.
- The most important situational factor identified was whether or not the individual VNSA perpetrator was a lone actor or a member of an organization. Generally speaking, the CB choices of perpetrators operating as members of an organization are strongly influenced by organizational goals and the preferences of leaders.
- Ideology appears to have significance for weapon choice with cults and those with secular left-wing ideologies more likely to use both chemical and biological weapons, whereas other ideological groups are more likely to pursue chemical weapons than biological weapons.

METHOD

This project builds upon previous work conducted by START researchers, by updating and extending prior analyses and focusing for the first time on the psychological aspects of the threat:

- A review and synthesis of the available scientific and scholarly literature, including the latest specific studies concerning VNSAs and unconventional weapons, as well as broader relevant literatures in psychology, criminology and political science.
- Development of an open-source perpetrator-level dataset of all identifiable previous non-state users and attempted users of CB weapons or devices; the Chemical and Biological Non-State Adversary Database (CABNSAD).
- An analysis of alternative reasons for why VNSAs might decide not to pursue CB agents.
- Iterated development of a CB adversary psychological framework encapsulating the major dynamics and salient features of the motivation and intent to pursue and/or use CB agents to cause harm.
- Testing and enhancing of the CB adversary psychological framework using empirical data on prior CB adversaries.
- Distillation of findings into a set of indicators that can be utilized to assess the strength of motivations of known and potential adversaries for pursuing a CB weapons capability.

FUTURE DIRECTIONS

Additional activities will include development of a set of indicators that can be used to detect the motivation to use CB weapons among actors of concern. A potential outgrowth of the research is application of the methodology and adversary psychological framework to Radiological and Nuclear VNSAs to identify commonalities and unique differences. Finally, there is an expectation that CABNSAD will provide a foundation for future efforts by START and other researchers.

RESEARCHERS AND CONTACT INFORMATION

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The National Consortium for the Study of Terrorism and Responses to Terrorism (START) is supported in part by the Science and Technology Directorate of the U.S. Department of Homeland Security through a Center of Excellence program led by the University of Maryland. START uses state-of-the-art theories, methods and data from the social and behavioral sciences to improve understanding of the origins, dynamics and social and psychological impacts of terrorism. For more information, visit www.start.umd.edu.

This research was supported by the U.S. Department of Homeland Security Chemical and Biological Defense Division through award number 2012-ST-061-CS0001-05. The views and conclusions contained in this document are those of the authors and should not be interpreted as necessarily representing the official policies, either expressed or implied, of the U.S. Department of Homeland Security or START.